Click here to go to Table of Contents

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Fundamental Information Technology Engineer Examination (FE)

Past Morning Examination Collection in Japan

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This Table of Contents has INTERACTIVE link

TABLE OF CONTENTS

Examination Time & Q range		# of Qs	Page #
Technology		***270***	***5 ~ 124***
JITEC FE 2018 Fall AM	(01-50)	50	7 ~ 27
JITEC FE 2018 Sprint AM	(01-50)	50	28 ~ 49
JITEC FE 2017 Fall AM	(01-50)	50	50 ~ 68
JITEC FE 2017 Spring AM	(01-50)	50	69 ~ 91
JITEC FE 2016 Fall AM	(01-50)	38	92 ~ 107
JITEC FE 2016 Spring AM	(04-50)	12	108 ~ 113
JITEC FE 2015 Fall AM	(08-47)	13	114 ~ 120
JITEC FE 2015 Spring AM	(15-50)	07	121 ~ 124
Management & Strategy		***215***	***125 ~ 230***
JITEC FE 2018 Fall AM	(66-70)	05	127 ~ 130
JITEC FE 2018 Spring AM	(51-80)	30	131 ~ 144
JITEC FE 2017 Fall AM	(51-80)	30	145 ~ 158
JITEC FE 2017 Spring AM	(51-80)	30	159 ~ 172
JITEC FE 2016 Fall AM	(51-80)	30	173 ~ 187
JITEC FE 2016 Spring AM	(51-80)	30	188 ~ 201
JITEC FE 2015 Fall AM	(51-80)	30	202 ~ 216
JITEC FE 2015 Spring AM	(51-80)	30	217 ~ 230
Total Questions Coverage		**485**	

JITEC

Morning Examination

Technology

JITEC FE 2018 Fall AM_Technology

JITEC FE 2018 Fall AM Question 1 (English translation)

Which of the numbers expressed in fractions of decimal number equals to hexadecimal number 0.248?

a. 31 / 32 b. 31 / 125 c. 31 / 512 d. 73 / 512

JITEC FE 2018 Fall AM Question 2 (English translation)

The following procedure is an algorithm that leaves 1 on the rightmost side and sets all other bits to 0 when a bit string in which at least one of the digits is 1 is given. For example, when 00101000 is given, 00001000 is obtained. Which logical operation will be filled into blank [X]?

Step 1: Consider the given bit string A as an unsigned binary number, subtract 1 from A,
and let B be the result.

Step 2: Calculate the exclusive OR (XOR) of A and B, and let C be the result.

Step 3: Calculate [X] of A and C and let A be the result.

a. XOR b. NAND c. AND d. OR

JITEC FE 2018 Fall AM Question 3 (English translation)

Which is the most appropriate explanation for machine learning in AI?

a. Technology for making computers has the learning ability naturally performed by human beings, such as finding a specific pattern from the stored data
b. Technology for reproducing life phenomena and evolution processes using computers, machines, etc.
c. Technology for inputting expertise in a specific field into a computer and inferring by the computer using the input knowledge
d. Technology for bringing teaching materials and learning management abilities to computers by using information technology such as Web system for people to perform interactive learning

JITEC FE 2018 Fall AM Question 4 (English translation)

A code table was created in order to compress communication data composed of five letters A, B, C, D, E with different appearance frequencies using Huffman coding. Which of the following is appropriate as a sign to fill blank ___X___?

letters	appearance frequencies (%)	code
A	26	00
B	25	01
C	24	10
D	13	___X___
E	12	111

a. 001 b. 010 c. 101 d. 110

JITEC FE 2018 Fall AM Question 5 (English translation)

The operation for the queue is defined as follows.

ENQ n: Insert data n into the queue.

DEQ: Retrieve data from the queue.

The following operations, ENQ 1, ENQ 2, ENQ 3, DEQ, ENQ 4, ENQ 5, DEQ, ENQ 6, DEQ, DEQ were operated for an empty queue. Which data is retrieved when the next DEQ operation is done?

a. 1 b. 2 c. 5 d. 6

JITEC FE 2018 Fall AM Question 6 (English translation)

Which is the appropriate explanation of quick sorting?

a. It is a method of repeating the operation of adding data to the correct position of already aligned data string.
b. Find the minimum value in the data, then find the minimum value from the parts excluding it. This is a method of repeating this operation.
c. Choose an appropriate reference value and divide the data into smaller value groups and larger value groups. In the same way, select the reference value in the group and divide each group. This is a method of repeating this operation.
d. It is a method of gradually transferring small value data to the end by repeating comparison and replacement of adjacent data.

JITEC FE 2018 Fall AM Question 7 (English translation)

Which of the items stipulated in the coding standards of the program is appropriate?

a. For local variables, if the data types are the same even if they are used differently, use the same variables as much as possible.
b. In order to improve the processing performance, we use a floating-point variable for the control variable of the loop.
c. To repeat the same calculation over and over, use the function's recursive call.
d. When using the memory area allocation function, describe the processing when allocation is impossible.

JITEC FE 2018 Fall AM Question 8 (English translation)

Which is appropriate as an explanation of Java's characteristics?

a. It is an object-oriented language, and multiple inheritance that specifies multiple superclasses is possible.
b. Integer and character are always treated as class.
c. Because there is a pointer type, you can refer directly to the address on the memory.
d. There is garbage collection function for memory management.

JITEC FE 2018 Fall AM Question 9 (English translation)

When the number of clocks required for the execution of the instruction and the occurrence rate of the instruction are the values shown in the table for the CPU with the operation clock frequency of 700 MHz, how many MIPS is the performance of this CPU?

Type of instruction	Clocks required for executing	Occurrence rate (%)
Operation for inter-register	4	30
Operation between memory and register	8	60
Non-conditional jump	10	10

a. 10 b. 50 c. 70 d. 100

JITEC FE 2018 Fall AM Question 10 (English translation)

Which register preserves at the time of the interruption so as to resume from the interrupted location after the end of the interrupt processing?

a. Index register b. Data register
c. Program counter d. Instruction register

JITEC FE 2018 Fall AM Question 11 (English translation)

ECC is used for memory error detection and correction. When $n + 2$ bits are required for redundant bits for data bus width 2^n bits, how many bits of redundant bits are necessary for the 128-bit data bus width?

a. 7 b. 8 c. 9 d. 10

JITEC FE 2018 Fall AM Question 12 (English translation)

Which one is appropriate as an explanation of USB 3.0?

a. It is an interface that uses 4 pairs of signal lines that transmit 2 bits of information with 1 clock and has a throughput of 1 Gbit / s maximum at the maximum.
b. It is a serialized ATA specification that connects a PC and peripheral devices.
c. It adopts isochronous transfer suitable for audio, video, etc., and it is a serial interface with broadcast transfer mode.
d. It is a serial interface with a data transfer mode of 5 Gbit / s called super speed.

JITEC FE 2018 Fall AM Question 13 (English translation)

In the Web system, which is appropriate as an advantage when placing the Web server and the application (AP) server on different physical servers?

a. Since the execution environment of the client is implemented in the Web server, it is not necessary to exchange screen data between the client and the AP server every time the request is made, and the amount of data communication can be small.
b. Since the Web server absorbs the difference between the character code system of the Web browser and the character code system of the AP server, garbled characters do not occur.
c. Since the business logic accompanying the access to the data is arranged in the program of the Web server, it is unnecessary to change the program of the AP server as the business logic is changed.
d. Processing can be divided according to the type of request from the client so that the request to the static contents with light load is processed by the Web server and the request to the dynamic contents with heavy load is processed by the AP server.

JITEC FE 2018 Fall AM Question 14 (English translation)

There are systems where the operation status is continuously monitored. Which of the following is appropriate for the order of capacity planning work items to be implemented when new business is applied to the system in a few years after its operation?

[Work item of capacity planning]

(1) Evaluate whether the system configuration is appropriate, and if necessary review it.

(2) Consider the necessary system configuration such as the number of servers and whether parallel distributed processing is implemented according to the system characteristics.

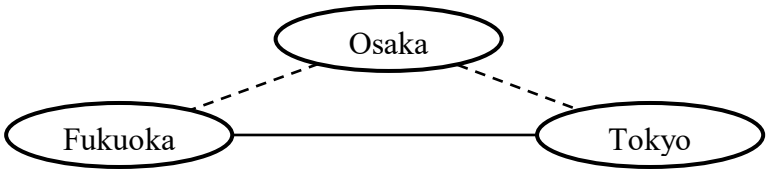
(3) Understand the hardware performance information and the system-specific environment from the operating status of the system.

(4) Hears new business to users and others and grasps the requirements required of the system such as the number of expected processing and the time required for processing.

a. (3), (2), (4), (1) b. (3), (4), (2), (1) c. (4), (2), (1) ,(3) d. (4), (3), (1), (2)

JITEC FE 2018 Fall AM Question 15 (English translation)

There is a line represented as a solid line connecting Tokyo and Fukuoka. In order to improve the reliability between Tokyo and Fukuoka, we added a dashed detour line via Osaka. What is the availability rate between Tokyo and Fukuoka after detour line addition? Here, the availability rate of the line is 0.9 for all of Tokyo and Fukuoka, Tokyo and Osaka, Osaka and Fukuoka.



a. 0.729 b. 0.810 c. 0.981 d. 0.999

JITEC FE 2018 Fall AM Question 16 (English translation)

The priority of the three tasks and the order of operation and processing time of the CPU and the input / output device (I / O) when each task is executed independently are as shown in the table. How many milliseconds is the CPU idle time from the time when the three tasks can be executed at the same time to the time when execution of all the tasks is completed under the OS that performs the task scheduling of the priority method? Here, there is one CPU, one CPU is composed of one core, I/O does not conflict, OS overhead is not considered. Also, the numbers in parentheses in the table indicate processing time.

Priority	Operating sequence and processing time in standalone execution
High	CPU (3) → I/O (5) → CPU (2)
Middle	CPU (2) → I/O (6) → CPU (2)
Low	CPU (1) → I/O (5) → CPU (1)

a. 2 b. 3 c. 4 d. 5

JITEC FE 2018 Fall AM Question 17 (English translation)

Which is appropriate as an explanation of the spooling function?

a. When a CPU enters an idle state by executing an I/O instruction while executing a certain task, CPU is allocated to other tasks.
b. Temporarily suspend the program being executed and transfer control to the control program.
c. Data transfer between the main storage device and the low-speed input / output device is performed via the auxiliary storage device, thereby increasing the processing capability of the entire system.
d. By preparing a buffer pool consisting of a large number of buffers and increasing the probability of accessing the buffer in the main memory, the access time of the auxiliary storage device is shortened.

JITEC FE 2018 Fall AM Question 18 (English translation)

Which of the descriptions on scheduling is appropriate as an explanation of the round robin method?

a. It is a method that allocates CPU time equally to each task and executes it.
b. Each task is assigned a CPU time proportional to the turnaround time and executed.
c. It is a method of executing in real time in response to occurrence of an execution event of each task.
d. Each task is executed in descending order of priority.

JITEC FE 2018 Fall AM Question 19 (English translation)

Which of the processes that the compiler of procedural language will perform first?

a. Semantic analysis
b. Parsing
c. optimisation
d. Lexical analysis

JITEC FE 2018 Fall AM Question 20 (English translation)

Which of the following is a suitable function of the linker?

a. Register the created program in the library.
b. Load the load module into main memory before execution.
c. Resolution of cross-references etc., and generates one load module from a plurality of object modules etc.
d. Monitor the execution of the program and record the execution result for each step.

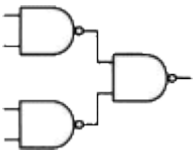
JITEC FE 2018 Fall AM Question 21 (English translation)

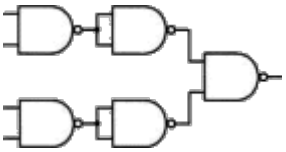
Which of the following description is appropriate for DRAM?

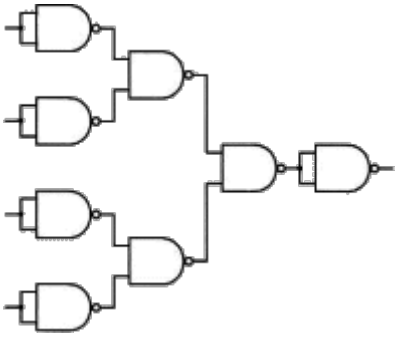
a. It is a nonvolatile memory that can erase and write data in units of 1 byte and is used for applications that need to hold data even when the power supply is cut off.
b. Nonvolatile memory is NAND type or NOR type, and it is used for SSD.
c. Memory cells are composed of flip-flops and used for cache memories.
d. It is a memory requiring a refresh operation and is used as a main memory of PC.

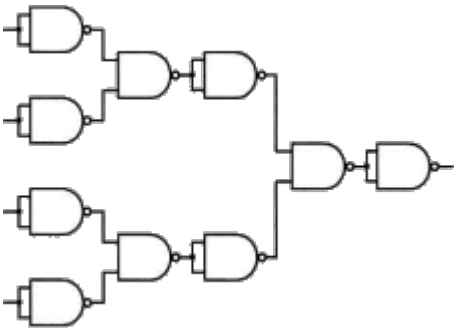
JITEC FE 2018 Fall AM Question 22 (English translation)

Which 4-input NAND circuits is appropriate configured using 2-input NAND devices?

a.


b.


c.


d.


JITEC FE 2018 Fall AM Question 23 (English translation)

Which one is a secondary battery (rechargeable battery)?

a. Alkaline manganese dry battery
b. Silver oxide battery
c. Fuel battery
d. Lithium ion battery

JITEC FE 2018 Fall AM Question 24 (English translation)

In the train reservation system, human beings and computers exchange only voice as follows. Which type of interface is used in this case?

[Legend]

P: Person

C: Computer

P: "May 28th from Nagoya station to Tokyo station."

C: "Please give me the number of people to board."

P: "I'd like two adults."

C: "Please give me your departure time."

P: "I hope around 9AM."

C: "How about the train departing at 9:03AM and arriving at 10:43AM?"

P: "Yes please."

C: "I will check with 2 adults, will you leave Nagoya station on May 28th at 9:03AM and take the train arriving at Tokyo station at 10:43AM?"

P: "Yes."

a. Sensibility Interface
b. Natural Language Interface
c. Nonverbal Interface
d. Multimodal Interface

JITEC FE 2018 Fall AM Question 25 (English translation)

In a display device such as a liquid crystal display, which is a method for smoothly displaying a tilted straight line?

a. Antialiasing
b. Shading
c. Texture Mapping
d. Bump mapping

JITEC FE 2018 Fall AM Question 26 (English translation)

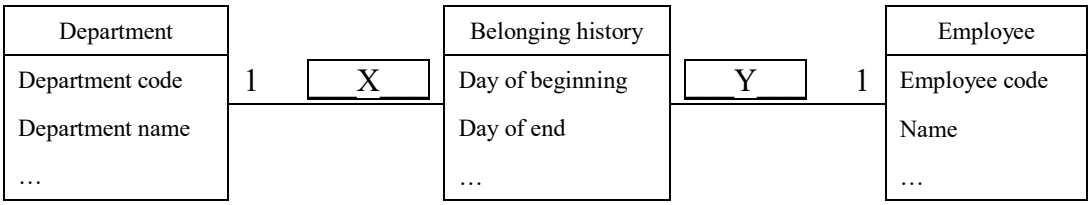
Which multiplicity to put in X, Y of the data model of the figure expressed using UML?

[conditions]

More than one employee belongs to the department.

Employees belong to one department each.

Record the history of employees belonging to the department as the affiliation history.



	X	Y
a.	0..*	0..*
b.	0..*	1..*
c.	1..*	0..*
d.	1..*	1..*

JITEC FE 2018 Fall AM Question 27 (English translation)

When establishing naming conventions for data items, which ones cannot be avoided with only the following naming conventions?

[Naming convention]

(1) Be sure to append a segment word such as "name", "code", "number", "amount of money", "year / month / day" to the end of the data item name, and make it a data type defined for each segment word.

(2) Create a dictionary in which data item names and meanings are registered so that abnormal synonyms and homophones are not generated.

a. A date type and a character string type are mixed as a data type of the data item "date of receipt".

b. The range of possible values of the data item "order receipt amount" varies depending on the table.

c. There is a data item "incentive amount" in the same meaning as the data item "bonus amount".

d. It cannot be determined whether the data item "business partner" is "business partner code" or "business partner name".

JITEC FE 2018 Fall AM Question 28 (English translation)

Which relational algebra operations to obtain relation Z after natural combination of relations X and Y?

X

Student ID	Student Name	Department code
1	Taro YAMADA	A
2	Ichiro JOHO	B
3	Hanako SUZUKI	A
4	Goro GIJUTSU	B
5	Jiro KOBAYASHI	A
6	Momoko SHIKEN	A

Y

Department code	Department name
A	Engineering
B	Informatics
C	Literature

Z

Departnemt name	Student ID	Student Name
Informatics	2	Ichiro JOHO
Informatics	4	Goro GIJUTSU

a. Projection and Sum
b. Selection
c. Selection and Projection
d. Selection and Sum

JITEC FE 2018 Fall AM Question 29 (English translation)

Which of the explanations on the granularity of locks is appropriate?

a. When updating data, increasing the granularity increases waiting for other transactions and reduces overall throughput.
b. When the number of transactions for updating the same data is large, increasing the granularity increases the number of transactions that can be executed concurrently.
c. When referring to all the data of the table, increasing the granularity makes it possible not to disturb data reference of other transactions.
d. When the granularity is increased, the number of data included increases, so the number of locks to be put in one transaction increases.

JITEC FE 2018 Fall AM Question 30 (English translation)

If a failure occurs in the storage medium where the database is stored, which operation to be done for recovering the database using backup files and logs?

a. Archive b. Commit c. Checkpoint dump d. Roll forward

JITEC FE 2018 Fall AM Question 31 (English translation)

How long is the transmission time required to transfer 12 Mbytes of data using a 1.5 Mbit/s transmission line? Here, the transmission efficiency of the transmission line is assumed to be 50%.

a. 16 b. 32 c. 64 d. 128

JITEC FE 2018 Fall AM Question 32 (English translation)

Which of the descriptions on the inter-LAN connection device is appropriate?

a. The gateway converts only the first to third layer protocols in the OSI basic reference model.
b. The bridge relays the frame based on the IP address.
c. The repeater extends the transmission distance by amplifying the signal among similar segments.
d. The router relays the frame based on the MAC address.

JITEC FE 2018 Fall AM Question 33 (English translation)

Which role does DNS play in TCP / IP networks?

a. In response to a request for assigning an IP address from a PC, a printer, or the like, an unused IP address is assigned from the IP addresses registered in the server.
b. Programs on the server are called only by specifying the program name without being conscious of the IP address of the server.
c. It converts the private IP address in the company into the global IP address and makes it possible to access the Internet.
d. Associate the domain name, host name, etc. with the IP address.

JITEC FE 2018 Fall AM Question 34 (English translation)

In the Internet e-mail standards, which ones is extended header fields so that it can handle not only text but also voice, images, etc.?

a. HTML b. MHS c. MIME d. SMTP

JITEC FE 2018 Fall AM Question 35 (English translation)

What is the name of the communication standard with the following three features used in the mobile phone network?

(1) All communication is handled in a packet switching manner.
(2) A communication method called MIMO using a plurality of antennas can be used.
(3) It is standardized by the international standardization project 3 GPP (3rd Generation Partnership Project).

a. LTE (Long Term Evolution) b. MAC (Media Access Control)
c. MDM (Mobile Device Management) d. Voice over Internet Protocol (VoIP)

JITEC FE 2018 Fall AM Question 36 (English translation)

Which is the purpose of applying digital signature to application software?

a. Allow users to detect tampering with application software.
b. Restrict the use of application software to specific users.
c. Prove that the copyright of the application software exists in the creator.
d. Disable modification or modification by users of application software.

JITEC FE 2018 Fall AM Question 37 (English translation)

When a ciphertext known to be encrypted with AES - 256 is given, which is the maximum number of trials required to obtain a plaintext decrypted as a key in a brute force attack?

a. 256 b. 2^{128} c. 2^{255} d. 2^{256}

JITEC FE 2018 Fall AM Question 38 (English translation)

Which one is appropriate as a feature of common key cryptography?

a. When used for encrypted communication, it is necessary to share the key with the other party, and it is recommended to send it in plaintext beforehand.
b. When there is only one opponent who performs encrypted communication, the number of keys used is larger than that of the public key encryption method.
c. When a key length having the same degree of encryption strength is selected, the time required for encryption and decryption is shorter than that in the public key encryption method.
d. When a key pair is generated and a document is encrypted with one key, only the other key can be decrypted.

JITEC FE 2018 Fall AM Question 39 (English translation)

Which of the following definitions A to D for authenticity and reliability in JIS Q 27000: 2014 (ISO / IEC 27000, information security management system - terminology) is appropriate?

[Definition]

A) Characteristics that the intended behavior and results are consistent

B) The entity has the property that it is what it claims

C) Characteristics that access and use are possible when requested by an authorized entity

D) Characteristics of not allowing or not using information for unauthorized individuals, entities or processes

	Authenticity	Reliability
a.	A	C
b.	B	A
c.	B	D
d.	D	A

JITEC FE 2018 Fall AM Question 40 (English translation)

Which one is created by JPCERT / CC for the purpose of supporting the construction and operation of an organizational incident response system?

a. CSIRT Material

b. ISMS User's Guide

c. Evidence Conservation Guidelines

d. Internal fraud prevention guideline in organization

JITEC FE 2018 Fall AM Question 41 (English translation)

Which one is appropriate for the role of C & C server in botnet?

a. By caching the contents of the Web site and delivering the content to the user on behalf of the original server, the load on the network and the server is reduced.
b. By using protocols such as CHAP when accessing the company network from the outside via the Internet, it prevents eavesdropping of the password at the time of user authentication.
c. By using the one-time password adopting the challenge response method when accessing the company network from the outside via the Internet, it prevents eavesdropping of the password at the time of user authentication.
d. We issue instructions from outside or receive responses so that illegal operations such as attacks against other computers are made to the compromised computer that took over.

JITEC FE 2018 Fall AM Question 42 (English translation)

What is the function of IDS?

a. Check whether the software product installed on the PC is the latest version.
b. Send test data to the product to be inspected and detect brittle vulnerability from product response and behavior.
c. It monitors servers and networks and notifies administrators when intrusion or infringement is detected.
d. We enter information security countermeasure status such as operation management status of information system and company information and self-diagnose the situation of the information security efforts of the organization.

JITEC FE 2018 Fall AM Question 43 (English translation)

Which definition is appropriate as secure booting?

a. Technology that prevents unauthorized activation of the OS by setting a password in the BIOS and requesting the password input of the BIOS when starting the PC
b. Technology that prevents unauthorized activation of the OS by setting a password on the HDD and requesting input of the password of the HDD at the time of starting the PC
c. Technology that prevents the execution of malware before OS startup by verifying the digital signature of the OS and driver at the time of start of the PC and preventing execution of unauthorized items
d. Technology that prevents malware damage by registering malware countermeasure software in the startup program and automatically performing malware scan at OS startup

JITEC FE 2018 Fall AM Question 44 (English translation)

Which of the set of security measures and effects is appropriate when installing an access point of a public wireless LAN?

	Security measures	effect
a.	Configure MAC address filtering	Shut down the connection from the attacker's terminal disguised as the MAC address of the legitimate terminal and prevent spoofing by the user
b.	Encrypt SSID	Conceal SSID and prevent SSID from eavesdropping
c.	The domain registered by the company in the registrar is set as the SSID of the access point	Prevent the installation of a malicious access point with the same SSID as the regular access point
d.	Communication between terminals that are wirelessly connected to the same access point is blocked by the access point	Prevent the user of the public wireless LAN from unauthorized access to the other terminal wirelessly connected to the same access point via the access point

JITEC FE 2018 Fall AM Question 45 (English translation)

When acquiring a log consisting of the source IP address, the domain name of the mail address of the sender of the e-mail, and the domain name of the e-mail address of the recipient of the e-mail at the company's relay mail server, which log can be judged as a third party relay? Here, AAA.168.1.5 and AAA.168.1.10 are their global IP addresses, and BBB.45.67.89 and BBB.45.67.90 are global IP addresses outside the company. x.y.z is the domain name of your company, and x.y.v and x.y.w are the domain names of other companies. Also, assume that IP addresses and domain names are not misrepresented.

	Connection source IP address	Domain name of e-mail sender's e-mail address	Domain name of e-mail recipient's e-mail address
a.	AAA.168.1.5	x.y.z	x.y.v
b.	AAA.168.1.10	x.y.z	x.y.z
c.	BBB.45.67.89	x.y.v	x.y.w
d.	BBB.45.67.90	x.y.v	x.y.z

JITEC FE 2018 Fall AM Question 46 (English translation)

Which is represented in both UML 2.0 sequence diagram and communication diagram?

a. Event and object state
b. The shortest and longest time an object stays in a certain state
c. The period during which the object processes the message
d. Messages sent and received between objects

JITEC FE 2018 Fall AM Question 47 (English translation)

Which one is appropriate as the object-oriented class-instance relationships?

a. An instance defines the specification of a class.
b. An instance is created based on the definition of the class.
c. Multiple classes correspond to one instance.
d. There is only one instance for one class.

JITEC FE 2018 Fall AM Question 48 (English translation)

Which is the weakest module coupling that module-to-module information is passed only by parameters?

a. Common coupling
b. Control coupling
c. Data coupling
d. Content coupling

JITEC FE 2018 Fall AM Question 49 (English translation)

Which one is appropriate as an explanation on "delegation" in object oriented?

a. When an operation is applied to an object, the operation is automatically applied to the related object
b. A mechanism for asking other objects to manipulate an object internally
c. A mechanism that lower classes inherit attributes and operations of superordinate classes
d. A mechanism for generating a new single object by using a plurality of objects as a part

JITEC FE 2018 Fall AM Question 50 (English translation)

Which explanations of the XP (eXtreme Programming) practice is appropriate?

a. The customer is responsible for the specification of the unit test.
b. Continually repeat code merging and testing.
c. After confirming that code can be created and combined, a test case is created.
d. Code that passed the test does not refactor until the next iteration.

JITEC FE 2018 Fall AM Question 01-50

Answers

1 d	11 c	21 d	31 d	41 d
2 c	12 d	22 b	32 c	42 c
3 a	13 d	23 d	33 d	43 c
4 d	14 b	24 b	34 c	44 d
5 c	15 c	25 a	35 a	45 c
6 c	16 b	26 d	36 a	46 d
7 d	17 c	27 b	37 d	47 b
8 d	18 a	28 c	38 c	48 c
9 d	19 d	29 a	39 b	49 b
10 c	20 c	30 d	40 a	50 b

JITEC FE 2018 Spring AM_Technology

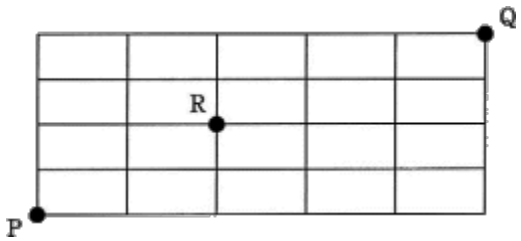
JITEC FE 2018 Spring AM Question 1 (English translation)

In the binary notation in which an integer value is represented by a complement of 2, the least significant 2 bits of a certain integer are "11". Under decimal notation, which description is appropriate as the remainder when dividing its integer value by 4? Here, the quotient of division would be rounded down to the decimal point of the absolute value.

a. If the integer value is positive, 3.
b. If the integer value is negative, -3.
c. If the integer value is negative 3.
d. Regardless of whether the integer value is positive or negative, 0.

JITEC FE 2018 Spring AM Question 2 (English translation)

How many the shortest paths exist from the point P to the point Q through the point R on the line in the figure?



a. 16 b. 24 c. 32 d. 60

JITEC FE 2018 Spring AM Question 3 (English translation)

Which is the characteristics of Deep Learning in AI (Artificial Intelligence)?

a. A rule is set in advance by a human being like "if A, then B," and a solution is obtained as a result of inference based on a rule expressing new knowledge by a logical expression.

b. A method to obtain a solution that is as close as possible to the optimal solution even if it is not an optimal solution, and it is to make it possible to solve a wide range of general purpose problems without specializing in a specific field.

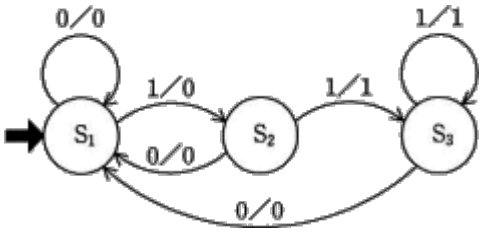
c. A method to realize intelligence such as recognition by imitating the human brain nerve circuit and to enable recognition similar to human beings by using a neural network.

d. Although it is restricted to fields such as medical diagnosis that can create decision rules, it can make a probabilistically high decision such as narrowing down from specific symptoms to specific diseases.

JITEC FE 2018 Spring AM Question 4 (English translation)

The set of input and output symbols is {0, 1}, and an automaton is shown in the state transition diagram. Which one is the appropriate output when 0011001110 is the input? Here, S_1 represents the initial state, and the label of the side of the graph represents input / output.

[State transition diagram]



a. 0001000110 b. 0001001110

c. 0010001000 d. 0011111110

JITEC FE 2018 Spring AM Question 5 (English translation)

Define the next two stack operations.

PUSH n: Push data (integer value n) to the stack.

POP: Pop the data from the stack.

Which of the following results of performing a stack operation on an empty stack in the following order?

PUSH 1→PUSH 5→POP→PUSH 7→PUSH 6→PUSH 4→POP→POP→PUSH 3

a.

1
7
3

b.

3
4
6

c.

3
7
1

d.

6
4
3

JITEC FE 2018 Spring AM Question 6 (English translation)

A list is realized with two one-dimensional arrays. The pair of array element box [i] and next [i] correspond to one element of the list, the value of the element is entered in box [i], and the number of the next element is included in next [i]. If the array is shown in the diagram state, which one is the value of next [8] when inserting an element whose value is H between the 3rd and 4th of the list? Here, next [0] points to the first (first) element of the list, the element whose value of next [i] is 0 represents the end of the list, and the element whose value of next [i] is blank It is not connected to the list.

	0	1	2	3	4	5	6	7	8	9
box		A	B	C	D	E	F	G	H	I

	0	1	2	3	4	5	6	7	8	9
next	1	5	0	7		3		2		

a. 3 b. 5 c. 7 d. 8

JITEC FE 2018 Spring AM Question 7 (English translation)

Which one is the feature of hash method in table searching?

a. It is a kind of a method using a binary tree.
b. There is no collision of the storage location.
c. The storage location is decided by the function value of the key.
d. The time required for the search is almost proportional to the size of the entire table.

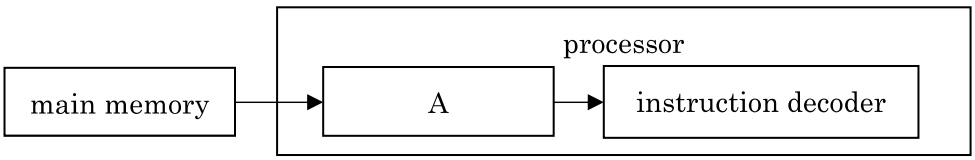
JITEC FE 2018 Spring AM Question 8 (English translation)

What is described in the DTD of the XML document?

a. Character code to use
b. Data
c. Version information
d. Definition of document type

JITEC FE 2018 Spring AM Question 9 (English translation)

The figure shows the storage order of the instructions fetched by the processor. Which of the following applies to A?



a. Accumulator
b. Data cache
c. Program register (program counter)
d. Instruction register

JITEC FE 2018 Spring AM Question 10 (English translation)

Which is classified as internal interrupt?

a. Interruption due to power supply abnormality such as instantaneous power failure of commercial power supply
b. Interruption due to execution of division by zero
c. Interruption due to completion of I / O
d. Interruption due to occurrence of memory parity error

JITEC FE 2018 Spring AM Question 11 (English translation)

Which one is the appropriate description of cache memory?

a. When there is no hit in the cache memory, an interrupt occurs, and data is transferred from the main memory to the cache memory by the program.
b. Cache memory is employed to fill up the difference in memory capacity between real storage and virtual storage.
c. There is one method of rewriting both the cache memory and the main storage when executing a data write instruction, and another method of rewriting only the cache memory and performing rewriting of the main memory when the data is expelled from the cache memory.
d. Since the progress of the access speed of semiconductor memories is remarkable, the need for cache memories is decreasing.

JITEC FE 2018 Spring AM Question 12 (English translation)

Which of the following is a suitable feature of SDXC which is one of the upper standards of SD memory cards?

a. Peripheral functions such as GPS, camera, wireless LAN adapter etc. are mounted on the card as hardware.
b. It is a small size of 1/4 or less of the SD memory card and has a capacity of a maximum of 32 Gbytes.
c. Adopting AACS as a copyright protection technology, security was enhanced more than the conventional SD memory card.
d. ExFAT is adopted as a file system, and it can cope with a capacity of 2 T bytes at maximum.

JITEC FE 2018 Spring AM Question 13 (English translation)

Which is indispensable for realizing a fault tolerant system?

a. Redundancy is to be added to the system configuration so that even if a component fails, the influence is minimized so that processing can be continued without affecting the entire system.
b. Automatically records the history such as the change information of the database that the system is in operation for investigating the cause and recovery when the system fails.
c. In case of a failure, backing up the data should be needed on a regular basis in order to promptly recover the state to the spare environment before the failure.
d. It should be designed to make easy operation which is hard to cause operation error, or to prevent fatal error even if operation error occurs.

JITEC FE 2018 Spring AM Question 14 (English translation)

Two computers are prepared and if the working system fails, the system that starts up the same online processing program as the active system in advance and quickly switches to the standby computer that is on standby and continues processing. Which is appropriate explanation for this system

a. Cold standby system
b. Hot standby system
c. Multiprocessor system
d. Multiuser system

JITEC FE 2018 Spring AM Question 15 (English translation)

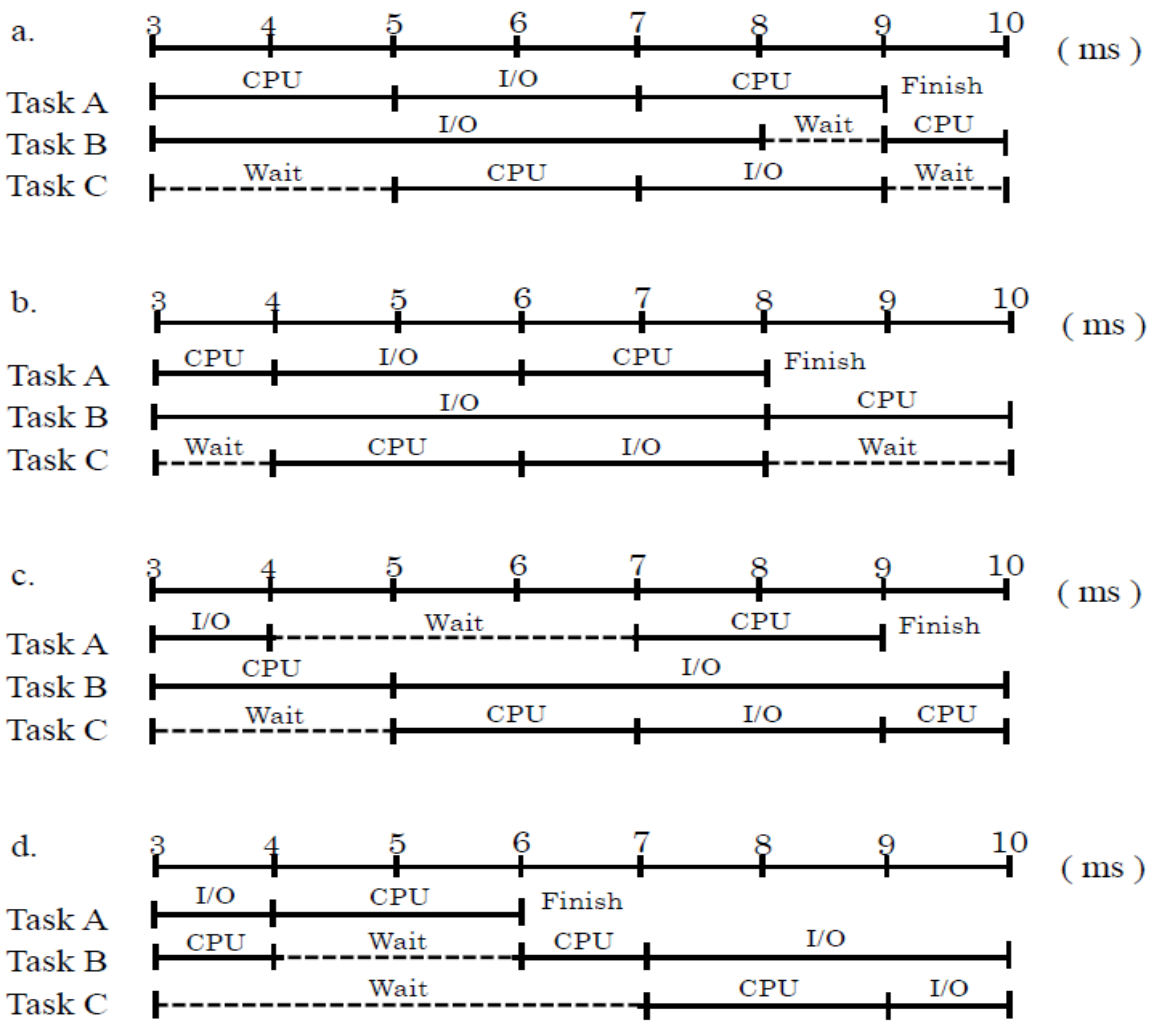
Which is appropriate as a description of the scale-out of the system?

a. Improve the processing capability of the whole system by additionally introducing a server to the existing system.
b. Reduce the system operation cost by rearranging some or all of the servers of the existing system to cloud services and the like.
c. Improve the processing capacity of individual servers by replacing servers of existing systems with those of higher performance.
d. Reduce the system operation cost by making one server appear as if it is a plurality of servers.

JITEC FE 2018 Spring AM Question 16 (English translation)

The priority of the three tasks A to C and the operation order and processing time of the CPU and the input / output device (I / O) when each task is executed independently are as shown in the table. Which figure is appropriate that shows the scheduling situation for 7 milliseconds after 3 milliseconds since A to C became executable at the same time? Here, the I / O does not conflict, and the overhead of the OS is not needed to consider. In addition, the number in parentheses ( ) means the processing time, "wait" in the answer group means that the task is in the executable state and waiting for CPU allocation.

Task	Priority	Operating sequence and processing time in standalone execution (ms)
A	High	CPU(2) → I/O(2) → CPU(2)
B	Middle	CPU(3) → I/O(5) → CPU(2)
C	Low	CPU(2) → I/O(2) → CPU(3)



JITEC FE 2018 Spring AM Question 17 (English translation)

Which one is the explanation of the absolute path name of the file system?

a. Among the several path names from one directory to the target file, the shortest path name
b. Path name from the current directory to the target file
c. Path name from home directory to target file
d. Path name from the root directory to the target file

JITEC FE 2018 Spring AM Question 18 (English translation)

Which is the main purpose of the compiler's optimization?

a. Reduce the execution time of the program.
b. Easy to debug programs.
c. Improve maintainability of the program.
d. Reduce the time to generate the object program.

JITEC FE 2018 Spring AM Question 19 (English translation)

Which OSS is provided as an integrated development environment for software?

a. Apache Tomcat
b. Eclipse
c. GCC
d. Linux

JITEC FE 2018 Spring AM Question 20 (English translation)

Which OSS provides a large-scale distributed file system function consisting of a large number of servers and realizes distributed processing of large-scale data by MapReduce?

a. Apache Hadoop
b. Apache Kafka
c. Apache Spark
d. Apache Storm

JITEC FE 2018 Spring AM Question 21 (English translation)

Which one is appropriate as an explanation of the actuator?

a. Compares the given target amount with the control amount obtained from the sensor and outputs the operation amount so that the control amount matches the target amount.
b. The position, angle, speed, acceleration, force, temperature, etc. are detected and converted into electrical information.
c. Convert the power from the energy generation source into motion such as rotation, translation, etc. based on the control signal.
d. Microphones, sensors, etc. amplify minute electric signals output by them.

JITEC FE 2018 Spring AM Question 22 (English translation)

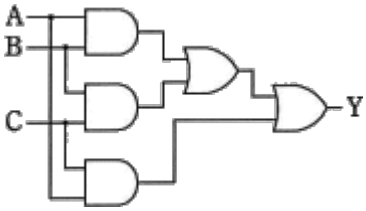
Which of the following is appropriate for describing flash memory?

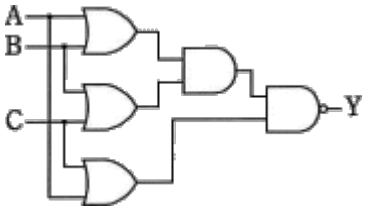
a. It can be rewritten at high speed and used for cache memory of CPU.
b. All data can be erased collectively with ultraviolet rays.
c. It is necessary to periodically rewrite data.
d. Contents can be erased electrically in block units.

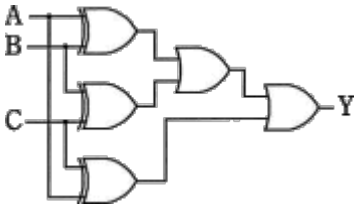
JITEC FE 2018 Spring AM Question 23 (English translation)

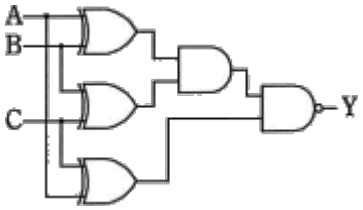
Which three-input majority circuit is shown in the truth table?

INPUT			OUTPUT
A	B	C	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

a.


b.


c.


d.


JITEC FE 2018 Spring AM Question 24 (English translation)

Which check is done to check if the order date is a business day before the input date when the following order data is entered?

Order data

Slip number (character)	Order date (character)	Product code (character)	Quantity (number)	Customer code (character)

a. Sequence check
b. Double check
c. Format check
d. Logical check

JITEC FE 2018 Spring AM Question 25 (English translation)

Which statement is appropriate about H.264 / MPEG-4 AVC?

a. A communication method for controlling streaming distribution of moving images and audio data on the Internet
b. A communication method for controlling bidirectional video distribution by video conference or video phone
c. A method of describing metadata of program contents used in television's electronic program guide
d. A compression coding system for moving picture data used in one segment broadcasting (mobile terrestrial digital audio/video and data broadcasting service) and the Internet

JITEC FE 2018 Spring AM Question 26 (English translation)

Which is the most appropriate explanation of AR (Augmented Reality)?

a. By watching images recorded in the past, you get the feeling that you were in that place in that era.
b. By adding virtual information using a computer to a part of the actual scene in front of you, you can experience the extended reality environment.
c. By constructing a natural three-dimensional virtual space for people and changing the virtual space according to their own actions, it is possible to obtain a sense as if they are in that place.
d. By using equipment such as a head mounted display to encourage people's five senses, you can experience places and worlds that do not actually exist as if they were real.

JITEC FE 2018 Spring AM Question 27 (English translation)

Among the functions provided by the DBMS, which is an appropriate way to realize data security protection?

a. Manage transactions that organize a series of processes as logical units.
b. Manage users' access rights to data.
c. Check referential constraints when updating data.
d. Put a proprietary lock before updating data.

JITEC FE 2018 Spring AM Question 28 (English translation)

In the part of the program using the following embedded SQL, what is the name X represents?

```
EXEC SQL OPEN X;
      EXEC SQL FETCH X INTO :NAME, :DEPT,
:SALARY;
      EXEC SQL UPDATE EMPLOYEE
            SET MONEY = MONEY * 1.1
            WHERE CURRENT OF X;
EXEC SQL CLOSE X;
```

a. Cursor
b. Schema
c. Table
d. View

JITEC FE 2018 Spring AM Question 29 (English translation)

Which files are to be saved as database update records by exporting the values before and after updating the database?

a. Dump file
b. Checkpoint file
c. Backup file
d. Logfile

JITEC FE 2018 Spring AM Question 30 (English translation)

In the following description of RDBMS lock granularity, which is appropriate as A and B combination?

> Two transactions processed in parallel each update multiple rows in one table. When comparing row-by-row locking with table-based locking, lock conflicts are more likely to occur when using ___A___ lock. In addition, it is necessary to use more memory use area of RDBMS for managing locks during transaction execution when using ___B___ lock.

	A	B
a	row	row
b	row	table
c	table	row
d	table	table

JITEC FE 2018 Spring AM Question 31 (English translation)

When transferring 10 M bytes of data using a 100,000 bit / s line, how long is the transfer time? Here, the line transmission efficiency is set to 50%, and 1 M byte = 10^6 bytes.

a. 200 b. 400 c. 800 d. 1,600

JITEC FE 2018 Spring AM Question 32 (English translation)

There is a network with the following network address and subnet mask. When a PC uses this network, which IP address should not be allocated to that PC?

Network address:

200.170.70.16

Subnet mask:

255.255.255.240

a. 200.170.70.17
b. 200.170.70.20
c. 200.170.70.30
d. 200.170.70.31

JITEC FE 2018 Spring AM Question 33 (English translation)

Which command should be used to check the MAC address of the printer connected to the LAN from the PC on the same LAN? Here, it is assumed that the PC is using this printer immediately before, and the IP address of the printer is known.

a. arp
b. ipconfig
c. netstat
d. ping

JITEC FE 2018 Spring AM Question 34 (English translation)

Which of the header fields of the e-mail are deleted in the course of message transfer by SMTP?

a. Bcc
b. Date
c. Received
d. X-Mailer

JITEC FE 2018 Spring AM Question 35 (English translation)

What is the mechanism by which the Web server and the external program cooperate to realize an interactive page such as executing the application program in response to a request from the client and returning the result to the Web browser in the Web server.

a. CGI
b. HTML
c. MIME
d. URL

JITEC FE 2018 Spring AM Question 36 (English translation)

Which of the following is appropriate explanation as "Drive-by download attack"?

a. Remotely control the malware in the PC to encrypt the entire hard disk drive of the PC.
b. Invade by mistake of setting firewall from external network and invade and set up a root kit to the system drive of the server in the internal network.
c. On the public Web site, enter the script in the input field in the Web page, and illegally download the data in the database accessed by the Web server.
d. When the user browses the public Web site, regardless of the intention of the user, let the PC download the malware and infect it.

JITEC FE 2018 Spring AM Question 37 (English translation)

What is the purpose of port scans when an attacker breaks into the system?

a. At the post-processing stage, investigate whether traces of attacks remain in the system log.
b. At the stage of authority acquisition, investigate whether there is an account likely to take authority.
c. At the preliminary survey stage, investigate whether there are services that can be attacked.
d. At the stage of fraudulent execution, investigate whether there is useful user information for the attacker.

JITEC FE 2018 Spring AM Question 38 (English translation)

When Mr. A sends Mr. B and Mr. C an e-mail encrypted with Mr. B's public key, then which explanation is appropriate? Here, it is assumed that Mr. A, Mr. B, and Mr. C have each of their 3 public keys and their own secret keys only by themselves.

a. Only Mr. B can decrypt the encrypted e-mail with Mr. A's public key.
b. Only Mr. B can decrypt the encrypted e-mail with Mr. B's secret key.
c. Mr. B and Mr. C can decrypt the encrypted e-mail with Mr. B's public key.
d. Both Mr. B and Mr. C can decrypt the encrypted e-mail with their own secret key.

JITEC FE 2018 Spring AM Question 39 (English translation)

In ISO/IEC/JIS Q 27000: 2014 (information security management system - terminology), which is defined as "the entity is the characteristic that it is as claimed"?

a. Authenticity
b. Reliability
c. Responsibility traceability
d. Nonrepudiation

JITEC FE 2018 Spring AM Question 40 (English translation)

Which explanation is appropriate for SPF (Sender Policy Framework)?

a. The server that receives the e-mail confirms that there is no misrepresentation of the sender domain using the digital signature attached to the e-mail.
b. The server that receives the e-mail confirms that there is no domain misrepresentation from the domain information of the sender of the e-mail and the IP address of the server that sent the e-mail.
c. Transmission of the e-mail is suspended temporarily until the server that sends the e-mail gets approval from the supervisor of the sender of the e-mail to be transmitted.
d. The server that sends the e-mail archives all the e-mails regardless of the domain of the e-mail destination or the mail address of the sender.

JITEC FE 2018 Spring AM Question 41 (English translation)

Which way is appropriate to prevent SQL injection attacks?

a. Make sure that the character being input is not interpreted as a character having a special meaning in the query or operation to the database.
b. If an HTML tag is included in the input, it is replaced with another character string which is not interpreted as an HTML tag.
c. It does not accept when the input contains characters (../) specifying the higher directory.
d. It does not accept when the total length of input exceeds the limit.

JITEC FE 2018 Spring AM Question 42 (English translation)

Which of the following describes "Security by Design"?

a. Third-party information security experts will conduct vulnerability diagnosis on the developed system and improve the quality and security of the system.
b. Risk assessment is performed on developed systems and the system is refurbished based on the results of risk assessment.
c. In system operation, it is to repair the system based on the audit result by a third party.
d. It is a measure to secure security from the planning and design stage of the system.

JITEC FE 2018 Spring AM Question 43 (English translation)

There is an application that has only the function of retrieving user information from the database storing user information and displaying it. Which is appropriate for information security management as the access authority to the database given to the account used by this application to access the database? Here, the name of authority and the scope of authority are as follows.

[Name of authority and scope of authority]

Reference permission:	Record reference allowed
Update permission:	Record can be registered, changed, deleted
Administrator privilege:	Can browse, register, change, delete tables

a. Administrator authority
b. Update permission
c. Update authority and reference authority
d. Reference authority

JITEC FE 2018 Spring AM Question 44 (English translation)

We have installed a static packet filtering type firewall that does not have stateful inspection function at the connection point between the company network and the Internet. In this network configuration, when making it possible to send e-mail from an in-house PC to an SMTP server on the Internet, which combination of port numbers of TCP packets allowed to pass through the firewall is appropriate? Here, it is assumed that the default port number is used for SMTP communication.

	Sender	Destination	Port number (Sender)	Port number (Destination)
a.	PC	SMTP Server	25	more than 1024
	SMTP Server	PC	more than 1024	25
b.	PC	SMTP Server	110	more than 1024
	SMTP Server	PC	more than 1024	110
c.	PC	SMTP Server	more than 1024	25
	SMTP Server	PC	25	more than 1024
d.	PC	SMTP Server	more than 1024	110
	SMTP Server	PC	110	more than 1024

JITEC FE 2018 Spring AM Question 45 (English translation)

Which is the most appropriate description to consider when introducing a biometric authentication system?

a. Let the trusted third party issue your digital certificate.
b. Adjust the device settings considering both False Rejection Rate (FRR) and False Acceptance Rate (FAR).
c. By using a product frequently updating the malware definition file, we can prevent decreasing False Rejection Rate (FRR).
d. The balance between the knowledge that cannot be easily guessed and the knowledge that you can remember is important as for the setting of the knowledge necessary for authentication.

JITEC FE 2018 Spring AM Question 46 (English translation)

In object-oriented programming/design principle, what is the name of the feature that allows attributes and functions of a class to be used in subclasses?

a. Override
b. Encapsulation
c. Inheritance
d. Polymorphism

JITEC FE 2018 Spring AM Question 47 (English translation)

In the development process, which work should be done by software method design?

a. Ask the customer for opinions and determine specifications.
b. Converts requirements for software items into schemes representing top level structures and identifying software components.
c. Details the program so that it becomes clearer up to the processing of each encoded line.
d. Summarize the contents of the request in a format such as a chart and analyze it step by step in detail.

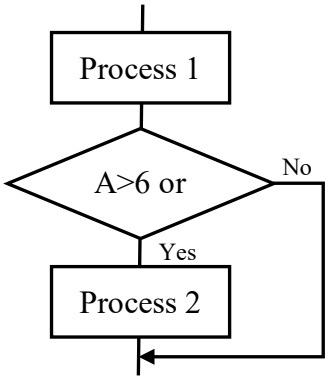
JITEC FE 2018 Spring AM Question 48 (English translation)

Which of the methods for creating test data for black box test is the most appropriate?

a. Raw data is randomly extracted from the running system and test data is created.
b. Identify equivalence classes and limit values from functional specifications and create test data.
c. Analyze the occurrence frequency of data occurring in business, and create test data.
d. Based on the flow chart of the program, test data based on the branch condition is created.

JITEC FE 2018 Spring AM Question 49 (English translation)

Test data on the part shown in the program flow chart was set by decision coverage. When changing this test data to setting by multiple condition coverage, which of the test data to be added is appropriate? Here, the portion surrounded by ( ) represents a set of test data.



- Test data with coverage analysis
  (A = 4, B = 1), (A = 5, B = 0)

a. (A = 3, B = 0), (A = 7, B = 2)
b. (A = 3, B = 2), (A = 8, B = 0)
c. (A = 4, B = 0), (A = 8, B = 0)
d. (A = 7, B = 0), (A = 8, B = 2)

JITEC FE 2018 Spring AM Question 50 (English translation)

Which of the practices of Extreme Programming (XP: eXtreme Programming) is to facilitate communication and improve the quality of programs by alternating roles and checking in program development in program development?

a. Plan game
b. Coding standard
c. Test driven development
d. Pair programming

JITEC FE 2018 Spring AM Question 01-50

Answers

1 a	11 c	21 c	31 D	41 a
2 d	12 d	22 d	32 D	42 d
3 c	13 a	23 a	33 A	43 d
4 a	14 b	24 d	34 A	44 c
5 c	15 a	25 d	35 A	45 b
6 c	16 c	26 b	36 D	46 c
7 c	17 d	27 b	37 c	47 b
8 d	18 a	28 a	38 b	48 b
9 d	19 b	29 d	39 a	49 d
10 b	20 a	30 c	40 b	50 d

JITEC FE 2017 Fall AM_Technology

JITEC FE 2017 Fall AM Question 1 (English Translation)

There is a register that represents a numeric value in binary notation. Which operation to multiply the positive integer x stored in this register by 10? Here, it is assumed that overflow of digits will not occur.

a. Add x to the value obtained by shifting x left by 2 bits and shift it further by 1 bit to the left.
b. x is added to the value obtained by shifting x left by two bits, and further shifted to the left by 2 bits.
c. Adds the value obtained by shifting x to the left by 3 bits and the value obtained by shifting x left by 2 bits.
d. Add x to the value obtained by shifting x to the left by 3 bits and further shift it to the left by 1 bit.

JITEC FE 2017 Fall AM Question 2 (English Translation)

Which method is appropriate for error checking explained in following sentences?

> "On the transmission side, the remainder obtained by dividing the bit string by a certain generator polynomial is added to the bit string itself and transmitted, and on the receiving side, the error is checked by whether the received bit string can be divided by the same generator polynomial."

a. CRC method
b. Vertical parity check method
c. Horizontal parity check method
d. Hamming code method

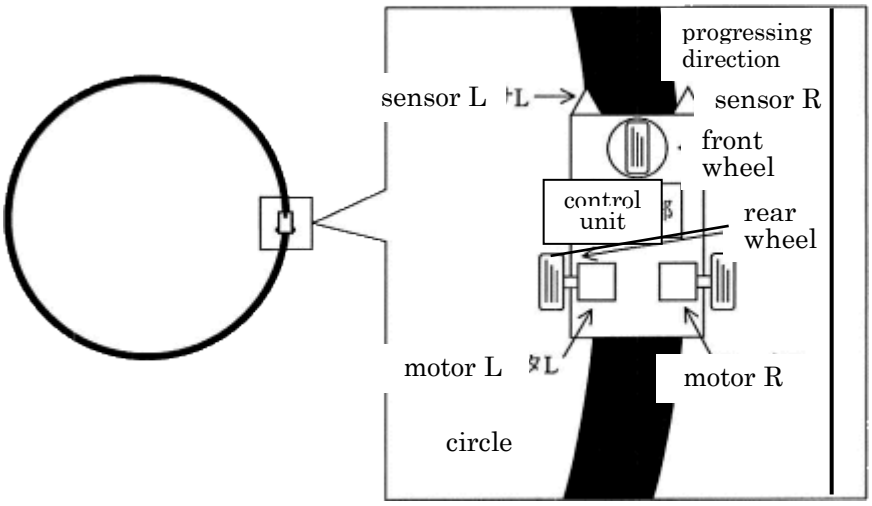
JITEC FE 2017 Fall AM Question 3 (English Translation)

Which is appropriate explanation of feedback control?

a. Perform control in a predetermined order.
b. Control is performed before the influence of disturbance appears on the output.
c. The output result is compared with the target value, and control is performed so as to coincide.
d. Control is performed without using the output result.

JITEC FE 2017 Fall AM Question 4 (English Translation)

The rotation speeds of the motors L and R independently mounted on the left and right rear wheels are controlled so that the car runs along a circle drawn in black as shown in the figure. Sensors L and R are reflection type photosensors, output value decreases when the ratio of black color of sensor is large, and output value increases when ratio of black color is small. Which is a suitable method for controlling the motor rotation speed to drive this car along a circle? Here, when the output values of the two sensors coincide, it is assumed that the rotational speeds of the two motors are returned to their initial values.



	output of sensor L > output of sensor R		output of sensor L < output of sensor R	
	speed of motor L	speed of motor R	speed of motor L	speed of motor R
a.	increase	decrease	increase	decrease
b.	increase	decrease	decrease	increase
c.	decrease	increase	increase	decrease
d.	decrease	increase	decrease	increase

JITEC FE 2017 Fall AM Question 5 (English Translation)

Which data strings can be output using only one stack for data arriving in the order A, B, C, D?

a. A, D, B, C b. B, D, A, C c. C, B, D, A d. D, C, A, B

JITEC FE 2017 Fall AM Question 6 (English Translation)

Which description is appropriate for the recursive call?

a. Perform processing according to the event that occurred, not in a predetermined order.
b. Performing processing calling itself inside the function.
c. Do not erase the function finished processing from the memory, and use it again when it becomes necessary.
d. When processing fails, it returns to the state just before calling the processing.

JITEC FE 2017 Fall AM Question 7 (English Translation)

Which of the following is an explanation of override to achieve polymorphism for object-oriented programming?

a. Hiding detailed specifications and structures inside the object from the outside.
b. Redefining methods defined in superclass in subclass.
c. Defining multiple methods with the same method name and different argument types, number, and order within the same class.
d. Summarizing the common properties of multiple classes, then creating abstracted classes.

JITEC FE 2017 Fall AM Question 8 (English Translation)

Which of the following statements describes to running Perl?

a. It is developed for UNIX, and there is no language processing system for Windows.
b. It is a language that requires a web server for execution and is suitable for CGI development.
c. Dynamic debugging is performed by executing a program independent from the language processing system.
d. It is not necessary to prepare the file which compiled the program beforehand.

JITEC FE 2017 Fall AM Question 9 (English Translation)

There is a computer with an average instruction execution time of 20 ns. How many MIPS is the performance of this computer?

a. 5 b. 10 c. 20 d. 50

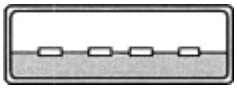
JITEC FE 2017 Fall AM Question 10 (English Translation)

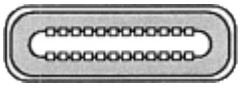
Which description is categorized as an external interrupt?

a. An interrupt generated at the specified time elapsed by the interval timer
b. An interrupt caused by overflow of operation result or division by zero
c. An interrupt caused by access to nonexistent pages in virtual memory management
d. An interrupt caused by execution of software interrupt instruction

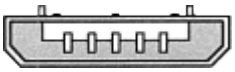
JITEC FE 2017 Fall AM Question 11 (English Translation)

Which is the cross-sectional view of the plug side connector of USB Type-C? Here, the scale of the drawing is not the same.

a. 

b. 

c.

d. 

JITEC FE 2017 Fall AM Question 12 (English Translation)

Which explanation is appropriate for the RAID 5 recording method?

a. It distributes data on multiple magnetic disks, writes data in byte units, and writes parity on one magnetic disk.
b. Writes data on a bit basis by distributing the data on a plurality of magnetic disks, and writes an error correction code (ECC) on a plurality of magnetic disks.
c. The data is distributed to a plurality of magnetic disks and written in block units, and furthermore, parity is written by dispersing the data on a plurality of magnetic disks.
d. In order to construct a mirror disk, write the same contents to two magnetic disks.

JITEC FE 2017 Fall AM Question 13 (English Translation)

Which is the most appropriate explanation for a dual system?

a. Duplicate systems that perform the same processing are prepared in duplicate and check the processing results to check the correctness of processing. If a failure occurs in either system, the process is continued by degenerate operation.
b. Prepare an active system that performs on-line processing and a standby system that makes it stand by while performing batch processing, etc. If a failure occurs in the active system, switch to the standby system and continue online processing.
c. The online processing program of the active system is loaded into the standby system and kept on standby. If a failure occurs in the active system, immediately switch to the standby system and continue processing.
d. Processors, memories, channels, power supply systems, and the like are prepared in duplicate, and processing is continued even if failure occurs in one of the devices.

JITEC FE 2017 Fall AM Question 14 (English Translation)

Which of the benefits can be gained by moving internal business systems to cloud services?

a. By using PaaS, the platform management and the OS update are performed by the provider that provides the service, so that the burden of introduction and operation can be reduced.
b. In the case of transferring an in-house business system having in-house unique functions operated on-premises to a system provided by SaaS, it is easy to transfer functions unique to the company.
c. When temporarily using development and evaluation of in-house business systems, SaaS can be used to prepare a highly flexible development environment.
d. When migrating an internal business system that requires very high availability to IaaS, migration is easy since both providers guarantee high availability.

JITEC FE 2017 Fall AM Question 15 (English Translation)

There is a system whose MTBF is 45 hours and MTTR is 5 hours. What is the operation rate of a system in which two devices are connected in series?

a. 0.81 b. 0.90 c. 0.95 d. 0.99

JITEC FE 2017 Fall AM Question 16 (English Translation)

Which of the following is an appropriate explanation for memory leak?

a. It is the phenomenon the main memory secured during operation is not released due to OS and application bugs etc. When this situation happens, the usable area in main memory decreases.
b. When the number of concurrently executing applications is increased, the main memory capacity becomes insufficient, most of the processing time is spent on paging, resulting in an extreme decrease in throughput.
c. It is a technique to load the necessary modules into the main memory when the size of the program area at the time of execution is limited.
d. Although the total amount of free space available in the main memory is enough, it is discontinuous and scattered in the main memory, so that it is impossible to secure an area for loading a large program.

JITEC FE 2017 Fall AM Question 17 (English Translation)

Which is the appropriate description of polling control in software control?

a. The CPU reads the status register or the busy signal and monitors the status of the input / output device.
b. Temporarily suspends the process being executed, and executes another process with a high degree of urgency.
c. The task on the sending side stores the data in the memory and conveys the address to the task on the receiving side.
d. Allow one task to occupy shared resources used by multiple tasks.

JITEC FE 2017 Fall AM Question 18 (English Translation)

Scheduling two tasks A and B with a real-time OS that performs preemptive scheduling based on priority. Which is the appropriate action for the real-time OS performs when A is higher in priority than B?

a. If B is activated while A is running, B is executed and put A into the executable state.
b. If B is activated while A is running, put A into the wait state and execute B.
c. If A is activated while B is running, A is executed and put B into the executable state.
d. If A is activated while B is running, put B into the wait state and execute A.

JITEC FE 2017 Fall AM Question 19 (English Translation)

In the memory map of the figure, when segment 2 is released, we want to move (dynamically rearrange) the segments and collect the space areas to be dispersed into one continuous area. If one memory access is performed in units of 4 bytes and the read and write are 30 nsec each, how many milliseconds is the total memory access time required for dynamic relocation? Here, it is assumed that 1 k byte is 1,000 bytes, and overhead other than time required for dynamic relocation is not considered.

segment 1	segment 2	segment 3	empty
500 kB	100 kB	800 kB	800 kB

a. 1.5 b. 6.0 c. 7.5 d. 12.0

JITEC FE 2017 Fall AM Question 20 (English Translation)

In paging virtual memory, which is a factor that increases the number of occurrences of page faults?

a. Increase in access to pages that do not exist in main memory
b. Increase in access to pages existing in main memory
c. Increase in the ratio of the updated page among the pages of the main memory
d. Accessing pages of main memory not accessed for a long time

JITEC FE 2017 Fall AM Question 21 (English Translation)

Which memory stores information by the presence or absence of charges stored in the capacitor?

a. EEPROM b. SDRAM c. SRAM d. Flash memory

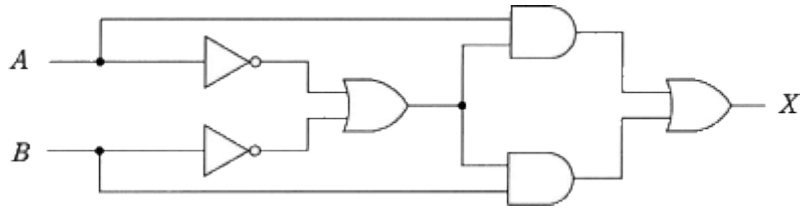
JITEC FE 2017 Fall AM Question 22 (English Translation)

Which is the appropriate description of the function of the actuator?

a. The analog electric signal is converted into a digital signal which can be processed by a computer.
b. It is used for keyboard, touch panel, etc., and inputs information to computer.
c. Change electric signal output by computer into mechanical motion.
d. Detects the physical quantity and converts it into an electric signal.

JITEC FE 2017 Fall AM Question 23 (English Translation)

Which logical expression is equivalent to the digital circuit shown in the figure? Here, "·" in the logical expression represents a logical product, "+" represents a logical sum, and $\bar{X}$ represents a negation of X.



a. $X = A \cdot B + \overline{A \cdot B}$

b. $X = A \cdot B + \bar{A} \cdot \bar{B}$

c. $X = A \cdot \bar{B} + \bar{A} \cdot B$

d. $X = (\bar{A} + B) \cdot (A + \bar{B})$

JITEC FE 2017 Fall AM Question 24 (English Translation)

Which result of adding a check digit obtained by the following method? Here, the data is 7394, the weighting constant is 1234, and the radix is 11.

[method]

(1). Find the product of the corresponding digit of data and weighting constant, and obtain the sum of them.

(2). Divide the sum by the radix and find the remainder.

(3). The remainder is subtracted from the radix, and the least digit of this result is added as the check digit to the end of the data.

a. 73940 b. 73941 c. 73944 d. 73947

JITEC FE 2017 Fall AM Question 25 (English Translation)

Which of the following is a description of hidden line elimination and hidden surface removal in rendering 3DCG?

a. Analyze the position of the light source and how much light hits the target object and decide what color and brightness you see.
b. Draw only the part visible from the specified viewpoint.
c. For the generated image, only the part that fits in the screen to be displayed is displayed.
d. Not only the surface of the object but also the inside of the object and the shape of the part hidden behind it are generated as an image by translucent display or the like.

JITEC FE 2017 Fall AM Question 26 (English Translation)

In client-server systems, which method is able to reduce the network load between clients and servers by pre-storing the highly utilized instruction set in the DBMS on the server?

a. Two phase commitment
b. Group commitment
c. Multithreading server process
d. Stored procedure

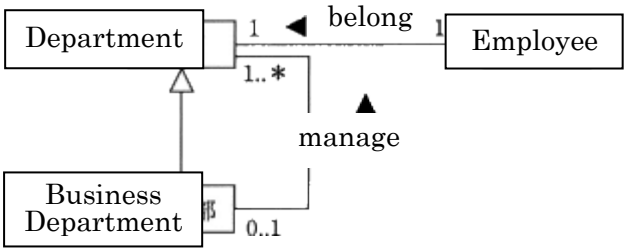
JITEC FE 2017 Fall AM Question 27 (English Translation)

Which constraints do you specify using FOREIGN KEY and REFERENCES in SQL statements?

a. Key constraint
b. Check constraint
c. Referential constraint
d. Assertion

JITEC FE 2017 Fall AM Question 28 (English Translation)

Which of the following is an appropriate interpretation of the data model of the figure expressed using UML?



a. Departments other than the business department can manage departments.
b. Employees can belong to the business department.
c. There are departments that do not have any employees.
d. Departments are managed by one of the business department.

JITEC FE 2017 Fall AM Question 29 (English Translation)

What is the nature of the transaction realized by the function of the RDBMS?

a. ACID characteristics
b. Function dependency
c. Uniqueness of candidate key
d. Data independence

JITEC FE 2017 Fall AM Question 30 (English Translation)

If the transaction processing program terminates abnormally during the database update, the database is restored by rollback processing. Which information should be used at that time?

a. Latest snapshot information
b. The latest backup file information
c. Information after log file update
d. Pre-update information of log file

JITEC FE 2017 Fall AM Question 31 (English Translation)

How many seconds is required as a buffering time of data before starting to reproduce 2.4 Mbytes of audio data having an encoding rate of 192 kbit / second without interruption while downloading using a network having a communication speed of 128 kbits / second?

a. 50 b. 100 c. 150 d. 250

JITEC FE 2017 Fall AM Question 32 (English Translation)

Which of the following is appropriate as a function of a switching hub (Layer 2 switch) which is one of network equipment?

a. Dynamic allocation of IP address is made to the terminal connected to the LAN port.
b. Transfer the received packet only to the LAN port where the destination MAC address exists.
c. Transfer the received packet to all LAN ports (broadcast).
d. The received packet is fragmented at the network layer (fragmentation).

JITEC FE 2017 Fall AM Question 33 (English Translation)

In IPv4, which is appropriate as an explanation of the NAT function of the Internet connection router?

a. By caching access to the Internet, it is a function that can speed up the display when accessing the website of the same IP address afterwards.
b. It is a function to detect attacks and intrusions from the Internet by inspecting IP packets in communication.
c. It is a function to pass only IP packets addressed to a specific terminal.
d. It is a function to mutually convert the private IP address and the global IP address.

JITEC FE 2017 Fall AM Question 34 (English Translation)

Which is the appropriate protocol of the transport layer that is used when real-time performance is more important than reliability?

a. HTTP b. IP c. TCP d. UDP

JITEC FE 2017 Fall AM Question 35 (English Translation)

There is a PC with the following IP address and subnet mask. What is the appropriate network address for this PC?

IP address: 10.170.70.19
Subnet mask: 255.255.255.240

a. 10.170.70.0 b. 10.170.70.16 c. 10.170.70.31 d. 10.170.70.255

JITEC FE 2017 Fall AM Question 36 (English Translation)

Which roles the C & C server plays in botnet?

a. Instruct information collection and attack activities to remotely operable malware.
b. Order the issuance of fake digital certificates to e-commerce business operators and others.
c. Uniform management of text, image and layout information of illegal Web contents.
d. Control and block communication from a plurality of servers as stepping stones.

JITEC FE 2017 Fall AM Question 37 (English Translation)

Which attacks are classified as DNS cache poisoning?

a. Acquire the version information of the software of the DNS server and specify the security hole of the DNS server.
b. It injects fake domain information into the DNS server referred to by the PC, and guides the user to the disguised server.
c. In order to interfere with the service to be attacked, an attacker uses a DNS server as a stepping stone to make recursive inquiries in large quantities.
d. In order to obtain internal information, transfer the zone information saved by the DNS server collectively.

JITEC FE 2017 Fall AM Question 38 (English Translation)

Which public key cryptosystem utilizes the fact that it is difficult to perform prime factorization of a very large number?

a. AES b. DH c. DSA d. RSA

JITEC FE 2017 Fall AM Question 39 (English Translation)

Which is the appropriate description of SQL injection attacks?

a. When there is a problem with the Web application, an attack that illegally acquires or tampering data of the database by inputting a statement to perform a malicious inquiry or operation into the Web site.
b. An attack that causes a visitor to browse a Web page embedded with a malicious script and causes another visitor to perform an operation not intended by the visitor.
c. By exploiting the vulnerability of commercially available DBMS, it searches for a database server to be a host, repeats self-infection, and attacks that increase the traffic of the Internet rapidly.
d. By sending input data embedded with a malicious script to a Web site displaying visitor's input data on the screen as it is, an attack executed by a visitor's browser.

JITEC FE 2017 Fall AM Question 40 (English Translation)

Which is the appropriate description for usage of signature key and its purpose in digital signature?

a. Ensure that the recipient can use the signing key to return the ciphertext to the original message.
b. Encrypt the message with the fixed character string added by the sender using the signature key so that the recipient can specify the altered part of the message.
c. The sender creates a signature using the signature key and adds it to the message so that the recipient can confirm the sender.
d. The sender encrypts the message using the signature key so that the contents of the message are not known to anyone other than the person concerned.

JITEC FE 2017 Fall AM Question 41 (English Translation)

When comparing malware with Trojan horse and worm, which is the worm's characteristics?

a. Encrypt the file arbitrarily and make it unreadable normally.
b. Perform unauthorized operation as a single program.
c. Wait without activities until certain conditions are met.
d. Expand infection by itself through networks and removable media.

JITEC FE 2017 Fall AM Question 42 (English Translation)

Which is the appropriate explanation of CSIRT?

a. Determination of IP address allocation policy, operation monitoring of DNS root server, adjustment related to DNS management, etc. are organized on a global scale.
b. It is an organization that prepares technical documents on the Internet and examines for standardization.
c. It is a collective term for organizations that are set up within companies, organizations and government agencies, who receive reports on information security incidents, investigate and respond to them.
d. It is a generic term for people and organizations with the purpose of using information technology to achieve religious or political goals.

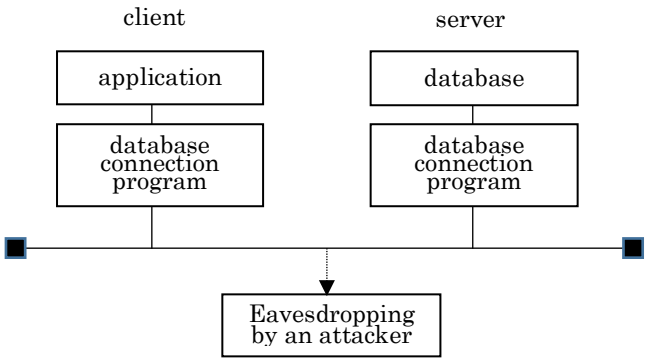
JITEC FE 2017 Fall AM Question 43 (English Translation)

Which process combination is appropriate for risk assessment?

a. Risk identification, risk assessment, risk acceptance
b. Risk identification, risk analysis, risk assessment
c. Risk analysis, risk response, risk acceptance
d. Risk analysis, risk assessment, risk response

JITEC FE 2017 Fall AM Question 44 (English Translation)

As shown in the figure, the application on the client accesses the data of the database on the server via the database connection program. What is a measure to prevent leakage of commands and execution results sent and received between the application and the database?



a. Restrict the IP address of the client that can access the database connection program on the server side to the necessary one.
b. Set the password required to start / stop the database connection program on the server side.
c. Change the port number used by the database connection program for communication from the initial value in the database management system.
d. Encrypt communication between database connection programs.

JITEC FE 2017 Fall AM Question 45 (English Translation)

Which approach is to try to intrude by actually attacking the system to discover security vulnerabilities in computers and networks?

a. Walk through
b. Software inspection
c. Penetration test
d. Regression test

JITEC FE 2017 Fall AM Question 46 (English Translation)

In UML 2.0, which diagram is appropriate for showing the interaction between objects in chronological order?

a. Activity diagram
b. Component diagram
c. Sequence Diagram
d. State transition diagram

JITEC FE 2017 Fall AM Question 47 (English Translation)

When modeling using object-oriented analysis, which set is a relationship between classes and objects?

a. Park, swing
b. Park, Yoyogi Park
c. Iron bar, swing
d. Nakanoshima Park, Yoyogi Park

JITEC FE 2017 Fall AM Question 48 (English Translation)

Which description can weaken the degree of module coupling as a method for module splitting?

a. Include as many functions as possible in one module.
b. Pass only the necessary data items between the two modules as arguments.
c. Use global space to share data items with other modules.
d. When calling another module, pass arguments to control the logic of the called module.

JITEC FE 2017 Fall AM Question 49 (English Translation)

Which is appropriate as a description of the black box test?

a. As the test data creation criteria, use the coverage rate of instructions and branches.
b. Even if there is redundant code in the program to be tested, it can not be detected.
c. Pay attention to the internal structure of the program and verify whether necessary parts have been executed.
d. As the number of branch instructions and modules increases, the test data rapidly increases.

JITEC FE 2017 Fall AM Question 50 (English Translation)

Which is the appropriate description as the reverse engineering of software?

a. Automatically generate source code from design information using development support tools and the like.
b. Change the internal structure of software without changing the behavior when viewed from the outside.
c. Analyze the existing software and clarify its specifications and structure.
d. Analyze and understand the existing software, and rebuild the entire software.

JITEC FE 2017 Fall AM Question 01-50

Answer

1 a	11 b	21 b	31 a	41 d
2 a	12 c	22 c	32 b	42 c
3 c	13 a	23 c	33 d	43 b
4 b	14 a	24 a	34 d	44 d
5 c	15 a	25 b	35 b	45 c
6 b	16 a	26 d	36 a	46 c
7 b	17 a	27 c	37 b	47 b
8 d	18 c	28 b	38 d	48 b
9 d	19 d	29 a	39 a	49 b
10 a	20 a	30 d	40 c	50 c

JITEC FE 2017 Spring AM_Technology

JITEC FE 2017 Spring AM Question 1 (English translation)

Which of the equations using sets A, B, C always holds regardless of the contents of sets A, B, C? Here, ∪ indicates a union set, and ∩ indicates a product set.

a. (A∪B) ∩ (A∩C) = B ∩ (A∪C)
b. (A∪B) ∩ C = (A∪C) ∩ (B∪C)
c. (A∩C) ∪ (B∩A) = (A∩B) ∪ (B∩C)
d. (A∩C) ∪ (B∩C) = (A∪B) ∩ C

JITEC FE 2017 Spring AM Question 2 (English translation)

When expressing numerical values other than 0 in floating point representation, which operation to align digits so that the most significant digit of the mantissa part is not 0? Here, the representation method of the mantissa part is an absolute value expression.

a. Rounding up b. Truncation c. Carry d. Normalization

JITEC FE 2017 Spring AM Question 3 (English translation)

The negative AND of X and Y, X NAND Y is defined as NOT (X AND Y). Which logical expression shows X OR Y using only NAND?

a. ((X NAND Y) NAND X) NAND Y
b. (X NAND X) NAND (Y NAND Y)
c. (X NAND Y) NAND (X NAND Y)
d. X NAND (Y NAND (X NAND Y))

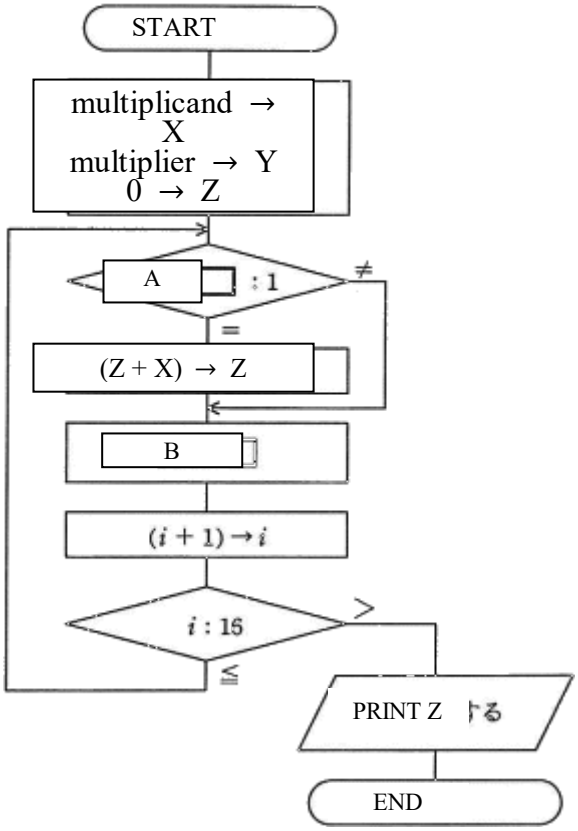
JITEC FE 2017 Spring AM Question 4 (English translation)

A list data structure can be implemented using an array or a pointer. Which of the following features is implemented by using an array? Here, the list using the array is constructed by sequentially storing the elements in the array, and the list using the pointers is constructed by connecting the element from the element with the pointer.

a. By specifying the position, you can access arbitrary data directly.
b. Arbitrary data can be efficiently inserted at the head of the data arranged side by side.
c. While reference to arbitrary data is not efficient, deletion and insertion operations can be performed efficiently.
d. When moving arbitrary data to another position, it is possible to move adjacent data without moving it.

JITEC FE 2017 Spring AM Question 5 (English translation)

The flow chart below shows a procedure for multiplying binary integers by repeating shift operation and addition. Which of the following is a suitable combination of A and B in this flow chart? Here, the multiplier and the multiplicand are represented by unsigned 16 bits. X, Y, Z are 32-bit registers, and logical shift is used for the shift. The least significant bit is referred to as the 0th bit.



	A	B
a.	the 0th bit of Y	X shifted left by 1 bit, Y shifted right by 1 bit
b.	the 0th bit of Y	X shifted right by 1 bit, Y shifted left by 1 bit
c.	the 15th bit of Y	X shifted left by 1 bit, Y shifted right by 1 bit
d.	the 15th bit of Y	X shifted right by 1 bit, Y shifted left by 1 bit

JITEC FE 2017 Spring AM Question 6 (English translation)

When the function $f(x, y)$ is defined as follows, what is the value of $f(775, 527)$? Here, x mod y returns the remainder after x is divided by y.

$$f(x, y): if\ y = 0\ then\ return\ x\ else\ return\ f(y, x\ mod\ y)$$

a. 0 b. 31 c. 248 d. 527

JITEC FE 2017 Spring AM Question 7 (English translation)

Which of the following is suited for binary search when searching customer data using customer number as the key?

a. Data structure arranged in the position indicated by the hash value obtained from the customer numbers.
b. Data structure arranged randomly regardless of the customer numbers.
c. Data structure arranged in ascending order of customer numbers.
d. Data structure arranged in the order of cell addresses where the customer numbers are stored.

JITEC FE 2017 Spring AM Question 8 (English translation)

When an operating clock frequency of CPU is 700 MHz, and the number of clocks required for execution of an instruction and the appearance rate are the values shown in the table, how many MIPS does this CPU perform?

Type of instruction	Clocks required for execution	Appearance rate (%)
Register-to-register operation	4	30
Operation between memory and register	8	60
Unconditional branch	10	10

a. 10 b. 50 c. 70 d. 100

JITEC FE 2017 Spring AM Question 9 (English translation)

There are write-through and write-back methods of writing cache. Which of the following is the appropriate purpose of using the write-back method?

a. To write cache while maintaining coherency with main memory.
b. To make write-back of the cache contents to the main memory unnecessary when cache misses occur.
c. To achieve cache management with a circuit configuration simpler than the write-through method in a multiprocessor system in which each processor has its own cache.
d. To reduce the writing frequency from the processor to main memory.

JITEC FE 2017 Spring AM Question 10 (English translation)

Which one is appropriate as an explanation of USB 3.0?

a. It is an interface that uses 4 pairs of signal lines that transmit 2 bits of information with 1 clock and has a throughput of 1 Gbit / s maximum at the maximum.
b. It is a serialized ATA specification that connects a PC and peripheral devices.
c. It adopts isochronous transfer suitable for audio, video, etc., and it is a serial interface with broadcast transfer mode.
d. It is a serial interface with a data transfer mode of 5 Gbit / s called super speed.

JITEC FE 2017 Spring AM Question 11 (English translation)

When configuring the external storage device of RAID 1 so that it can store 4 T bytes of data, at least how many magnetic storage devices with 1 T byte storage capacity after formatting are needed?

a. 4 b. 5 c. 6 d. 8

JITEC FE 2017 Spring AM Question 12 (English translation)

Which system is suitable for scale-out to improve system performance?

a. A system which is mainly difficult to execute in parallel processing because it is necessary to execute a series of large processes at once
b. A system that is performing distributed processing on multiple servers because there are many transactions of the reference system,
c. A system that the overhead for taking data consistency should be reduced because there are many transactions to add data
d. A system which is necessary to maintain a consistency between the databases when updating the master, because multiple identical master databases are arranged in the system

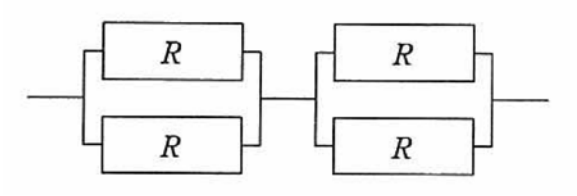
JITEC FE 2017 Spring AM Question 13 (English translation)

Which is appropriate as an explanation of the benchmark test?

a. Measure the operating status of the system and the status of resources by the program for monitoring and measurement, and obtain the system configuration and response performance data.
b. Execute a standard program selected according to purpose of use, and measure its processing performance.
c. When assessing future predictions, evaluate the performance of the system with a program that creates models and simulates them.
d. Analyze system processing on the desk without actually executing the program, estimate processing time from predicted values of the number of occurrences of individual instructions and execution times, and evaluate the performance.

JITEC FE 2017 Spring AM Question 14 (English translation)

There is a system that connects devices with availability R as shown in the figure. Which of the expressions represents the availability of the entire system? Here, only one of the devices needs to be operated when connected in parallel, whereas both devices need to be operated when connected in series.



a. $(1-(1-R^2))^2$
b. $1-(1-R^2)^2$
c. $(1-(1-R)^2)^2$
d. $1-(1-R)^4$

JITEC FE 2017 Spring AM Question 15 (English translation)

Which is appropriate as an explanation of the paging method?

a. A method of dividing the virtual storage space and the real storage space into fixed-length areas and managing them in correspondence with each other
b. A method of rearranging programs so that they can be executed in different areas of main memory
c. A method of dividing the main storage device into multiple areas that can be read and written concurrently in parallel
d. A method of collectively reading and writing multiple records in the auxiliary storage device

JITEC FE 2017 Spring AM Question 16 (English translation)

Execute and print four jobs A to D under the following conditions. How many seconds are needed to complete all the printing since starting the job?

[conditions]

(1) All jobs are activated at once, and executed at multiplicity 1.

(2) A is the highest priority, and B, C, and D are lower in this order.

(3) After execution of each job, the spooling function sequentially prints using one printer.

(4) Execution time and printing time when each job is executed independently are as shown in the table.

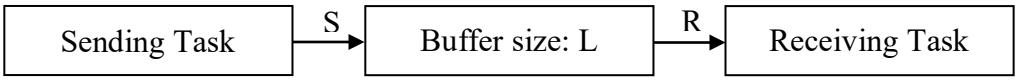
(5) Do not consider other overheads.

Job	Execution time (sec)	Printing time (sec)
A	50	50
B	30	40
C	20	30
D	40	20

a. 100 b. 160 c. 190 d. 280

JITEC FE 2017 Spring AM Question 17 (English translation)

As following the figure, data is continuously transmitted from the sending task to the receiving task for T seconds. When the transmission amount per second is S and the reception amount per second is R, which is appropriate as a relational expression expressing the buffer size L in which the buffer does not overflow? Here, it is assumed that the transfer task has a faster transfer rate than the receive task, and the time interval until the next transfer start is sufficient.



a. $L < (R - S) \times T$

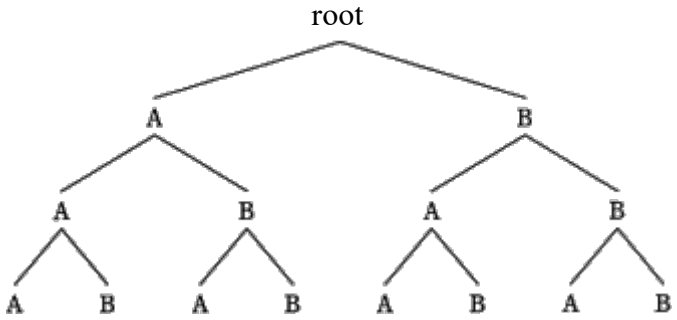
b. $L < (S - R) \times T$

c. $L \geqq (R - S) \times T$

d. $L \geqq (S - R) \times T$

JITEC FE 2017 Spring AM Question 18 (English translation)

Multiple directories named A and B are managed by the tree structure shown in the figure. When the current directory is shown as "\ B \ A \ B", how did you move through the directories? Here, the specification of the directory is made by the following method, and → denotes the order of movement.



[Directory specification method]

(1) As for directories, as shown in "directory name \ ... \ directory name", directories on the route are sequentially separated by "\", and then "\" and directory name are specified.

(2) The current directory is represented by ".".

(3) A directory one level higher is represented by "..".

(4) When the beginning is "\", it is assumed that the root directory is omitted at the left side.

(5) If the beginning is neither "\", ".", "..", it is assumed that ". \" is omitted at the left side.

a. \ A → .. \ B →. \ A \ B

b. \ B →. \ B \ A → .. \ B

c. \ B → \ A → \ B

d. \ B \ A → .. \ B

JITEC FE 2017 Spring AM Question 19 (English translation)

In a computer with a virtual memory system, suppose the number of pages allocated for real memory is 3, and the algorithms that decide which memory pages to page out are FIFO and LRU. If the access sequence of a certain task page is 1, 3, 2, 1, 4, 5, 2, 3, 4, 5, which of the following is the most suitable combination of the numbers of page replacement?

	FIFO	LRU
a.	3	2
b.	3	6
c.	4	3
d.	5	4

JITEC FE 2017 Spring AM Question 20 (English translation)

When the digital value 0 is input to the D / A converter with the resolution of 8 bits, the output voltage becomes 0 V., and when the digital value 128 is input, the output voltage becomes 2.5 V. When the lowest 1 bit is changed, How many V is the change in the output voltage of the D / A converter?

a. 2.5 / 128
b. 2.5 / 255
c. 2.5 / 256
d. 2.5 / 512

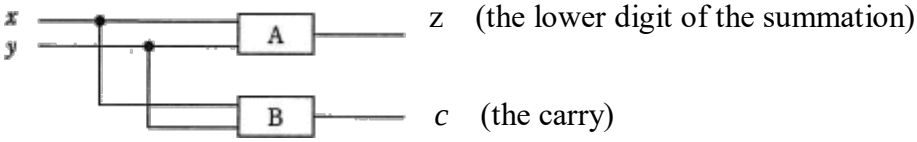
JITEC FE 2017 Spring AM Question 21 (English translation)

By using a sensor that detects deformation, it is possible to monitor and maintain the state of elevated roads etc. Which sensor is used for this purpose?

a. Thermistor
b. Gyro
c. Strain gauge
d. Hall element

JITEC FE 2017 Spring AM Question 22 (English translation)

The following figure shows the half adder which adds one digit binary number x and y and outputs z (the lower digit of the summation) and c (the carry). Which one is appropriate as a combination of the elements of A and B?



	A	B
a.	XOR	AND
b.	NAND	NOR
c.	NOR	XOR
d.	AND	OR

JITEC FE 2017 Spring AM Question 23 (English translation)

We would like to assign a customer code using 26 kinds of capital letters A to Z to customers. Currently the total number of customers is 8,000, and new customers will increase by 20% each year. How many digits of customer code do we need to allocate the code to all customers in three years?

a. 3 b. 4 c. 5 d. 6

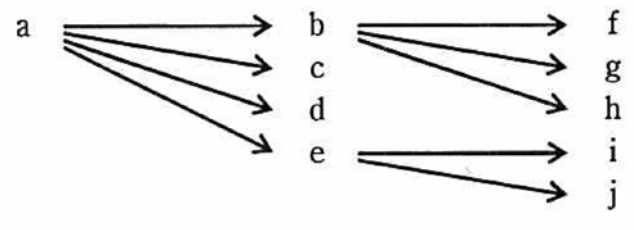
JITEC FE 2017 Spring AM Question 24 (English translation)

In the PCM used to digitize analog data such as voice, which is the appropriate process for cutting the sound signal as it is with the analog value at constant intervals?

a. Encryption
b. Sampling
c. Coding
d. Quantization

JITEC FE 2017 Spring AM Question 25(English translation)

$a \rightarrow b$ implies that if the value of attribute a is determined, the value of attribute b is uniquely determined. For example, if an employee name is uniquely determined by specifying an employee number, it is expressed as employee number → employee name. Based on this expression, which of the following is the appropriate combination that defines attributes a to j with established relationships shown in the figure in three tables in a relational database?



a. Table 1 (a)
Table 2 (b, c, d, e)
Table 3 (f, g, h, i, j)

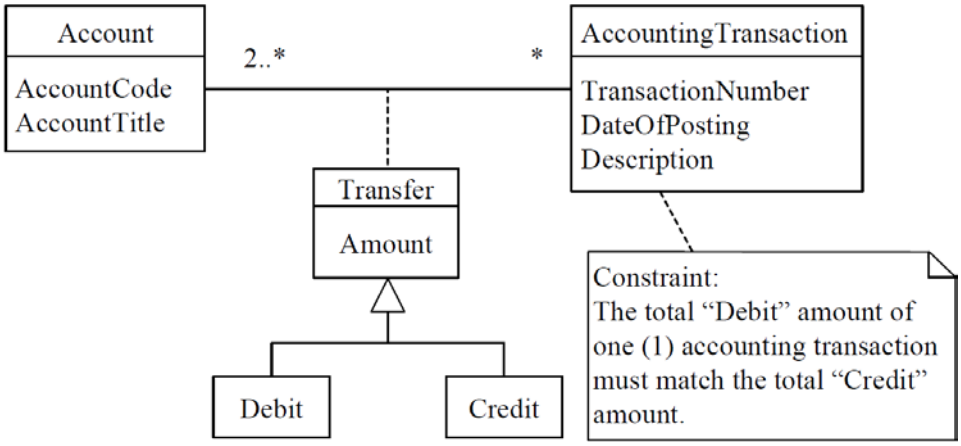
b. Table 1 (a, b, c, d, e)
Table 2 (b, f, g, h)
Table 3 (e, i, j)

c. Table 1 (a, b, f, g, h)
Table 2 (c, d)
Table 3 (e, i, j)

d. Table 1 (a, c, d)
Table 2 (b, f, g, h)
Table 3 (e, i, j)

JITEC FE 2017 Spring AM Question 26 (English translation)

The data model shown in the figure below is implemented as three (3) tables. At this time, which of the following is an appropriate combination of A and B in the "Transfer" table in which the transaction of "the sales of 500 dollars to Company C are booked in the cash account on April 4, 2017" is recorded? Here, the data model is described in UML.



Account

Account Code	Account Title
208	Sales
510	Cash
511	Deposits
812	Travel Expenses

Transfer

Account Code	Debit / Credit	Amount	Transaction Number
A	B	500	0122
201	Credit	500	0122
510	Credit	500	0124
812	Debit	500	0124

Accounting Transaction

Transaction Number	Date of Posting	Description
0122	2017-04-04	Company A
0124	2017-04-04	Company A

	A	B
a.	208	Credit
b.	208	Debit
c.	510	Credit
d.	510	Debit

JITEC FE 2017 Spring AM Question 27 (English translation)

Among the ways that RDBMS combines two tables, which is the suitable description of a sort merge join method?

a. If the joining column of one table is included in the index, join with the joining column of the other table with the index value.
b. Create a hash table with the values of the joining columns of one table and combine it with the joining columns of the other table.
c. Read the values of the joining columns of one table in order and combined with the joining columns of the other table.
d. Combine the rows of each table sorted by the value of the joining column in order from the top.

JITEC FE 2017 Spring AM Question 28 (English translation)

In a distributed database system, which method is appropriate that inquires whether update processing can be determined at multiple sites performing a series of transaction processing and then determine the update processing if all the sites can be determined?

a. Two-phase commit
b. Exclusion control
c. Roll back
d. Roll forward

JITEC FE 2017 Spring AM Question 29 (English translation)

What is the process of finding out new knowledge (trends and patterns) by using statistical method from a large amount of data as an example of using big data?

a. Data warehouse
b. Data dictionary
c. Data mining
d. Metadata

JITEC FE 2017 Spring AM Question 30 (English translation)

There is a system that transmits data by connecting a dedicated line between the head office and the factory. In this system, two pieces of slip data of 2,000 bytes for each are collected and sent together with 400 bytes of header information. An average of 100,000 slip data are generated per hour. Assuming that the line speed is 1 Mbit / s, what percentage is the line utilization rate?

a. 6.1 b. 44 c. 49 d. 53

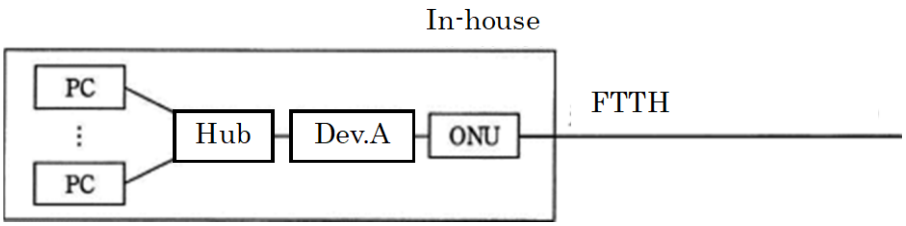
JITEC FE 2017 Spring AM Question 31 (English translation)

Which of the following devices performs protocol conversion between LAN systems with different layers above the transport layer of the OSI basic reference model?

a. Gateway b. Bridge c. Repeater d. Router

JITEC FE 2017 Spring AM Question 32 (English translation)

There is a system for connecting a plurality of PCs connected to a LAN to the Internet using FTTH, and one global IP address is assigned to the WAN side interface of the device A (Dev. A). Which function is required for device A to use the Internet with multiple PCs by using this one global IP address?



a. DHCP b. NAPT (IP Masquerade)
c. PPPoE d. Packet filtering

JITEC FE 2017 Spring AM Question 33 (English translation)

Which information is most appropriate for the router to use in routing packets?

a. Destination IP address
b. Destination MAC address
c. Source IP address
c. Source MAC address

JITEC FE 2017 Spring AM Question 34 (English translation)

Which address class contains IPv4 address 128.0.0.0?

a. Class A
b. Class B
c. Class C
d. Class D

JITEC FE 2017 Spring AM Question 35 (English translation)

Which of the following is an appropriate explanation of Software-Defined Networking (SDN) using OpenFlow?

a. One of the IoT (Internet of Things) technologies using RFID, software architecture for optimizing distribution network
b. An optimal placement method of servers on a network, developed to efficiently distribute various software content such as music, videos and online games via the Internet
c. A network technology that logically separates the functions of data transfer and routing control, and realizes the combination of network equipment specialized for data transfer and routing control by software
d. A technology of business analysis and visualization software for finding and improving problems in business processes using data flow diagrams and activity diagrams

JITEC FE 2017 Spring AM Question 36 (English translation)

The IP address of server X prepared by the attacker was stored in the DNS cache server of Company B as the IP address corresponding to the FQDN of the Web server of Company A. Which users are unintentionally guided to server X by this attack? Here, supposing each employee of company A and company B uses the company's DNS cache server to perform name resolution.

a. Company A employee trying to access Company A Web server
b. Company B employee trying to access Company A Web server
c. Company A employee trying to access Company B Web server
d. Company B employee trying to access Company B Web server

JITEC FE 2017 Spring AM Question 37 (English translation)

Which of the following is an explanation of directory traversal attack?

a. An attacker inputs data constituting an instruction statement to a database as input data of a Web application, and executes an SQL statement not intended by the administrator.
b. An attacker uses a path name to specify a file and illegally browses files that the administrator did not intend.
c. An attacker directs the user to a Web site, and then exploits the flaw in the HTML output escaping process by the Web application to execute malicious script on the user's Web browser.
d. When a session is managed by the session ID, an attacker illegally obtains the session ID of the logged-in user and impersonates the user to access the server.

JITEC FE 2017 Spring AM Question 38 (English translation)

Which of the following is an explanation of brute force attack that tries to find the key of the common key encryption?

a. Given a set of plaintext and ciphertext, try all the key candidates one by one to find the key.
b. The key is found by using an algebraic expression representing the relation between plaintext, ciphertext and key.
c. The key is found using the statistical correlation between the information of the plaintext part and the information of the ciphertext part as a clue.
d. The key is found out from the change of the ciphertext when the plaintext is changed by a fixed amount.

JITEC FE 2017 Spring AM Question 39 (English translation)

Which "Cyber Security Management Guidelines (Ver 1.1)" formulated by the Ministry of Economy, Trade and Industry of Japan and IPA, in addition to its own security measures by each company, which measures should be taken to confirm the implementation status?

a. Security measures taken by individual users of products and services provided by the company
b. Security measures taken by shareholders who have invested in the company
c. Security measures taken by business partners in your supply chain
d. Security measures taken by the local community near your office

JITEC FE 2017 Spring AM Question 40 (English translation)

Which is the encryption algorithm of the public key cryptosystem?

a. AES b. KCipher-2 c. RSA d. SHA-256

JITEC FE 2017 Spring AM Question 41 (English translation)

Which is the description of the time stamp service in information security?

a. Web service that securely displays worldwide date and time information used in official records using encrypted communication
b. A service that authenticates biometric information such as fingerprints, voiceprints, vein patterns, retinas and irises using the date and time registered in the authentication system
c. A service that proves that electronic data has indeed existed at a certain date and time and has not been tampered with since that date and time
d. A service that notifies you not to tamper with date and time information to synchronize clocks on PCs and servers on the network

JITEC FE 2017 Spring AM Question 42 (English translation)

When a packet filtering firewall is installed at the connection point between the company network and the Internet to enable a PC on the company network to access port 80 of a web server on the Internet, which of the following is the appropriate combination of the rules allowed by filtering?

a.

Source	Destination	Source port number	Destination port number
PC	Web server	80	1024 or higher
Web server	PC	80	1024 or higher

b.

Source	Destination	Source port number	Destination port number
PC	Web server	80	1024 or higher
Web server	PC	1024 or higher	80

c.

Source	Destination	Source port number	Destination port number
PC	Web server	1024 or higher	80
Web server	PC	80	1024 or higher

d.

Source	Destination	Source port number	Destination port number
PC	Web server	1024 or higher	80
Web server	PC	1024 or higher	80

JITEC FE 2017 Spring AM Question 43 (English translation)

There is a network divided into three segments of external segment, DMZ and internal segment by one firewall. In this network, when using a system consisting of a web server and a database server with important data to publish a service for users to the Internet, Which is the most appropriate server installation method for protecting important data from unauthorized access from the Internet? Here, in the firewall, communication between the external segment and the DMZ and between the DMZ and the internal segment is permitted only a specific protocol, and direct communication between the external segment and the internal segment is not permitted.

a. Install a web server and database server in the DMZ.
b. Install a web server and database server in the internal segment.
c. Install a web server in the DMZ and a database server in the internal segment.
d. Install a web server in the external segment and a database server in the DMZ.

JITEC FE 2017 Spring AM Question 44 (English translation)

Which of the followings is for authenticating the sender with the sender's mail server when sending e-mail?

a. APOP b. POP3S c. S / MIME d. SMTP-AUTH

JITEC FE 2017 Spring AM Question 45 (English translation)

What is the purpose of using a port scanner in web server inspection?

a. List the services running on the Web server and check that unnecessary services are not running.
b. Check the management status of the user ID of the Web server with the operator to check that there is no deviation from the information security policy.
c. Analyzes the access history to the Web server and detects unauthorized use.
d. Log in with a legitimate user ID, directly check the content of the Web server, and detect the vulnerability of the content.

JITEC FE 2017 Spring AM Question 46 (English translation)

When completing the external design of the system, which one is needed to be approved from the customer?

a. Screen layout
b. System development plan
c. Physical database specification
d. Program flow chart

JITEC FE 2017 Spring AM Question 47 (English translation)

Which of the following is a description of inspection as a software review method?

a. Conducted in a meeting format, with multiple participants including the creator participating. The creator explains the deliverables to be reviewed, and the participants ask questions and comments.
b. Participants in turn become presenters and reviewers. With the progress of the presenter, all reviewers comment in turn, and when all speak, the presenter will be replaced to move on to the next theme.
c. The moderator coordinates the whole, the participants have clear roles, make comments based on checklists, etc., and form a formal record.
d. A reviewer makes comments by distributing or circulating the review target products to multiple reviewers.

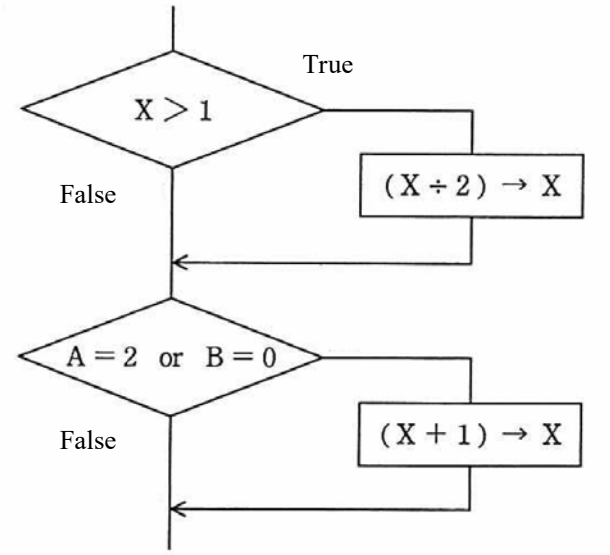
JITEC FE 2017 Spring AM Question 48 (English translation)

Which of the following is the appropriate combination of object-oriented basic concepts?

a. Virtualization, structuring, projection, class
b. Instantiation, structuring, continuation, class
c. Normalization, encapsulation, division, class
d. Abstraction, encapsulation, inheritance, class

JITEC FE 2017 Spring AM Question 49 (English translation)

In the flow diagram, what is the number of the minimum test cases that satisfy decision condition coverage (branch coverage)?



a. 1 b. 2 c. 3 d. 4

JITEC FE 2017 Spring AM Question 50 (English translation)

Among software development activities, which of the following refactorings is also emphasized in agile development?

a. In order to improve the quality of software, two programmers cooperate and code one program.
b. To improve the maintainability of software, change the internal structure of the program without changing the external specifications.
c. In order to develop software that works quickly, set up test cases first and then code the program.
d. In order to get feedback from users, create prototypes of software to be provided early.

JITEC FE 2017 Spring AM Question 01-50

Answers

1 d	11 d	21 c	31 a	41 c
2 d	12 b	22 a	32 b	42 c
3 b	13 b	23 a	33 a	43 c
4 a	14 c	24 b	34 b	44 d
5 a	15 a	25 b	35 c	45 a
6 b	16 c	26 d	36 b	46 a
7 c	17 d	27 d	37 b	47 c
8 d	18 a	28 a	38 a	48 d
9 d	19 b	29 c	39 c	49 b
10 d	20 a	30 c	40 c	50 b

JITEC FE 2016 Fall AM_Technology

JITEC FE 2016 Fall AM Question 1 (English translation)

Which of the following operations does not change the lower 4 bits of an 8-bit string?

a. An exclusive logical sum with a bit string 0F in hexadecimal

b. A negative logical product with a bit string 0F in hexadecimal

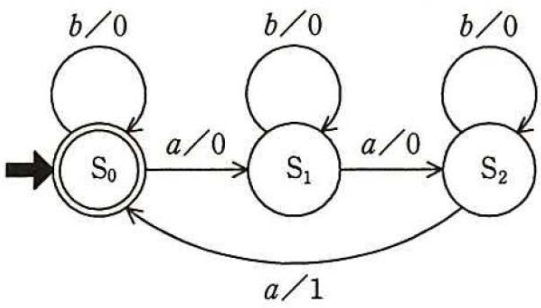
c. A logical product with a bit string 0F in hexadecimal

d. A logical sum with a bit string 0F in hexadecimal

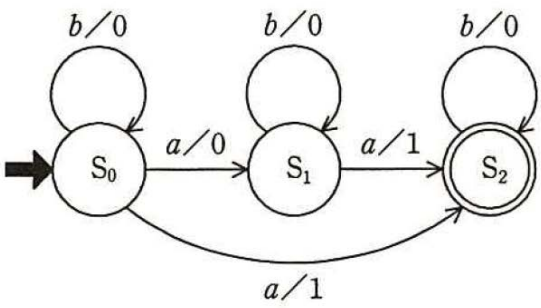
JITEC FE 2016 Fall AM Question 3 (English translation)

Which of the following is the state transition diagram of a vending machine that sells 300-yen products? Here, the relationship between input and output is expressed as Input/Output and the input a indicates 100-yen coin while input b indicates coins other than 100-yen. S0 to S2 indicate the states. When the input is b, the coins are immediately returned. In addition, the output 1 means the sales of a product whereas 0 means no action when transiting to the end status.

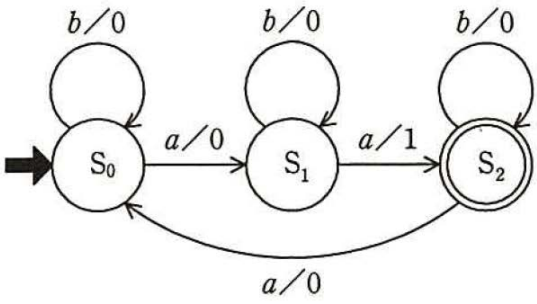
a.



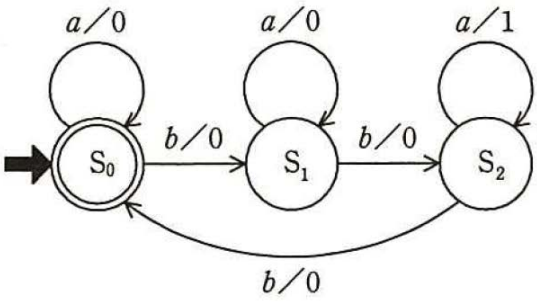
b.



c.



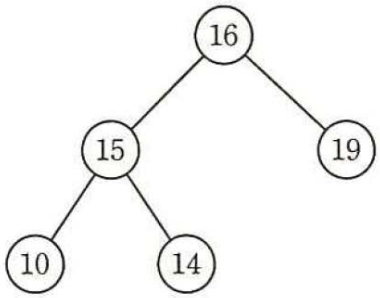
d.



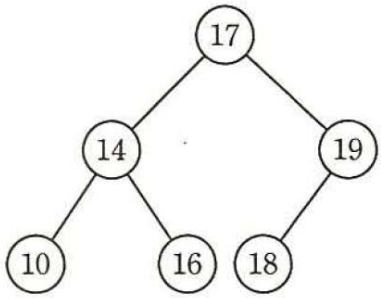
JITEC FE 2016 Fall AM Question 6 (English translation)

Which of the following binary trees is a binary search tree?

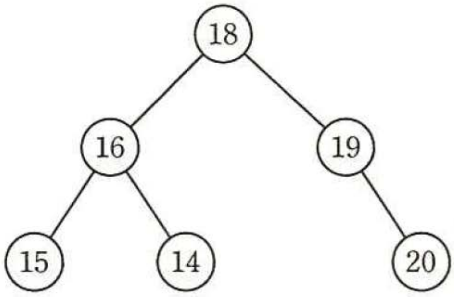
a.



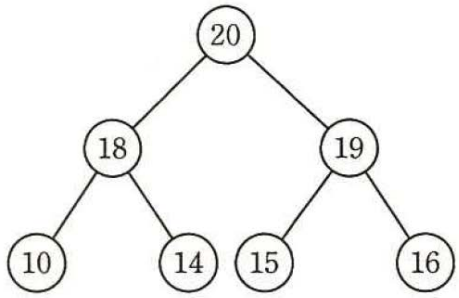
b.



c.



d.



JITEC FE 2016 Fall AM Question 7 (English translation)

For integers x, y $(x > y \geqq 0)$, there is a function $F(x, y)$ defined as follows.

Determine the value of $F(231, 15)$. Here, $x \bmod y$ is the remainder of division of x by y.

$$F(x,y) = \begin{cases} x & (where\ y = 0) \\ F(y, x\ mod\ y) & (where\ y > 0) \end{cases}$$

a. 2 b. 3 c. 5 d. 7

JITEC FE 2016 Fall AM Question 15 (English translation)

There is a system that uses two computers connected in parallel. MTBF and MTTR for each are indicated in the table below. If only one of the two needs to be in operation, what is the availability of the system as a whole?

	MTBF	MTTR
Computer 1	480 hours	20 hours
Computer 2	950 hours	50 hours

a. 91.2 b. 95.5 c. 96.5 d. 99.8

JITEC FE 2016 Fall AM Question 17 (English translation)

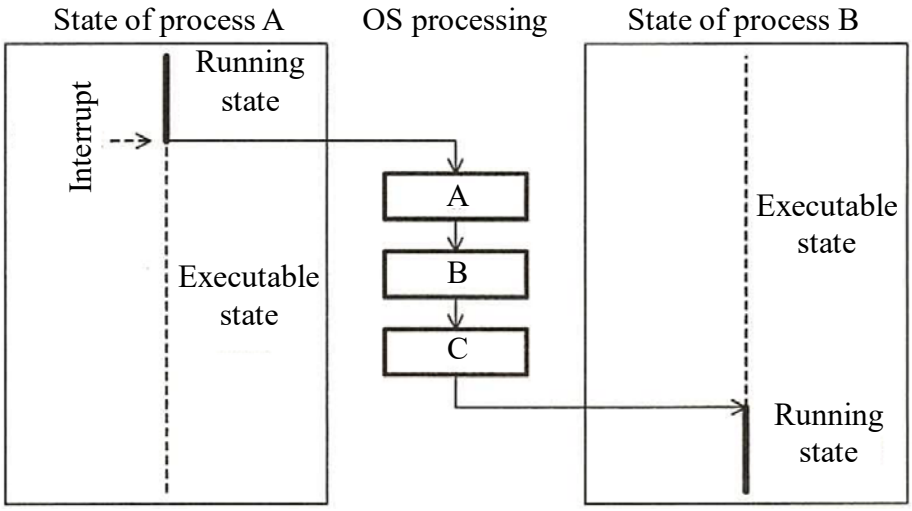
Which of the following expresses the state in which system overhead increases while processor usage rate of an application decreases by increasing the multiplicity of the program when the capacity of main memory is insufficient in a virtual memory system?

a. Thrashing b. Fragmentation

c. Paging d. Bottleneck

JITEC FE 2016 Fall AM Question 18 (English translation)

In the figure showing the process switching procedure in multiprogramming, which of the following is the appropriate combination of OS processing A to C?



	A	B	C
a.	Recover running state	Select a process	Save running state
b.	Save running state	Recover running state	Select a process
c.	Save running state	Select a process	Recover running state
d.	Select a process	Recover running state	Save running state

JITEC FE 2016 Fall AM Question 19 (English translation)

Which of the following items is used as the criterion for page replacement in an LRU algorithm?

a. Last referenced time

b. First referenced time

c. Reference frequency per unit time

d. Cumulative reference count

JITEC FE 2016 Fall AM Question 20 (English translation)

In a directly organized file with storage address ranging from 1 to 6, if data are stored under the following conditions, which of the followings is the key value of data stored in the address 1?

[Conditions]

(1) Data is stored in the order of key values 3, 4, 8, 13, 14 and 18.

(2) Storage address is the value obtained by dividing the data's key value by 5 and adding 1 to the remainder.

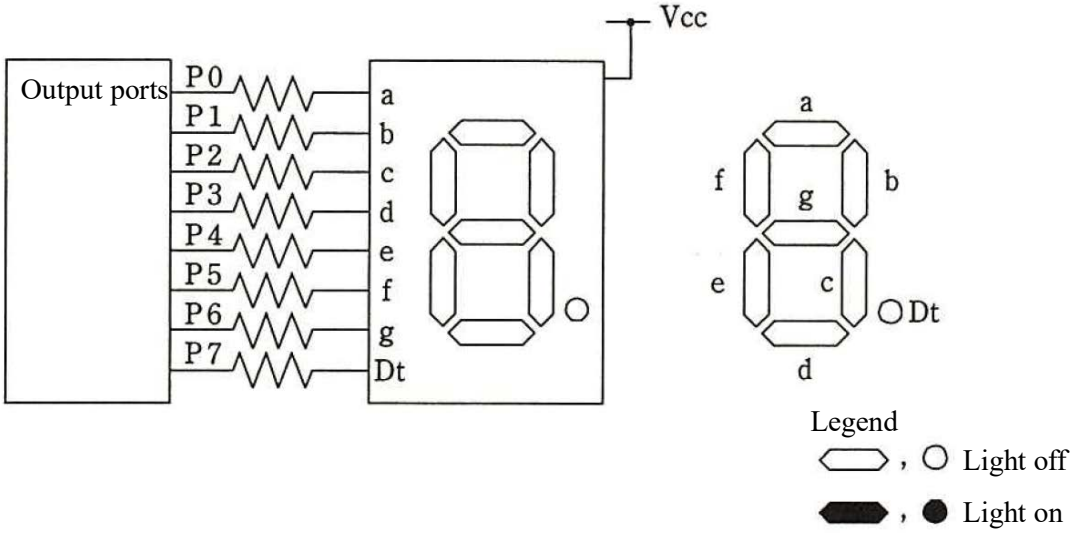
(3) If data already exist in a storage address, data are stored in the next address. Repeat this until storing is complete. After the ending address is a starting address.

(4) There is nothing stored in the file in the initial state.

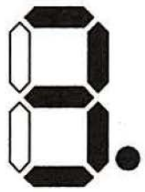
a. 8 b. 13 c. 14 d. 18

JITEC FE 2016 Fall AM Question 21 (English translation)

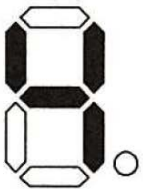
Which of the following is the display state when 92 is outputted in hexadecimal to the output ports in the lighting circuit of an anode-common 7-segment LED? Here, P7 is the most significant bit (MSB) and P0 is the least significant bit (LSB). LED lights up when the port output is 0.



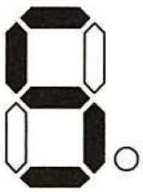
a.



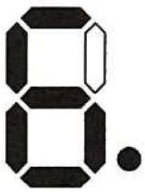
b.



c.



d.



JITEC FE 2016 Fall AM Question 22 (English translation)

Which of the following uses the flip-flop circuit in a memory cell?

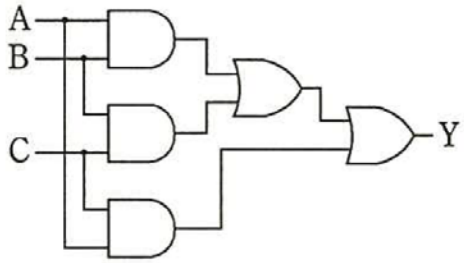
a. DRAM b. EEPROM c. SDRAM d. SRAM

JITEC FE 2016 Fall AM Question 23 (English translation)

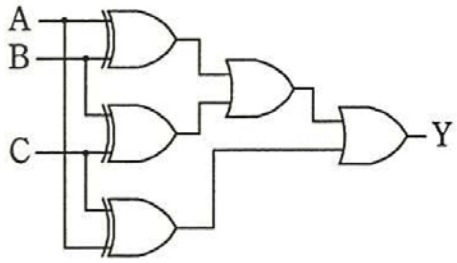
Which of the following is a three-input majority circuit shown in the truth table?

Input			Output
A	B	C	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

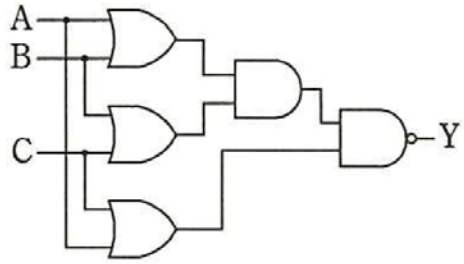
a.



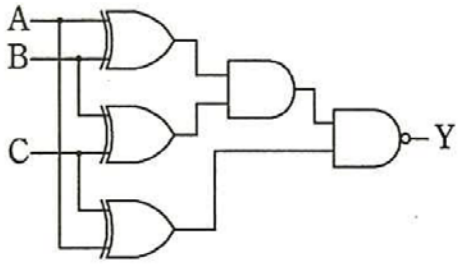
b.



c.



d.



JITEC FE 2016 Fall AM Question 24 (English translation)

When following data are entered, which of the following checks is performed to verify that the order date is prior to the input date?

Order data

Slip number (letters)	Order date (letters)	Product code (letters)	Quantity (number)	Customer code (letters)

a. Sequence check
b. Duplication check
c. Format check
d. Logic check

JITEC FE 2016 Fall AM Question 25 (English translation)

Sound is sampled 11,000 times per second, and each sampled value is recorded as 8-bit data. What is the maximum length of sound ??(in minutes)?? that can be recorded in a flash memory with a capacity of 512 x10^6 bytes?

a. 77
b. 96
c. 775
d. 969

JITEC FE 2016 Fall AM Question 26 (English translation)

Which of the following statements about an E-R diagram is accurate?

a. It represents on the premise of implementation as a relational database table.
b. It represents the target of management as a relationship between entities.
c. It represents data manipulation from generation to extinction of data.
d. The relationships represent work procedures.

JITEC FE 2016 Fall AM Question 27 (English translation)

Which of the following is the functional dependency established in the 6-row Delivery table? Here, $X \rightarrow Y$ means X functionally determines Y.

Delivery

Delivery date	Department ID	Department name	Delivery destination	Component ID	Quantity
2016-08-21	300	Production Department II	Akita Office	1342	300
2016-08-21	300	Production Department II	Akita Office	1342	300
2016-08-25	400	Production Department I	Nagoya Factory	2346	300
2016-08-25	400	Production Department I	Nagoya Factory	2346	1000
2016-08-30	500	R&D Department	Nagoya Factory	2346	30
2016-08-30	500	R&D Department	Kawasaki Office	1342	30

a. Delivery destination → Component ID

b. Delivery date → Component ID

c. Department ID → Component ID

d. Department name → Delivery destination

JITEC FE 2016 Fall AM Question 28 (English translation)

Which SELECT statement corresponds to the direct product (R × S) of the relations R and S among the relational algebra operations? Here, the relations R and S correspond to the tables R and S. There are no duplicated rows in the tables R and S.

a. SELECT * FROM R, S

b. SELECT * FROM R EXCEPT SELECT * FROM S

c. SELECT * FROM R UNION SELECT * FROM S

d. SELECT * FROM R INTERSECT SELECT * FROM S

JITEC FE 2016 Fall AM Question 29 (English translation)

Which of the following is the result of running the following SQL statement against the Employee table and Department table?

```
SELECT COUNT(*) FROM Employee, Department
WHERE employee.affiliation = department.department name AND deparment.floor = 2
```

Employee

Employee No.	Affiliation
11001	General affairs
11002	Accounting
11003	Sales
11004	Sales
11005	Information system
11006	Sales
11007	Planning
12001	Sales
12002	Information system

Department

Department Name	Floor
Planning	1
General affairs	1
Information system	2
Sales	3
Accounting	2
Legal affairs	2
Purchasing	2

a. 1 b. 2 c. 3 d. 4

JITEC FE 2016 Fall AM Question 30 (English translation)

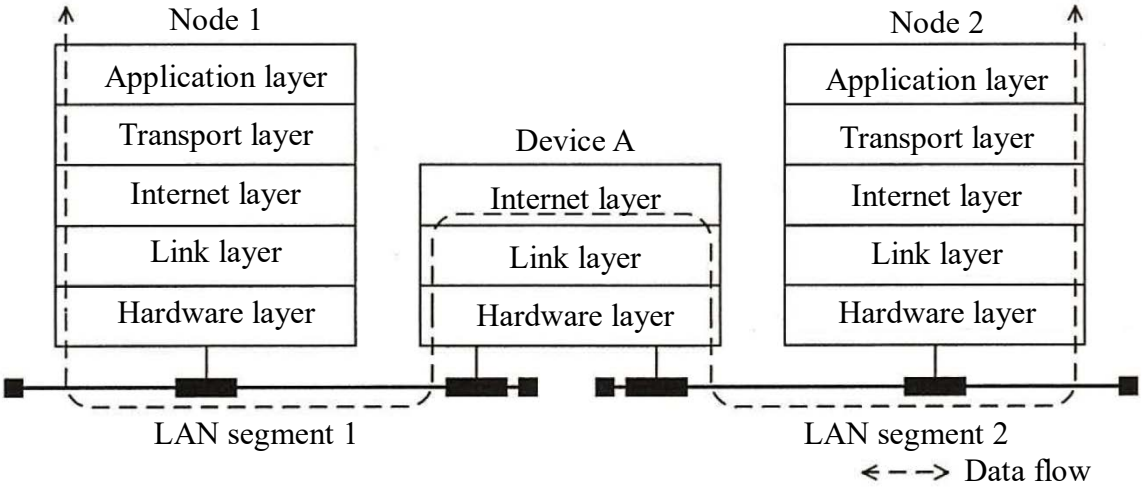
Transaction T is completed after obtaining a checkpoint, but a system failure occurs after that. Which of the following is the recovery method used to make the updated content of the transaction T return to the state immediately after the completion of transaction? Here, a transaction log is used in addition to a checkpoint.

a. Two-phase lock b. Shadow page

c. Roll back d. Roll forward

JITEC FE 2016 Fall AM Question 31 (English translation)

When expressed in a TCP/IP hierarchical model, the functions of device A that connects two LAN segments are as depicted the figure below. Which of the following is this device A?



a. Switching hub
b. Bridge
c. Repeater hub
d. Router

JITEC FE 2016 Fall AM Question 32 (English translation)

Which protocol dynamically assigns IP addresses in a TCP/IP network?

a. ARP
b. DHCP
c. RIP
d. SMTP

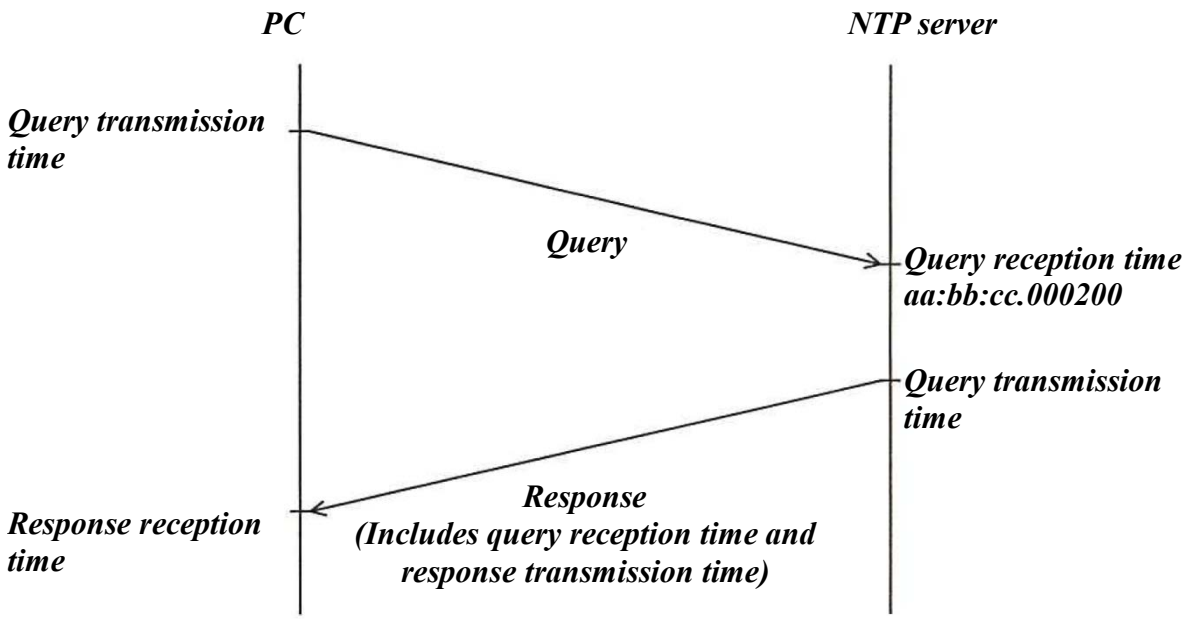
JITEC FE 2016 Fall AM Question 33 (English translation)

IPv4 address is to be assigned to two computers. Which combination of the IPv4 addresses of both computers belong to the same subnet when the subnet mask is 255.255.255.240?

a. 192.168.1.14 and 192.168.1.17
b. 192.168.1.17 and 192.168.1.29
c. 192.168.1.29 and 192.168.1.33
d. 192.168.1.33 and 192.168.1.49

JITEC FE 2016 Fall AM Question 34 (English translation)

The figure shows the basic mechanism of NTP time adjustment. The response from the NTP server includes the query reception time and the response transmission time in the NTP server. The PC calculates the deviation from the server clock from the four clock times shown in the figure. At this time, how much does the internal clock of the PC deviate from the NTP server clock? Here, the transmission delay is assumed to be equal for query and response. In addition, the clock times in the figure are those of the internal clocks for PC and NTP server expressed as aa:bb:cc.dddddd, where aa indicates hours, bb indicates minutes, and cc.dddddd indicates seconds (dddddd indicates microseconds).



a. 100 microseconds ahead.

b. 200 microseconds ahead.

c. 500 microseconds ahead.

d. 700 microseconds ahead.

JITEC FE 2016 Fall AM Question 36 (English translation)

Which of the following is the technology that eliminates automatic input by programs by making use of the difference in human capability to read compared to difficulty for a program to read and requiring a human to read and input an image or letters that are distorted or partially hidden?

a. CAPTCHA

b. QR code

c. Short URL

d. Trackback ping

JITEC FE 2016 Fall AM Question 37 (English translation)

Which of the following is an attack that threatens the integrity of information?

a. Falsification of web pages
b. Illegal copy of data stored in system
c. DoS attack that creates system overload
d. Wiretapping of communication contents

JITEC FE 2016 Fall AM Question 38 (English translation)

Which of the following is the purpose of use of message digest for message authentication codes?

a. To confirm that the message has not been tampered with
b. To confirm the encryption method of a message
c. To confirm the outline of a message
d. To ensure the confidentiality of a message

JITEC FE 2016 Fall AM Question 39 (English translation)

Which of the following roles does the Certification Authority in PKI play as a reliable third-party organization?

a. To give a response of an accurate time to the request by a user to enable time adjustment.
b. To provide a digital signature to the text of an email requested by a user.
c. To issue a digital certificate which certifies a public key of a user and server.
d. To issue a digital certificate which certifies a private key of a user and server.

JITEC FE 2016 Fall AM Question 40 (English translation)

Which of the following is the appropriate operation of user authentication using an IC card and PIN?

a. Since individual users can be identified by IC cards, a common PIN is set for all users to reduce management load.
b. When an IC card is lost, issue a new IC card, reset the PIN, and perform an invalidation process of the lost IC card.
c. PIN is set by combining the numbers marked on the surface of an IC card.
d. PIN is communicated to the user separately instead of enclosing it together when an IC card is delivered.

JITEC FE 2016 Fall AM Question 41 (English translation)

Which of the following is a package of unauthorized programs and tools that has functions to create a back door in a server and hide the trace of entry into the server?

a. RFID b. rootkit c. TKIP d. web beacon

JITEC FE 2016 Fall AM Question 42 (English translation)

Which of the following is the explanation of WAF?

a. It monitors the access contents for a website and blocks the access when a pattern deemed as an attack is detected.

b. It is the standard encryption method of wireless LAN that has been certified by Wi-Fi Alliance and corresponds to AES encryption.

c. It temporary accumulates and manages operation logs of various systems to detect and analyze an event that poses a security threat as soon as possible.

d. It manages several security functions in an integrated manner by having a firewall function and coordinating anti-virus measures and intrusion detection.

JITEC FE 2016 Fall AM Question 43 (English translation)

Which of the following is categorized as a behavior method in virus detection?

a. Comparing information that proves the absence of infection by viruses added in advance as test objects and information calculated from the test objects.

b. Comparing test objects and their originals that are stored in a safe place.

c. Comparing the hash value of a test object and the hash value of a known virus file.

d. Running a test object on a memory under virtual environment and monitoring its behavior.

JITEC FE 2016 Fall AM Question 44 (English translation)

Which of the following is an attack that uses account authentication information leaked from a different service and system and takes control of an account of a user who is using the same account authentication information?

a. Password list-based attack b. Brute force attack

c. Reverse brute force attack d. Rainbow attack

JITEC FE 2016 Fall AM Question 45 (English translation)

Which of the following is the reason for a malware that successfully intrudes into a PC to frequently use TCP port 80 as a destination port when it communicates with the command server on the Internet?

a. There is a high possibility that communication is permitted by a firewall, as port 80 is used for DNS zone transfers.

b. There is a low possibility of detection by an intrusion detection system, as port 80 is used for viewing web sites via HTTPS.

c. There is a high possibility that communication is permitted by a firewall, as port 80 is used for viewing web sites.

d. There is a low possibility to be detected by an intrusion detection system, as port 80 is used for name resolution of domain names.

JITEC FE 2016 Fall AM Question 46 (English translation)

Which of the following is categorized as a fool proof design to ensure safety and reliability?

a. When a device malfunctions, the system is safely stopped to minimize the damage.

b. When a device malfunctions, the system continues to operate with restricted functions and lowered processing capacity.

c. Redundant composition is created by duplication so that a device malfunction does not affect the functions of the entire system.

d. A system is created so as not to cause abnormality even when a user performs an erroneous operation.

JITEC FE 2016 Fall AM Question 47 (English translation)

Which of the following explains object-oriented encapsulation?

a. To abstract and organize multiple objects with the same properties.

b. To inherit the properties of base class to subclass.

c. To extract common properties between classes and create a base class.

d. To make data and its manipulation procedure as a single object and hide the details of the data and procedure from the outside of the object.

JITEC FE 2016 Fall AM Question 48 (English translation)

An input processing module with valid input values ranging from integer 1 to 1,000 that executes processing A when the input value is 1-100 and executes processing B when the input value is 101-1,000 is tested by equivalence partitioning and boundary value analysis. What is the minimum value of a test data when it is tested under the following conditions?

[Conditions]

(1) For each valid equivalence class, one value becomes the test data. However, the value to be tested should not be a boundary value.

(2) All the boundary values of valid and invalid equivalence classes become the test data.

a. 5 b. 6 c. 7 d. 8

JITEC FE 2016 Fall AM Question 49 (English translation)

Integration test of software composed of module group in hierarchical structure is performed from the upper module. Which of the following is the test module used in this case to substitute the lower module?

a. Emulator b. Simulator

c. Stub d. Driver

JITEC FE 2016 Fall AM Question 50 (English translation)

Which of the following is the method of generating a design specification expressed in E-R diagram from the definition information of database in operation using a modeling tool?

a. Concurrent engineering

b. Social engineering

c. Forward engineering

d. Reverse engineering

JITEC FE 2016 Fall AM Question 01 – 50 (38 Qs)
Answer

1 c	22 d	32 b	43 d
3 a	23 a	33 b	44 a
6 b	24 d	34 b	45 c
7 b	25 c	36 a	46 d
15 d	26 b	37 a	47 d
17 a	27 a	38 a	48 d
18 c	28 a	39 c	49 c
19 a	29 c	40 d	50 d
20 b	30 d	41 b	
21 c	31 d	42 a	

JITEC FE 2016 Spring AM_Technology

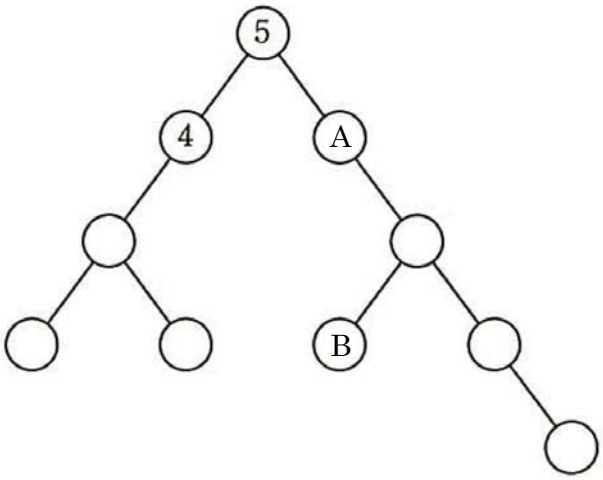
JITEC FE 2016 Spring AM Question 4 (English Translation)

Sound was sampled by the PCM method and converted to 8-bit digital data. When this was transferred in real time without compression, the transfer rate was 64,000 bit/second. How many microseconds is the sampling interval?

a. 15.6 b. 46.8 c. 125 d. 128

JITEC FE 2016 Spring AM Question 5 (English Translation)

When allocating values from 1 to 10 to uniquely correspond with each node of a 10-node binary tree, which of the following is the combination of nodes a and b? Here, the value allocated to each node is larger than the value allocated to the left-child and its descendants and smaller than the value allocated to the right-child and its descendants.



a. a=6, b=7 b. a=6, b=8

c. a=7, b=8 d. a=7, b=9

JITEC FE 2016 Spring AM Question 7 (English Translation)

Which expression should be placed in A in the definition of a function $F(n)$ that calculates the factorial of n in a recursive manner? Here, n is a non-negative integer.

$F(n) =$ [A] when $n > 0$

$F(n) = 1$ when $n = 0$

a. $n + F(n-1)$ b. $n - 1 + F(n)$

c. $n \times F(n-1)$ d. $(n-1) \times F(n)$

JITEC FE 2016 Spring AM Question 11 (English Translation)

Which of the following is the appropriate effect of cache memory?

a. To perform data transfer at high speed by simultaneously reading instructions from main memory to cache memory and reading data from main memory to cache memory.

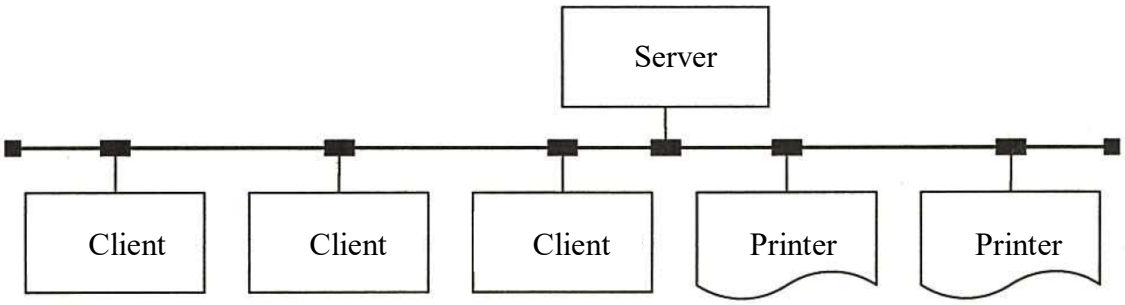
b. To retain data read from main memory in cache memory and transfer data at high speed when the CPU reads the same data later.

c. To retain data read from main memory in cache memory and perform operations at high speed by processing instructions in parallel.

d. To retain data read from main memory in cache memory and perform operations at high speed by decoding and running data in cache memory.

JITEC FE 2016 Spring AM Question 14 (English Translation)

A server, three clients, and two printers are connected via LAN as shown in the figure below. This system outputs data in the server from a printer based on instructions from a client. Which of the expressions represents the availability of the entire system when availability of each device is as shown in the table? Here, only one of the three clients and one of the two printers need to be in operation.



Device	Availability
Server	a
Client	b
Printer	c
LAN	1

a. ab^3c^2

b. $a(1-b^3)(1-c^2)$

c. $a(1-b)^3(1-c)^2$

d. $a(1-(1-b)^3)(1-(1-c)^2)$

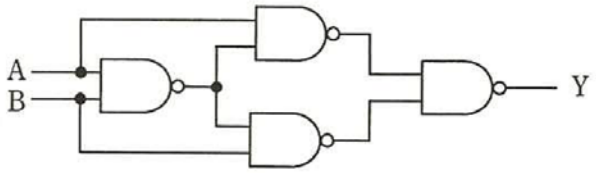
JITEC FE 2016 Spring AM Question 15 (English Translation)

Which of the following statements about system availability is accurate?

a. System availability is equal if MTTR is equal, even if MTBF is different.
b. System availability is equal if the sum of MTBF and MTTR is equal.
c. System availability improves if MTTR can be shortened without changing MTBF.
d. System availability decreases if MTBF becomes longer without changing MTTR.

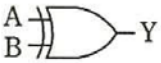
JITEC FE 2016 Spring AM Question 23 (English Translation)

Which of the following circuits is equivalent to the logic circuit in the figure below?



a.

b.

c. 

d.

JITEC FE 2016 Spring AM Question 27 (English Translation)

Which of the following relational algebra operations obtains the relation Z after combining relations X and Y?

X

Student No.	Name	Department code
1	Taro Yamada	A
2	Ichiro Joho	B
3	Hanako Suzuki	A
4	Goro Gijutsu	B
5	Jiro Kobayashi	A
6	Momoko Shiken	A

Y

Department code	Department Name
A	Engineering department
B	Informatics department
C	Literature department

Z

Department Name	Student No.	Name
Informatics department	2	Ichiro Joho
Informatics department	4	Goro Gijutsu

a. Projection and selection
b. Projection and sum
c. Selection
d. Selection and sum

JITEC FE 2016 Spring AM Question 32 (English Translation)

Which of the following is the device used to connect multiple LANs and relays data based on the protocol information of data link layer of the OSI basic reference model?

a. Gateway b. Bridge c. Repeater d. Router

JITEC FE 2016 Spring AM Question 39 (English Translation)

Which of the following is the role of Certification Authority (CA) in electronic commerce using public key encryption?

a. To manage a private key shared among the parties to the transaction.

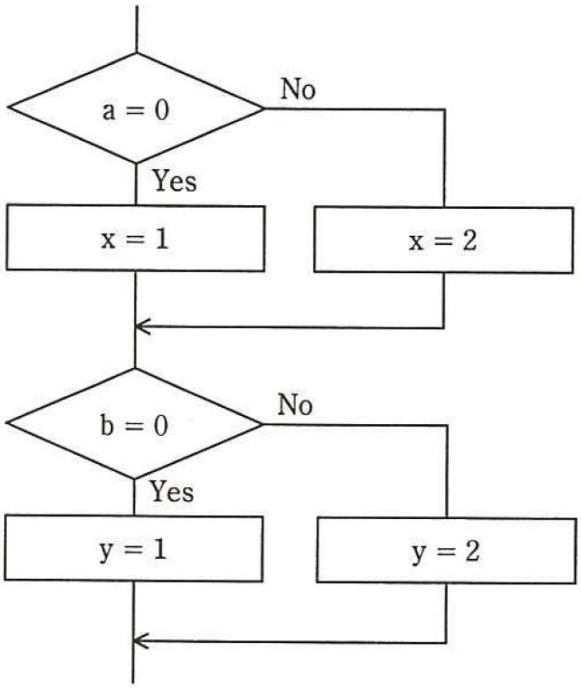
b. To issue a digital certificate for the public key of the parties to the transaction

c. To manage digital signatures of the parties to the transaction

d. To manage the passwords of the parties to the transaction

JITEC FE 2016 Spring AM Question 49 (English Translation)

When the part expressed in the flow diagram is tested by statement coverage, what is the minimum number of test cases that need to be prepared?



a. 2 b. 3 c. 4 d. 5

JITEC FE 2016 Spring AM Question 50 (English Translation)

Which of the following is a problem **unattributable** to configuration management in software development?

a. Since the developer revised the program without following the specified revision procedure, the program that worked correctly until now started to work incorrectly.

b. The development does not progress as scheduled due to many unit-test-level bugs occurring in the system test.

c. Due to noncorresponding version numbers of specifications, design specifications, and programs, the program that needs to be revised cannot be identified without analyzing source program at the time of program revision.

d. Although many derivative programs are created from a single program, revisions made to the original program are not reflected in all the derivative programs.

JITEC FE 2016 Spring AM Question 04 – 50 (12 Qs)
Answer

4	c
5	a
7	c
11	b
14	d
15	c
23	c
27	a
32	b
39	b
49	a
50	b

JITEC FE 2015 Fall AM_Technology

JITEC FE 2015 Fall AM Question 8 (English translation)

Consider the function $f(n)$ recursively defined as follows for the natural number n. Which of the following is the value of $f(5)$?

$$f(n):\ \text{if}\ \ n \leqq 1\ \ \text{then}\ \ \text{return}\ 1\ \ \text{else}\ \ \text{return}\ n + f(n-1)$$

a. 6 b. 9 c. 15 d. 25

JITEC FE 2015 Fall AM Question 10 (English translation)

Which of the following causes the average memory access time to increase in a memory system with cache memory?

a. Reduction of access time to cache memory
b. Decrease in hit ratio
c. Reduction of miss penalty
b. Decrease in miss ratio

JITEC FE 2015 Fall AM Question 14 (English translation)

Which of the following statements about MTBF and MTTR is accurate?

a. MTTR becomes longer due to error log and command trace functions
b. MTBF of a system becomes shorter and MTTR becomes longer by remote maintenance
c. MTBF of a system becomes longer when the system is composed of more types of devices
d. MTBF of a system becomes longer by preventive maintenance

JITEC FE 2015 Fall AM Question 15 (English translation)

There is a system composed of two processing units. What is the difference between the availability when at least one of them needs to operate normally and the availability when both of them need to operate normally? Here, the availability of both processing units is to be 0.9. Factors other than the processing units are not to be considered.

a. 0.09 b. 0.10 c. 0.18 d. 0.19

JITEC FE 2015 Fall AM Question 17 (English translation)

Which of the following page replacement methods of virtual memory management replaces the page with the longest elapsed time since last used?

a. FIFO b. LFU c. LIFO d. LRU

JITEC FE 2015 Fall AM Question 21 (English translation)

Which of the following is a characteristic of DRAM?

a. It performs writing and erasing in batches or blocks.

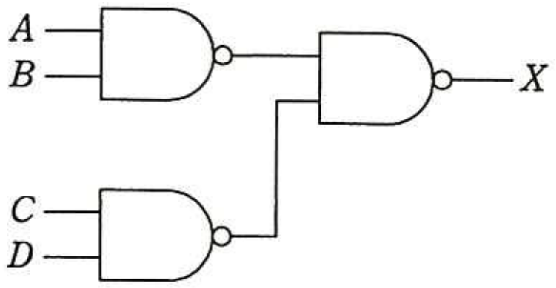
b. Refresh or access operation for retaining data is not necessary.

c. It can retain stored information even when the power is shut off.

d. Since the memory cell structure is simple, high integration can be achieved, and the bit unit cost can be reduced.

JITEC FE 2015 Fall AM Question 23 (English translation)

Which of the following is the logical expression of output X for the inputs A, B, C, and D in the combination circuit of the NAND gate in the figure? Here, * in the logical expression represents a logical product and + represents a logical sum.



a. (A + B) * (C + D) b. A + B + C + D

c. A * B + C * D d. A * B * C * D

JITEC FE 2015 Fall AM Question 27 (English translation)

There are functional dependencies (1) to (6) between the attributes of relational Order Record. Based on those, normalization is performed up to the third normal form to decompose each relation, Product, Customer, Order, and Order details. Which of the following is appropriate as the relational Order detail? Here, $\{X, Y\}$ represents a pair of attributes X and Y, and $X \rightarrow Y$ means that X functionally determines Y. In addition, the solid underline represents the primary key.

Order Record (Order No., Order date, Customer No., Customer name, Product No., Product name, Quantity, Unit sales price)

[Functional dependencies]

(1) Order No. → Order date

(2) Order No. → Customer No.

(3) Customer No. → Customer name

(4) {Order No., Product No.} → Quantity

(5) {Order No., Product No.} → Unit sales price

(6) Product No. → Product name

a. Order detail (<u>Order No.</u>, Quantity, Unit sales price)

b. Order detail (<u>Order No.</u>, <u>Customer No.</u>, Quantity, Unit sales price)

c. Order detail (<u>Order No.</u>, <u>Customer No.</u>, <u>Product No.</u>, Customer name, Quantity, Unit sales price)

d. Order detail (<u>Order No.</u>, <u>Product No.</u>, Quantity, Unit sales price)

JITEC FE 2015 Fall AM Question 28 (English translation)

Which of the SQL statements for the Delivery Record table results in the largest value?

Delivery Record

Product No.	Date	Quantity
NP200	2015-10-10	3
FP233	2015-10-10	2
NP200	2015-10-11	1
FP233	2015-10-11	2

a. SELECT AVG (Quantity) FROM Delivery Record WHERE Product No. = 'NP200'

b. SELECT COUNT (*) FROM Delivery Record

c. SELECT MAX (Quantity) FROM Delivery Record

d. SELECT SUM (Quantity) FROM Delivery Record WHERE date= '2015-10-11'

JITEC FE 2015 Fall AM Question 31 (English translation)

Which of the following layers is the third layer of the OSI basic reference model and performs the communication route selection and relay functions?

a. Session layer
b. Data link layer
c. Transport layer
d. Network layer

JITEC FE 2015 Fall AM Question 36 (English translation)

By carrying out the processing shown in the procedure, which of the followings can the recipient B do in addition to detecting the tampering of messages?

[Procedure]

Processing of the sender A

(1) Generate a digest from a message using a hash function.

(2) Generate a signature of the message from the digest generated in (1) by using the secretly retained own signature creation key.

(3) Send the message and the signature generated in (2) to the recipient B.

Processing of the recipient B

(4) Generate a digest from the received message using a hash function.

(5) Verify the received signature using the digest generated in (4) and the signature verification key of the sender A.

a. To confirm that the message is from the sender A

b. To identify the tampered parts of the message

c. To detect wiretapping of the message

d. To prevent leakage of the message

JITEC FE 2015 Fall AM Question 44 (English translation)

When a packet filtering firewall controls the packets based on the list of rules, which of the following is the rule applied to the packet A and its action? Here, the firewall applies the rules in order from 1 in the Rule List, and when one rule matches, the remaining rules are not applied.

[Rule list]

No.	***Source address***	***Destination address***	***Protocol***	***Source port number***	***Destination port number***	***Action***
1	***10.1.2.3***	*	*	*	*	***Prohibit passage***
2	*	***10.2.3.****	***TCP***	*	***25***	***Allow passage***
3	*	***10.1.****	***TCP***	*	***25***	***Allow passage***
4	*	*	*	*	*	***Prohibit passage***

Note: * indicates the pattern that matches arbitrarily.

[Packet A]

Source address	***Destination address***	***Protocol***	***Source port number***	***Destination port number***
10.1.2.3	***10.2.3.4***	***TCP***	***2100***	***25***

a. Prohibit passage by No. 1

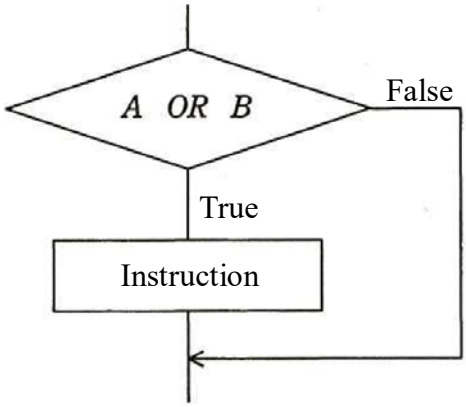
b. Allow passage by No. 2

c. Allow passage by No. 3

d. Prohibit passage by No. 4

JITEC FE 2015 Fall AM Question 47 (English translation)

Which of the following is the appropriate test case when the part of a program shown in the figure is tested by decision condition coverage (branch coverage)?



a.

A	B
False	True

b.

A	B
False	True
True	False

c.

A	B
False	False
True	True

d.

A	B
False	True
True	False
True	True

JITEC FE 2015 Fall AM Question 08 – 47 (13 Qs)
Answer

8	c
10	b
14	d
15	c
17	d
21	d
23	c
27	d
28	b
31	d
36	a
44	a
47	c

JITEC FE 2015 Spring AM_Technology

JITEC FE 2015 Spring AM Question 15 (English translation)

Which system configuration has the highest availability? Here, at least one system needs to be in operation when systems are connected in parallel.

a. Connecting four of the same systems with 70% availability in parallel
b. Connecting three of the same systems with 80% availability in parallel
c. Connecting two of the same systems with 90% availability in parallel
d. Single system with 99% availability

JITEC FE 2015 Spring AM Question 16 (English translation)

Which of the following statements about reliability of computer systems is accurate?

a. Remote maintenance of a system makes the MTTR longer and improves availability.
b. System availability improves by making the MTTR and MTBF longer.
c. MTBF becomes longer as system configuration becomes more complicated.
d. Preventive maintenance of a system is performed to make the MTBF longer.

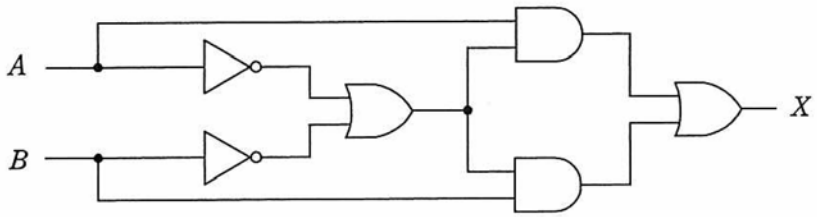
JITEC FE 2015 Spring AM Question 22 (English translation)

Which of the following is the characteristic of DRAM when compared to SRAM?

a. It is used mainly as cache memory.
b. Refresh or access operation for retaining data is not necessary.
c. Since the memory cell structure is simple, the bit unit cost is reduced.
d. It saves data to memory cell using flip-flop.

JITEC FE 2015 Spring AM Question 23 (English translation)

Which of the logic expressions is equivalent to the digital circuit shown in the figure? Here, * in the logical expression represents a logical product, + represents a logical sum, and $\overline{X}$ expresses the negation of X.



a. $X=A*B+\overline{A*B}$

b. $X=A*B+\overline{A}*\overline{B}$

c. $X=A*\overline{B}+\overline{A}*B$

d. $X=(\overline{A}+B)*(A+\overline{B})$

JITEC FE 2015 Spring AM Question 33 (English translation)

Which of the following statements about connecting device between LANs is accurate?

a. Gateway converts the protocols of the first to third layers of the OSI basic reference model.

b. Bridge relays frames based on IP address.

c. Repeater extends transmission distance by amplifying the signal between segments of the same type.

d. Router relays frames based on MAC address.

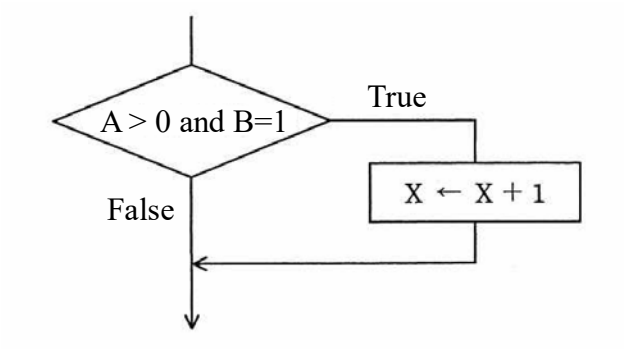
JITEC FE 2015 Spring AM Question 48 (English translation)

Which of the following can be considered a subclass of an automobile in general based on the object-oriented concept?

a. Engine b. Serial number c. Tires d. Truck

JITEC FE 2015 Spring AM Question 50 (English translation)

When designing a test case of white box test for the program with structure as shown in the figure, which test method has the largest number of minimum test cases that must be performed?



a. Condition coverage
b. Decision condition coverage
c. Multiple-condition coverage
d. Statement coverage

JITEC FE 2015 Spring AM Question 15 – 50 (7 Qs)
Answer

15	b
16	d
22	c
23	c
33	c
48	d
50	c

JITEC

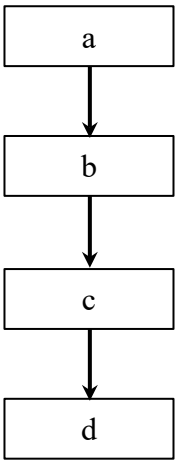
Morning Examination

Management & Strategy

JITEC FE 2018 Fall AM_Management & Strategy

JITEC FE 2018 Fall AM Question 66 (English Translation)

When procuring an information system using the procedure shown in the figure, which of the following can be put into b?



The ordering party requests the vendor to provide information on the purpose of the systemization and business details.

The ordering party indicates the procurement target system, procurement conditions, etc., and requests the submission of a proposal.

The ordering party decides the procurement destination based on the vendor's proposal and ability.

The document confirms the roles and responsibilities of the supplier and supplier in writing.

a. RFI
b. RFP
c. Supplier selection
d. Conclusion of contract

JITEC FE 2018 Fall AM Question 67 (English Translation)

Which are the characteristics of the growth period in the product life cycle?

a. The market begins to understand the value of the product. Both product lines and channels must be expanded. Sales will increase during this period, but investment is also required.
b. As demand increases, product differentiation and market segmentation becomes clear. Competition between competitors will intensify, and it will be important to add new varieties and reduce costs.
c. As demand declines, some companies will withdraw. Judge whether you can become a strong person at this time and consider entering into alternative markets.
d. Demand is partial, and new demand development is a game. A persuasive persuasion for a specific target is necessary.

JITEC FE 2018 Fall AM Question 68 (English Translation)

When the relationship between the set price and demand of a product can be expressed by a linear expression, which is the appropriate value to put in a?

1. If the set price is 3,000 yen, the demand will be zero.
2. If the set price is 1,000 yen, the demand will be 60,000 pieces.
3. When the set price to 1,500 yen, demand will be [ ] pieces.

a. 30,000 b. 35,000 c. 40,000 d. 45,000

JITEC FE 2018 Fall AM Question 69 (English Translation)

Company T sells three types of products A, B, and C. Currently, each product has 10,000, 20,000, and 80,000 buyers per month. Starting next year, the product system will be changed and four new products P, Q, R, and S will be sold. Therefore, the proportion of existing customers purchasing new products and the number of new customers were estimated. Which statement is appropriate for this trial calculation? Here, the numbers up to the first decimal place in each row of the table indicate the percentage of people who change from the old product to the new product.

	Number of People	P	Q	R	S
A	10,000	0.5	0.3	0.1	0.1
B	20,000	0.1	0.6	0.1	0.1
C	80,000	0.1	0.1	0.3	0.3
Number of existing customers		15,000	23,000	27,000	27,000
New customers		5,000	7,000	13,000	23,000

a. 1,000 purchasers of product A are expected to purchase new product Q.
b. The purchaser of the product B expects to purchase any of the new products P, Q, R, and S.
c. 50% of prospective buyers of new product P are expected to be buyers of product A.
d. The number of new customers of new product S is expected to be less than the number of purchasers of product C who purchase new product S.

JITEC FE 2018 Fall AM Question 70 (English Translation)

Technology follows the evolutionary process of transitioning to the next technology phase, during the introduction phase, the growth phase, the maturity phase, the decline phase, in the process of aiming for the ideal technology. Which represents this technological evolution process?

a. Technology S curve
b. Demand curve
c. Bathtub curve
d. Learning curve

JITEC FE 2018 Fall AM Question 66-70

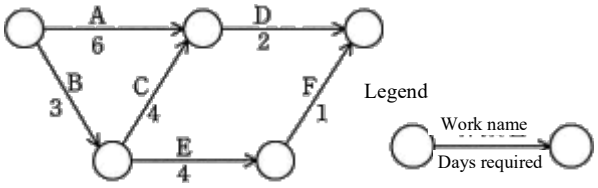
Answers

66	b
67	a
68	d
69	d
70	a

JITEC FE 2018 Spring AM_Management & Strategy

JITEC FE 2018 Spring AM Question 51 (English translation)

In the following arrow diagram, in order to shorten the duration of the whole project shorten some of work A to E one day each. Which combination of work can shorten the whole project by two days?



a. A, C, E　　b. A, D　　c. B, C, E　　d. B, D

JITEC FE 2018 Spring AM Question 52 (English translation)

The man-hour allocation of a project is as shown in the table. From basic design to program design is completed as planned. Currently it is in the programming phase, 1,200 out of 3,000 programs have been completed. How much is the percentage of the progress of the project as a whole?

Basic Design	Detailed Design	Program Design	Programming	Test
0.08	0.16	0.20	0.25	0.31

a. 40　　b. 44　　c. 54　　d. 59

JITEC FE 2018 Spring AM Question 53 (English translation)

In system development, when the relationship between manhour (man-month) and period (month) is indicated by the following approximate expression, how long is the period (month) when manhour is 4,096 man-months?

$$\text{period} = 2.5 \times \text{manhour}^{1/3}$$

a. 16　　b. 40　　c. 64　　d. 160

JITEC FE 2018 Spring AM Question 54 (English translation)

In certain software, the weighting coefficients for the number of functions and the complexity of functions are as shown in the table. What is the function point value of this software? Here, the correction factor for the overall complexity of the software is set to 0.75.

User function type	Value	Weighting coefficient
External input	1	4
External output	2	5
Internal logical file	1	10

a. 18 b. 24 c. 30 d. 32

JITEC FE 2018 Spring AM Question 55 (English translation)

In the activities to be carried out in problem management in IT service management, which one is a preventive activity in advance?

a. Analyze the occurrence trend of incidents and propose measures to prevent future incidents.
b. Classify problems detected and recorded, and set corresponding priority.
c. Evaluate the effectiveness of a solution to a serious problem.
d. Monitor the presence or absence of incident recurrence for a certain period of time after problem solving.

JITEC FE 2018 Spring AM Question 56 (English translation)

Which of the structure of the service desk organization and its characteristics is as the local service desk?

a. By concentrating the service desk at one site or a few places, it is possible to efficiently arrange service personnel and respond to a large number of calls.
b. By placing the service desk close to the user, it is possible to respond to users with different languages and cultures, and to support VIP by dedicated personnel.
c. Even if service personnel are distributed among multiple regions and divisions, services can be provided as if they are a single service desk by using communication technology.
d. By centralizing and managing all members including the service personnel of the distributed base, it is possible to provide a well-controlled service.

JITEC FE 2018 Spring AM Question 57 (English translation)

Which is the most appropriate description for backing up data on a disk connected to a server?

a. Data that has been used less frequently after a certain period of time is erased from the current disk and the backed up data is erased.
b. All data is backed up on the system start date, and after that, only data with high update frequency is backed up in order to shorten working time.
c. Back up important data over the same medium overwriting so as not to confuse the backup medium.
d. Data distributed in a plurality of files is backed up when a series of update processing to each file is completed.

JITEC FE 2018 Spring AM Question 58 (English translation)

Which of the following actions of the system auditor is appropriate?

a. Based on past experiences, opinions on insufficient investigation were summarized in the audit opinion.
b. Pointed out improvements on the problems found by the survey.
c. Ordered improvement on each problem found during the survey each time.
d. Since the original planned deadline came in the middle of the investigation, we moved to preparing an audit report.

JITEC FE 2018 Spring AM Question 59 (English translation)

Which of the system audit implementation systems should be avoided in terms of the independence of the system auditor.

a. Mr. A in the General Affairs Department, who is appointed as an audit team member, audits the status of entry and exit management by the General Affairs Department along with other members.
b. Mr. B of the Audit Department audits the status of personal information management of external companies entrusted with the work handling personal information.
c. Mr. C who transferred to the Audit Division 5 years ago from the development manager of the Information Systems Department audits the usage of the Internet at the marketing department.
d. Mr. D of the Legal Division cooperates with the auditor in the audit of the validity of the outsourcing agreement at the request of the Audit Division.

JITEC FE 2018 Spring AM Question 60 (English translation)

In the information security audit, which of check item is to check availability?

a. The prohibition of unauthorized taking out of the external storage medium is prohibited
b. It is managed so that the level of the SLA that defines the interruption time is kept
c. Error checking at the time of data input is properly done
d. The database is encrypted

JITEC FE 2018 Spring AM Question 61 (English translation)

Which case is possible to qualitatively improve customer service in the call center by applying pattern recognition function or machine learning function to accumulated data?

a. The response manual and the basic information of the customer are digitized and displayed as a pop-up screen on the response screen at the request of the operator.
b. Depending on the content of the customer's inquiry, the optimum answer is derived in real time from all the history concerning related materials and past responses.
c. When an operator who is answering a call is in danger of replying, it forwards the call or response screen to a veteran operator or specialist.
d. Veteran operators will be lecturers, using the response manual as a teaching material, and conducting role-playing training for new operators repeatedly.

JITEC FE 2018 Spring AM Question 62 (English translation)

Which description is appropriate as SOA?

a. A concept of raising sales efficiency and quality by utilizing IT for sales activities to increase sales and profits and improve customer satisfaction
b. To concentrate management resources on core business, outsource non-core business out of internal business
c. A concept of redesigning business processes to innovatively improve cost, quality, service and speed
d. The concept of constructing a system by considering software functions as parts called services and combining the services

JITEC FE 2018 Spring AM Question 63 (English translation)

When classifying the development process of the utilization of big data into the next four stages, which use case corresponds to Phase 4?

[Development stage of utilization of big data]
Phase 1: Confirmation of past and present facts (how was it)
Phase 2: Interpretation of the past and present situation (why was it so)
Phase 3: Prediction of events that may occur in the future (what is going to happen)
Phase 4: Deployment to future measures (what to do)

a. Using the Internet connection function of the product, accumulate the operation history by many users from the product after sales in big data and clarify the usage ratio of the function.
b. Based on the analysis result of the big data in which the operation history by a large number of users is accumulated, the misoperation of the user initially not expected by the maker and its cause are found out.
c. Based on the big data, we estimate the cause of erroneous operation by the user and the increase in failure rate due to it, and improve it to a user interface that is unlikely to cause erroneous operation by the user.
d. We estimate the increase in the failure rate of the product assumed when the erroneous operation by the user continues by simulation using big data.

JITEC FE 2018 Spring AM Question 64 (English translation)

When using UML for business modeling, which figure can represent a workflow such as branching depending on the execution order and conditions of business processes?

a. Activity diagram
b. Object diagram
c. Class diagram
d. Component diagram

JITEC FE 2018 Spring AM Question 65 (English translation)

Countries, local governments, etc. choose products and services that are evaluated as positively considering the environment. What is this activity?

a. CSR
b. Eco Mark certification
c. Environmental Assessment
d. Green Procurement

JITEC FE 2018 Spring AM Question 66 (English translation)

Which one is a niche strategy in corporate management?

a. Cash flow emphasis
b. Market identification
c. Vertical integration
d. Reduced lead time

JITEC FE 2018 Spring AM Question 67 (English translation)

When a maker produces beer and soft drinks, it costs different depending on the six cases (A to F) as shown in the table. Which of the descriptions on scale merit and synergy effects in the production activities of both manufacturers of this manufacturer is appropriate?

Case	Beer (thousands)	Soft drink (thousands)	Cost (thousand yen)
A	200	0	15,000
B	400	0	33,000
C	0	100	5,000
D	0	200	11,000
E	200	100	19,000
F	400	200	42,000

a. There is a merit of scale, but there is no synergistic effect.
b. There is no scale merit, but there is a synergistic effect.
c. Both scale merit and synergy effect are available.
d. Both scale merit and synergy effect are not available.

JITEC FE 2018 Spring AM Question 68 (English translation)

Which is the characteristics of the maturity phase in the product life cycle?

a. The market begins to understand the value of the product. Both product lines and channels must be expanded. Although sales will increase at this time, investment is also necessary.
b. Demand will increase, product differentiation and market segmentation will become clearer. Competition between competitors also intensifies, adding new varieties and cost reduction are important.
c. Demand will come down and some companies will withdraw. Judge whether you can become a strong player at this time and consider advancing to alternative market.
d. Demand is partial, and development of new demand is a game. Belief-filled persuasion for a specific target is necessary.

JITEC FE 2018 Spring AM Question 69 (English translation)

Which one is the explanation of the cost plus pricing method?

a. Research quality and price that buyer accepts, and determine appealing price.
b. Based on the average level of the industry and the price set by competitors, we decide competitive prices.
c. The price is determined by placing a certain margin on the manufacturing cost or purchase cost.
d. Based on the target sales volume, determine the price that can secure a certain profit rate after absorbing the total cost.

JITEC FE 2018 Spring AM Question 70 (English translation)

Which one is the explanation of the knowledge management?

a. We share knowledge scattered inside the company and manage management to increase the overall problem-solving power.
b. For rapid decision-making, management is carried out by a flat-type organization structure that minimizes the organization's hierarchy.
c. We conduct management innovation of our company from comparative analysis with companies that have excellent achievements.
d. We will manage with the core strengths of our company's unique expertise and technology that other companies cannot imitate.

JITEC FE 2018 Spring AM Question 71 (English translation)

Which is **NOT** appropriate as a practical example of IoT (Internet of Things)?

a. For the purpose of avoiding security problems on the Internet, a computer that does not connect to the server but performs work such as file management, arithmetic processing, print processing alone, etc.
b. A system in which sensors and communication functions are built in large-sized machines and the like, and the manufacturer can grasp the operation status, the failure location, parts requiring replacement, etc. in real time via the Internet by the manufacturer
c. Instead of a meter reader, a power meter that communicates with an electric power company and transmits electricity usage
d. A system that gathers location information of cars in real time and delivers congestion information by communicating between cars and cars and roadside devices

JITEC FE 2018 Spring AM Question 72 (English translation)

Which one can be confirmed by collecting and analyzing POS data with customer IDs associated with personal information such as point cards at a convenience store?

a. The ultimate user of the item
b. Distribution route to products store
c. Motivation to purchase items
d. Frequency of purchase of the same item

JITEC FE 2018 Spring AM Question 73 (English translation)

Which of the following can be used the advantage of cell production system?

a. To increase productivity, those requiring mass production
b. Those products whose specifications have not changed for a long time
c. Many kinds and flexible production is required
d. Standardization, simplification, requiring expert division of labor

JITEC FE 2018 Spring AM Question 74 (English translation)

Which is the description of the long tail?

a. Perform necessary processing such as integrated and systematic management and distribution for digital contents such as texts and images constituting Web contents
b. With internet shopping, the total sales of products that are not very popular with respect to the total sales is not negligible
c. The company posts a link to the company on his web site or blog and the company pays the referral fee when another person purchases the item via these links
d. Being able to sell items on your website without incurring inventory risk by shipping products directly from manufacturers or wholesalers

JITEC FE 2018 Spring AM Question 75 (English translation)

Which of the following is an explanation of the ABC analysis method?

a. Divide the area into a plurality of lattice-shaped sections and conduct regional analysis more precisely based on various data (population, purchasing power, etc.).
b. I repeatedly investigate the same panelist (respondent) many times. Use the data to grasp local trends and changes in purchasing layer.
c. Sales prices, gross profit amount, etc. are arranged in order from the highest to the lowest, and the products are divided into several hierarchies according to the cumulative ratio, and the sales volume of the products belonging to the higher hierarchy is expanded.
d. Analyze related sales power analysis and purchase situation of the same product by classifying and summarizing multiple survey data by factor.

JITEC FE 2018 Spring AM Question 76 (English translation)

In sampling inspection, which one can explain the pass probability of the lot with a defect rate?

a. OC curve b. Gompertz curve c. Bathtub curve d. Logistic curve

JITEC FE 2018 Spring AM Question 77 (English translation)

Which of the items is displayed in the net assets section of the balance sheet?

a. Accounts receivable
b. Capital
c. Corporate bond
d. Investment securities

JITEC FE 2018 Spring AM Question 78 (English translation)

All payment receipts for the current month of item A are listed in the table. When evaluating Product A by the FIFO method, how much is the evaluation price of stock at the end of the current month?

Date	Summary	Number of product		Unit price
		Receive	Payout	
1	Previous month brought forward	10		100
4	Purchase	40		120
5	Sales		30	
7	Purchase	30		130
10	Purchase	10		110
30	Sales		30	

a. 3,300 b. 3,600 c. 3,660 d. 3,700

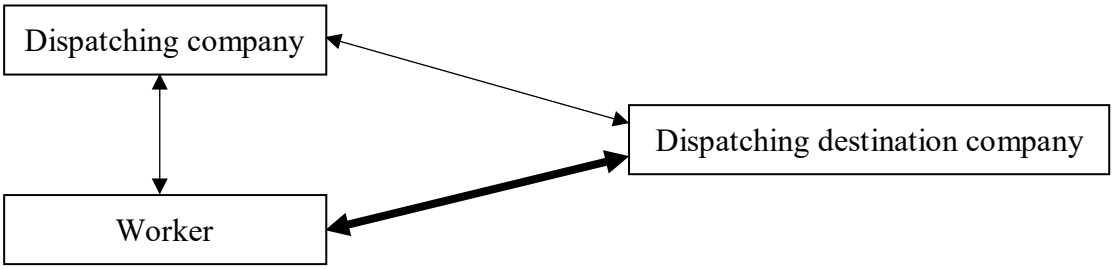
JITEC FE 2018 Spring AM Question 79 (English translation)

Company A does not make any particular arrangement concerning the rights of copyrighted material with company B and entrusts company B to prepare the program of sales management system based on the requirement specification of company A. Which one is appropriate as primitive attribution of program copyright in this case?

a. Discuss between company A and company B to decide
b. Shared by Company A and Company B
c. Belong to Company A
d. Belong to Company B

JITEC FE 2018 Spring AM Question 80 (English translation)

Which is the relationship between the company to be dispatched and the workers (bold line in the figure) based on the Worker Dispatch Law?



a. Contract relationship
b. Employment relationship
c. Command order relation
d. Worker dispatch contract relationship

JITEC FE 2018 Spring AM Question 51-80

Answer

51 d	61 b	71 a
52 c	62 d	72 d
53 b	63 c	73 c
54 a	64 a	74 b
55 a	65 d	75 c
56 b	66 b	76 a
57 d	67 b	77 b
58 b	68 b	78 d
59 a	69 c	79 d
60 b	70 a	80 c

JITEC FE 2017 Fall AM _Management & Strategy

JITEC FE 2017 Fall AM Question 51 (English translation)

Which is the explanation of the function point method?

a. Estimate the scale of development by integrating the number of steps for each program to be developed.
b. Create a WBS for the work required for the development project, and estimate the number of steps for each work.
c. The scale of development is estimated from the number and characteristics of external I / O, internal logical file, external query, external interface, etc.
d. Find similar examples in the past, analyze and evaluate the results and differences with the system to be developed, and estimate the scale of development.

JITEC FE 2017 Fall AM Question 52 (English translation)

Create a system screen consisting of 100 screens in all. The breakdown of the 100 screens by size and complexity is as follows.

- Screen with "small" scale and "simple" complexity: 30
- Screen with "medium" scale and "normal" complexity: 40
- Screen with "large" scale and "normal" complexity: 20
- Screen with "large" scale and "complex" complexity: 10

If you estimate the total man-hours for creating all the screens using table-manufacturing man-hours, how many days does it take? Here, it takes 5 man-days to review and correct all the screens, and 20% of the work man-hours including the review and correction man-hours are required to manage the work.

Man-hours created per screen

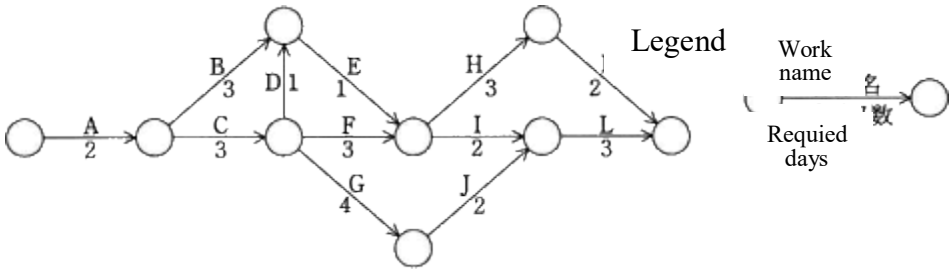
Unit: man-day

compexity / size	simple	normal	complex
small	0.4	0.6	0.8
medium	0.6	0.9	1.0
large	0.8	1.0	1.2

a. 80 b. 85 c. 101 d. 102

JITEC FE 2017 Fall AM Question 53 (English translation)

Which is the critical path of the project activity shown in the figure?



a. A → B → E → I → L

b. A → C → D → E → H → K

c. A → C → F → I → L

d. A → C → G → J → L

JITEC FE 2017 Fall AM Question 54 (English translation)

In order to analyze the tendency of issues that occurred in the project, arrange the number of issues by management items such as stakeholder, cost, schedule, and quality as a bar chart in descending order of the number of issues Created the figure. Which of the followings is the appropriate figure?

a. Control chart

b. Scatter plot

c. Characteristic factor diagram

d. Pareto chart

JITEC FE 2017 Fall AM Question 55 (English translation)

In service management, which ot the followings is a requirements of service level management?

a. Assess and document risks to service continuity and availability.
b. Create a service catalog and SLA of the service to be provided, and agree with the customer.
c. Create, implement and maintain capacity and capacity plans, taking into account human, technical, informational and financial resources.
d. Monitor and report expenses against budgets, review financial forecasts, and manage expenses.

JITEC FE 2017 Fall AM Question 56 (English translation)

Which is the most appropriate description of how to back up data in the new system?

a. If business processes overlap with backup processes and response time may increase, schedule so that both processes do not overlap.
b. In order to shorten backup processing time, backup data is placed in the same storage medium as backup source data.
c. In order to shorten the recovery time from backup data, use differential backup.
d. In order to store backup data for a long time, use a medium that allows random access.

JITEC FE 2017 Fall AM Question 57 (English translation)

Which of the following is effective as a means to protect the information system from the damage of overvoltage caused by lightning strikes?

a. Connect the communication cable and computer via a surge protection device (SPD).
b. Install a private power generator.
c. Communication lines shall be two systems with different routes.
d. Digitize the control circuit of the power supply equipment.

JITEC FE 2017 Fall AM Question 58 (English translation)

Among the situations found in audits related to operation management of system operation tasks, which of the following should be stated in the audit report as pointed out items?

a. The operation manager has confirmed the operation record created by the operator.
b. The operation manager keeps the operation record with a fixed period.
c. The operator records exception handling that occurred during operation.
d. The operator decides the daily operation plan and approves it by himself.

JITEC FE 2017 Fall AM Question 59 (English translation)

Which of the following statements is appropriate about the interview conducted by the system auditor?

a. Select a manager of an audited department who has experienced audit work as a target person for hearings.
b. Seek to obtain documents and records to support the information obtained from the department under audit through hearings.
c. Instruct the audited department to improve on the spot any deficiencies that you notice in the hearing.
d. If there are multiple interviews, there may be differences in the contents of the records, so one system auditor should do it.

JITEC FE 2017 Fall AM Question 60 (English translation)

Which is an appropriate explanation of the audit report?

a. It is an implementation record of audit procedures conducted by the auditor, and serves as a basis for audit opinion.
b. This is a compilation of the auditor's own security pledges, which the auditor submits to the audited department when conducting the audit.
c. It summarizes the standards and guidelines used by the auditor to conduct the audit.
d. They are required to be issued along with the audit report to prove that the auditor has paid due duty.

JITEC FE 2017 Fall AM Question 61 (English translation)

The results of analyzing the day's business activities of a sales member are as shown in the table. By introducing sales support system, “hours of client visit preparation” can be shortened by 0.1 hour per case. How many hours of "hours of other works" needs to be reduced to make the number of client visits per day 6 without changing the total work hours and client visit time per case?

Time table for daily activity analysis

Total Working hours					The number of client visit per day
	Hours of client visit	Hours of in-house work			
			Hours of client visit preparati on	Hours of other works	
8.0	5.0	3.0	1.5	1.5	5

a. 0.3 b. 0.5 c. 0.7 d. 1.0

JITEC FE 2017 Fall AM Question 62 (English translation)

Which one is an appropriate explanation of SOA?

a. A method of radically reviewing existing organizations and business rules in corporate reform, and restructuring business flow, management mechanism, and information system
b. A business system to manage core operations in an integrated manner, not by department, in order to effectively utilize corporate resources and improve management efficiency
c. Documents that have agreed on the quality of service between the client and the IT outsourcing service provider
d. System architecture that provides business process components and IT infrastructure to support them as services that are software components

JITEC FE 2017 Fall AM Question 63 (English translation)

Which of the followings is a case of companies utilizing Big Data?

a. When the customer center is inquired, the contact information is extracted from the registered customer information.
b. Calculate the return on sales from the financial statements issued by the most important business partners.
c. In the creation of a target person list for internal training, employees in the 10th year of joining are extracted from personnel information.
d. Analyze a large amount of writing on a wide variety of social media and improve products.

JITEC FE 2017 Fall AM Question 64 (English translation)

Which is an appropriate explanation of green procurement?

a. Companies that carry out environmental protection activities will widely appeal their activities and raise funds from investors for environmental protection.
b. An international standard for environmental labeling such as the Eco Mark, in which a third party certifies a product contributing to environmental protection based on certain standards.
c. It is a certificate that enables the market to trade green power generated by natural energy such as solar light, biomass, wind power and geothermal energy.
d. In addition to meeting the requirements for quality and price, it is a priority to purchase products and services that have a low environmental impact from businesses seeking to reduce their environmental impact.

JITEC FE 2017 Fall AM Question 65 (English translation)

Which one describes BI (Business Intelligence)?

a. A method to support the speeding up of corporate decision-making by accumulating, classifying, processing, analyzing and using internal and external data
b. A method to improve cost, quality, service, etc. by fundamentally reorganizing business processes, regardless of company practices
c. A method for continuous business improvement by visualizing the flow of business in a company and applying a business improvement cycle
d. A method for efficiently using systems as a whole by connecting different systems in a company to one another and integrating data and processes

JITEC FE 2017 Fall AM Question 66 (English translation)

When prototyping parts to be mounted on electrical appliances, which development method is the cheapest overall cost? Here, the construction period of each process is 6 months for the preparation process, 3 months for the modification process, and 2 months for the evaluation process. The cost per man-month is 600,000 yen for the preparation process and 1 million yen for the remodeling process and evaluation process. However, costs other than human costs, purchasing costs and outsourcing costs are not considered. Here "yen" means japanese money / currency similar to "Taka" in Bangladesh.

	Developping method	Purchasing cost (thousands yen)	Outsourcing cost (thousands yen)	Persons per month		
				Preparation process	Remodeling process	Evaluation process
a.	Buy samples and remodel in-house	20,0000	0	0	40	10
b.	Outsourced all to outside	0	35,000	0	0	0
c.	Remodel in-house assets	0	0	0	100	30
d.	Create new in-house	0	0	100	0	20

JITEC FE 2017 Fall AM Question 67 (English translation)

In the SWOT analysis, which of the followings is generally regarded as threats?

a. Higher production efficiency compared to competitors
b. High growth rate of business domain
c. Entry of strong companies into the market
d. Low market share

JITEC FE 2017 Fall AM Question 68 (English translation)

Which is the leader strategy in a company's competitive strategy?

a. With the goal of stealing market share, we will take differentiation strategies in all aspects such as products, services, sales promotion, and distribution channels.
b. Concentrate limited resources in specialized markets where there is potential demand but no other companies can enter.
c. By observing and quickly imitating the target company's strategy, control development and advertising costs and aim for market survival.
d. Aim for profit, maintaining and improving good reputation, and securing optimal market share, and take an omnidirectional strategy targeting all customers in the market.

JITEC FE 2017 Fall AM Question 69 (English translation)

Which one describes supply chain management?

a. Review a series of operations linking purchasing, production, sales and distribution from the perspective of the entire optimization within a company and among companies, and aim to shorten delivery times and reduce inventory.
b. Share intellectual assets such as know-how and experience possessed by individuals throughout the organization and connect them to creative work.
c. Understand employee skills and behavior characteristics, and manage appropriate staffing and evaluation from the perspective of personnel strategy.
d. Work closely with our customers by unifying and using customer information collected through various channels.

JITEC FE 2017 Fall AM Question 70 (English translation)

Which of the following is an example of core technology?

a. Technology that aims to form an alliance, formulate interfaces, etc. and use them in common
b. Automotive engine idling stop technology that competitors cannot imitate
c. Technology that uses the same CPU core as competitors and takes advantage of software portability
d. Technology to develop by combining general purpose parts for the purpose of early development of products and early market launch

JITEC FE 2017 Fall AM Question 71 (English translation)

The basic elements and device service examples when utilizing IoT in factory equipment maintenance work are organized. When a-d correspond to any of 1.-4., which corresponds to 1.?

Basic element	Example of device or service
Data collection	1.
Data transmission	2.
Data analysis	3.
Data utilization	4.

a. Outlier judgment tool
b. Equipment temperature sensor
c. Factory wireless communication
d. Work instruction display

JITEC FE 2017 Fall AM Question 72 (English translation)

Which is the feature of MRP?

a. Produce products after receiving customer orders.
b. Use the work instruction sheet to give work instructions and transport instructions.
c. Conduct product development, design and production preparation in parallel.
d. Calculate the quantity of parts ordered based on the standard production plan of the product.

JITEC FE 2017 Fall AM Question 73 (English translation)

Which of the following is an appropriate explanation of HEMS?

a. A system that converts electricity generated by a solar power generation system and a home fuel cell so that it can be used at home
b. A system to recycle useful parts of home appliances discharged from general homes and offices for promoting waste reduction and effective use of resources
c. Electric hot water supply system that generates large amount of heat with less energy using heat pump
d. A system that connects multiple home appliances with a network to perform power visualization and optimal control of power consumption

JITEC FE 2017 Fall AM Question 74 (English translation)

Which of the explanations related to improving the performance of in-vehicle devices uses deep learning?

a. The acceleration sensor detected a collision against the car wall, and the air bag was inflated to protect the passenger from injury.
b. By acquiring and processing a large amount of images, the system can distinguish pedestrians and vehicles more reliably.
c. By installing an automatic idling stop device, fuel efficiency is improved compared to when a driver with abundant driving experience drives.
d. The navigation system updated the software through the mobile phone line and updated the map.

JITEC FE 2017 Fall AM Question 75 (English translation)

What is the main role that the CIO should play?

a. In formulating informatization strategies, in order to support business strategies, formulate a plan that optimizes the effects of investment in information resources across the enterprise.
b. Identify the situation regarding information system development and operation, and instruct improvement points specifically so that the company-wide information system functions optimally.
c. Advise the information system department by auditing whether the information system is functioning properly for corporate activities.
d. Receive inquiries from the information system department and reports from the information system department regarding problems and provide specific instructions to the department in charge so that the company-wide information system can be optimally operated.

JITEC FE 2017 Fall AM Question 76 (English translation)

Which is the feature of OJT?

a. Education focused on generalized knowledge and technology.
b. As the superiors and seniors closely stand by them to the practice and educate the knowledge and skills in practice, they can acquire necessary skills.
c. A certain level of business knowledge can be acquired regardless of the superiors and seniors' qualities.
d. I can leave the office and concentrate on education.

JITEC FE 2017 Fall AM Question 77 (English translation)

Which of the financial statements is appropriate for showing the entity's assets, liabilities, and net assets at a given point in time, and clarifying the entity's financial position?

a. Statement of changes in equity
b. Cash flow statement
c. Profit and loss statement
d. Balance sheet

JITEC FE 2017 Fall AM Question 78 (English translation)

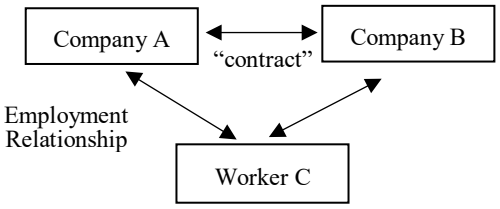
From the table, how much is the stock valuation value when the end-of-life stock is evaluated by the first-in first-out method?

Summary		Number of products	Unit price
Initial stock		10	10
Purchase	April	1	11
	June	2	12
	July	3	13
	September	4	14
Final stock		12	

a. 132 b. 138 c. 150 d. 168

JITEC FE 2017 Fall AM Question 79 (English translation)

The figure shows the relationship between a company and a worker. Which of the following statements is correct as a description of the relationship between company B and worker C?



a. When "contract" is a service contract and company A is a trustee and company B is a consignor, a command-and-order relationship arises between company B and worker C.
b. When "contract" is a seconded contract (loan of an employee), when the company A transfers the worker C to the company B, a command-and-order relationship between the company B and the worker C occurs.
c. When the "contract" is a worker dispatch contract and the company A is a dispatch source and the company B is a dispatch destination, an employment relationship also occurs between the company B and the worker C.
d. When "contract" is a worker dispatch contract, when company A is a dispatch source and company B is a dispatch destination, it can be said that worker C is dispatched to company B.

JITEC FE 2017 Fall AM Question 80 (English translation)

Which of the following laws defines the rules such as cooling-off and other rules to protect consumers against door-to-door sales, mail-order sales, telephone solicitation sales etc. ?

a. Commercial law
b. Electronic Consumer Contract Act
c. Specified Commercial Transaction Law
d. Unfair Competition Prevention Act

JITEC FE 2017 Fall AM Question 51-80

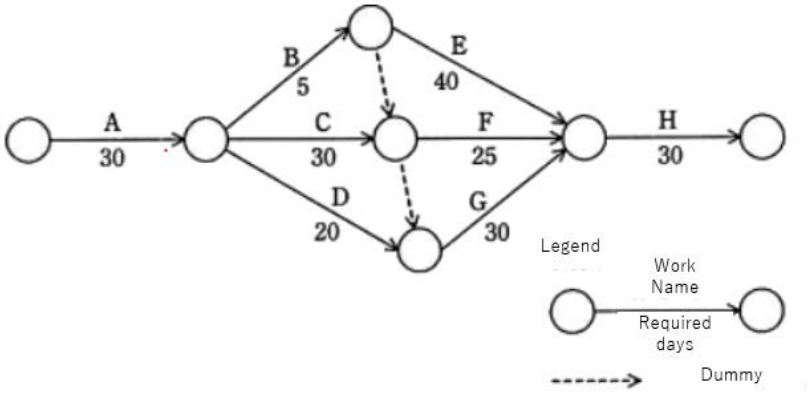
Answer

51 c	61 c	71 b
52 d	62 d	72 d
53 d	63 d	73 d
54 d	64 d	74 b
55 b	65 a	75 a
56 a	66 a	76 b
57 a	67 c	77 d
58 d	68 d	78 c
59 b	69 a	79 b
60 a	70 b	80 c

JITEC FE 2017 Spring AM_Management&Strategy

JITEC FE 2017 Spring AM Question 51 (English Translation)

How many days is required for the project represented by the diagram in the shortest time to complete?



a. 105 b. 115 c. 120 d. 125

JITEC FE 2017 Spring AM Question 52 (English Translation)

Which one is appropriate as an explanation of the function point method which is one of estimating methods for system development?

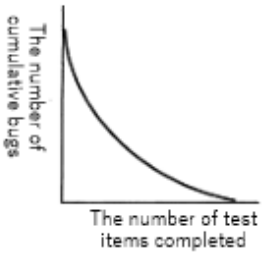
a. Assuming the scale of development is known, it is a method of estimating man-hour and construction period. It is applicable not only to the business field but also to all fields.
b. Based on data on similar systems experienced in the past, it is a method to examine system differences, to use past data for the same part and to estimate scale and man-hours from different experiences.
c. It is a method of quantitatively measuring the function of the system by the number of input / output data and the number of files, and adjusting the system size by adjusting the complexity and the characteristics of the application.
d. It is a method of deciding the standard value of the unit work amount, disassembling the work item to the unit work item, and estimating the total work amount by integration.

JITEC FE 2017 Spring AM Question 53 (English Translation)

To judge the quality situation in the test process, it is necessary to analyze and evaluate the relationship between the number of test items completed and the number of cumulative bugs. Which graph shows that quality is stabilizing?

a.

b.



c.

d.

JITEC FE 2017 Spring AM Question 54 (English Translation)

Which description of the trend chart is used for progress management of system development?

a. Chart that shows in a matrix by workers and their responsibilities
b. Chart that shows in strip form so that the plan of the work schedule can be compared with the actual result
c. Chart that shows the progress of work relations with the consumption situation of the budget and indicated by a polygonal line
d. Chart that shows in network form the order and interrelationship of work

JITEC FE 2017 Spring AM Question 55 (English Translation)

What is the availability of services in the service management system?

a. The ability of the service or service component to perform the requested function over the pre-agreed time or period
b. The extent to which the planned activities were carried out and the planned results were achieved
c. Ability to manage risks and events that could have a serious impact on services to provide services on an agreed level on an ongoing basis
d. A set of capabilities and processes that fulfill the requirements of services and directs and manages service provider activities and resources for service design, migration, provision and improvement

JITEC FE 2017 Spring AM Question 56 (English Translation)

Which of the methods the most appropriate when transition of system smoothly and effectively from development to operation when the development department and the operation department of the system are organized separately?

a. After the operation test is completed, the department explains the system specification and operation method to the operation department.
b. The operation test is carried out only by the operation division without being supported by the development department.
c. Operation department also actively participate in the extraction of requirements related to the operation of the system.
d. The development department conducts operational tests, prepares operation manuals, and delivers them to the operation department.

JITEC FE 2017 Spring AM Question 57 (English Translation)

Which activities of IT service management do as incident management and service request management?

a. Evaluate whether customer satisfaction with service desk meets agreed service objectives and review to identify opportunities for improvement.
b. Consider countermeasure for the threshold value since free space of the disk has approached.
c. Investigate the degree of influence when program change is made.
d. Check whether a failure report from users is corresponded to a known error.

JITEC FE 2017 Spring AM Question 58 (English Translation)

Which is the most appropriate purpose for the system auditor to exchange views with the audited department on the draft of the audit report?

a. Before submitting the audit report to the audit client, to report the audit to the audited department
b. To receive the recommendation for improvement described in the audit report, approval of the person responsible for the audited department
c. To confirm that there are no misunderstandings of facts pointed out in the audit report and improvement recommendations
d. To substitute for additional investigation of deficiency items verbally confirming the items that are insufficient in the survey report contents to the audited department

JITEC FE 2017 Spring AM Question 59 (English Translation)

Which checkpoints are used to audit control over the risk of system-related documents being leaked, altered, or misused?

a. As the system is changed, the document is updated without delay
b. To take measures to ensure document confidentiality
c. Make document standardization
d. Also in the prototype development, you have created the necessary documents

JITEC FE 2017 Spring AM Question 60 (English Translation)

Which of the descriptions on the system for implementing the system audit is appropriate?

a. The system auditor reports the audit results to the auditor so that the audit client can instruct improvement based on the audit report.
b. In the case of auditing the information system as a part of the business audit, the audit team of members of the utilization department is organized and conducted.
c. In the case where the system auditor receives assistance from another expert, the extent and method of support and the judgment of the audit result are made at the responsibility of another expert.
d. In the case of auditing the development situation in the information system department, we will organize an audit team by members of the information system department that is familiar with the development content.

JITEC FE 2017 Spring AM Question 61 (English Translation)

Which method of optimally allocating resources for information-based investment by category divided by similarity of risk and investment value?

a. 3C analysis
b. IT portfolio
c. Enterprise architecture
d. Benchmarking

JITEC FE 2017 Spring AM Question 62 (English Translation)

Which measures to deal with the risk of lowering system maintenance quality and operation quality when outsourcing IT services?

a. Propose proposals of the company's human resources enhancement plan after outsourcing at the selection stage of outsourcing parties and make it clear in the contract as well.
b. The detailed fee structure for each service is clarified with a contract for verifying the validity of the service fee, etc.
c. Use quality metrics indicative of quality of service, negotiate the target quality level with outsourcing parties, and advance quality of service improvement activities.
d. Secure human resources with assessment abilities for service expenses such as system maintenance and operation practice on the company side.

JITEC FE 2017 Spring AM Question 63 (English Translation)

Which of the characteristics of hosting services?

a. On the operation management side, users are responsible for monitoring operation of servers, incident response, and so on.
b. Loans the use right of the server prepared by the service provider to the user.
c. It does not correspond to usage where the user exclusively uses high-performance servers of service providers.
d. Users bring their own server to the facility of the service provider and freely select and combine servers.

JITEC FE 2017 Spring AM Question 64 (English Translation)

Which description of BYOD (Bring Your Own Device)?

a. Always carry and carry out information equipment leased from the company
b. Privately use information equipment such as notebook PC owned by the company outside the company
c. Setting the usage environment to privately use personal information devices
d. To use information equipment owned by an employee for business

JITEC FE 2017 Spring AM Question 65 (English Translation)

Which tasks do you do in defining non-functional requirements?

a. Clarify the flow of information (data) between the functions that make up the task.
b. Develop development standards and standard technical requirements according to program languages used in system development.
c. Define the range to be realized as system function.
d. Clarify the interface such as information exchange with other systems.

JITEC FE 2017 Spring AM Question 66 (English Translation)

Which of the series of system development processes consisting of planning, requirements definition, system development, software implementation, hardware implementation, maintenance should be performed in the requirements definition process?

a. Plan the implementation plan to realize the purpose of the project, the systemization policy necessary to achieve the goal, and the system.
b. Identify the types of stakeholders involved in the system and identify the stakeholders' needs, desires and the constraints imposed.
c. Define the functions and capabilities of the system, and establish the realization method by hardware, software by system type design for obtaining the purpose of the system.
d. Conduct method design and verification of eligibility to obtain software products or software services that satisfy stakeholder requirements.

JITEC FE 2017 Spring AM Question 67 (English Translation)

Which description is core competence?

a. Outstanding ability which cannot be imitated by competitors in the business field of the company
b. Corporate activities that comply with laws, regulations, social norms, etc. in conducting business
c. Area of development of business set from the viewpoint of market, technology and products (service)
d. Total optimization method of business and system to achieve the purpose of organizational activity

JITEC FE 2017 Spring AM Question 68 (English Translation)

In a competitive position, which is the basic strategy of Nicher?

a. Differentiation strategy necessary for leader attack such as share mortgage
b. Imitation strategy to respond quickly to market opportunities
c. Specification strategy to specialize specialization of products and markets
d. Omnidirectional strategy that covers all markets and secures maximum market share

JITEC FE 2017 Spring AM Question 69 (English Translation)

In the growth matrix advocated by Anzov, what is the strategy for expanding business with existing products to existing markets?

a. Market development
b. Market penetration
c. Product development
d. Diversification

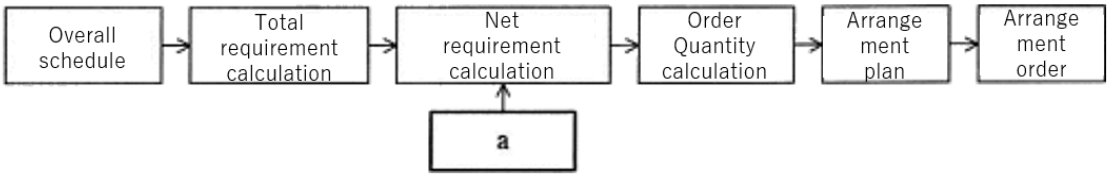
JITEC FE 2017 Spring AM Question 70 (English Translation)

Which of the strategic goals and performance indicators in Balance Scorecard's learning and growth perspectives are examples?

a. Since sustainable growth is the goal, the backlog is used as an indicator.
b. Since the goal is to build ongoing relationships with key customers, we use the number of complaints as an indicator.
c. Since the goal is to improve product development capability, we use the time taken for training in the product development area as an indicator.
d. Since the goal is to observe the delivery date of the product, the number of days shortened the manufacturing period is used as an indicator.

JITEC FE 2017 Spring AM Question 71 (English Translation)

The figure shows the work procedure of MRP (Material Requirements Planning) which is a method of the production management system. Which information is necessary to calculate the net requirement that falls into a in the figure?



a. Standard schedule (completion time, lead time days)
b. Stock status (stock amount, order remaining, in-process amount)
c. Order policy (lot organization method, ordering method, safety stock)
d. Component composition table (composition and required amount of each part in the final product)

JITEC FE 2017 Spring AM Question 72 (English Translation)

Which one explained "Kanban system"?

a. To improve the efficiency of each work, we procure parts and semi-finished products whose specifications are unified.
b. To efficiently procure parts, we procure parts from affiliates.
c. To reduce the intermediate inventory as much as possible, in the production line, the subsequent process procures the necessary parts from the previous process according to the production of its own process.
d. To procure parts with higher quality, we decide multiple delivery contractors for parts and procure parts by competitive bidding.

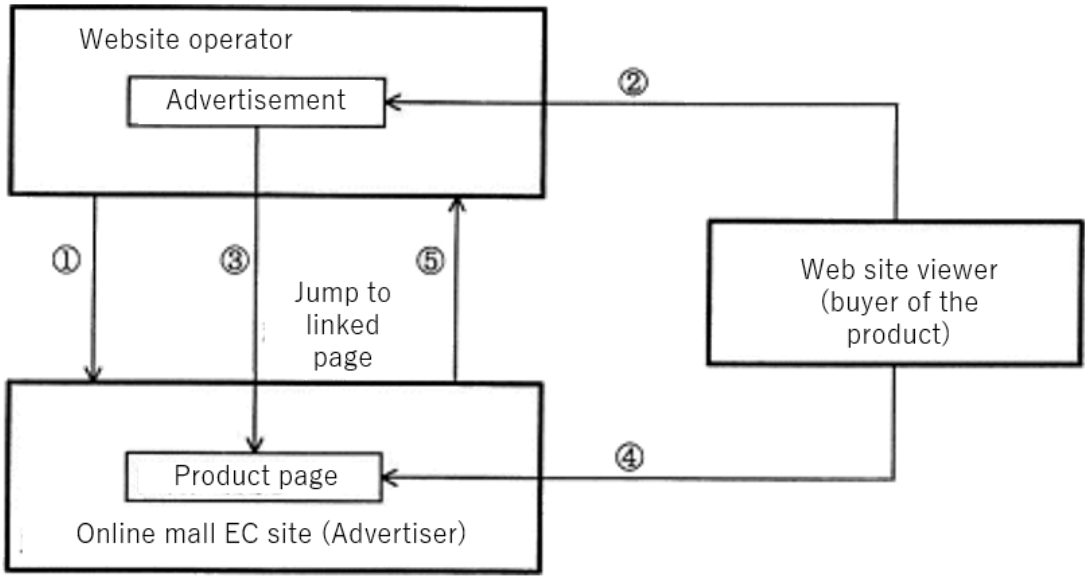
JITEC FE 2017 Spring AM Question 73 (English Translation)

Which description of CGM (Consumer Generated Media)?

a. Those that serve as intermediaries for individual trading between consumers by providing a function of buying and selling goods in an auction form
b. Those that allow distribution of digital contents created by individuals to viewers / viewers and sharing among users
c. Those collecting personal shopkeeper's online shops, acting on issuing common points and credit card transactions
d. Those of our customers who wanted to subscribe to mailing lists and periodically distribute information via e-mail

JITEC FE 2017 Spring AM Question 74 (English Translation)

Which of the following is an example of affiliate program model ⑤ seen in Internet advertisement? Here, ① to ⑤ indicate the order of operations in this model, ①, ②, ④, ⑤ correspond to answer choices of a -d.



a. Click the advertisement on the website.
b. I agree to the affiliate program and participate.
c. Purchase the desired item.
d. Pay fee based on sales of goods.

JITEC FE 2017 Spring AM Question 75 (English Translation)

Which role is appropriate for the role of the facilitator in the conference?

a. Provide advice only for discussions on specific areas such as technical and legal aspects that they specialize.
b. Be chaired and control the discussion as to draw conclusions conforming to the intention of management.
c. From a neutral and fair perspective, I urge participants in the conference to speak and to organize the flow of discussion.
d. Provide specialized assistance for administrative tasks such as schedule adjustment, preparation of materials, preparation of minutes, etc.

JITEC FE 2017 Spring AM Question 76 (English Translation)

Which one explained the affinity projection?

a. It is a method of examining countermeasures for problems where various events are assumed and determining the process leading to the desired result.
b. It is a method of grouping collected information according to mutual relationship and clarifying problems to be solved.
c. It is a method to clarify the causal relation between the events concerning the intertwined events of complicated factors.
d. It is a method of pursuing the best means and measures by sequentially developing measures and measures to achieve the purpose and goal.

JITEC FE 2017 Spring AM Question 77 (English Translation)

Which of the following cash flows corresponds to cash flows from operating activities in the statement of cash flows?

a. Proceeds from issuance of shares
b. Purchase of goods
c. Repayment of short-term borrowings
d. Proceeds from the sale of tangible fixed assets

JITEC FE 2017 Spring AM Question 78 (English Translation)

Calculating the depreciation cost of the building for the current fiscal year will be several thousand yen. Here, the acquisition price of the building is 10,000 thousand yen, accumulated depreciation to the previous term is 3,000 thousand yen, the amortization method is straight-line method, the accounting period is one year, the useful life is 20 years, the residual value is 0 yen .

a. 150
b. 350
c. 500
d. 650

JITEC FE 2017 Spring AM Question 79 (English Translation)

Which of the descriptions on the scope of protection of software by copyright law is appropriate?

a. The application program is protected by the copyright law, but the basic program such as the OS is not protected because the price of the right is included in the price of the hardware.
b. Algorithms and programming languages are protected by copyright law.
c. Documents describing algorithms are protected by copyright law, but programs created using that algorithm are not protected.
d. Both the source program and the object program are protected by copyright law.

JITEC FE 2017 Spring AM Question 80 (English Translation)

In the Unfair Competition Prevention Act, which requirement to be trade secret is "managed as secret", "what is a useful technical or business information for business activities" and which is another one?

a. Business transfers are possible
b. The period does not exceed 10 years
c. What is not publicly known
d. Make a patent application

JITEC FE 2017 Spring AM Question 51-80

Answer

51 c	61 b	71 b
52 c	62 c	72 c
53 d	63 b	73 b
54 c	64 d	74 d
55 a	65 b	75 c
56 c	66 b	76 b
57 d	67 a	77 b
58 c	68 c	78 c
59 b	69 b	79 d
60 a	70 c	80 c

JITEC FE 2016 Fall AM_Management & Strategy

JITEC FE 2016 Fall AM Question 51 (English translation)

Which of the project management processes is to be carried out within the planning process group?

a. Scope definition
b. Identify stakeholders
c. Implementation of quality assurance
d. Creating a project charter

JITEC FE 2016 Fall AM Question 52 (English translation)

Which technique is to shorten the duration of the activity by increasing resources allocated to the activity to shorten the schedule of the project?

a. Crashing
b. Critical chain method
c. Fast tracking
d. Monte Carlo method

JITEC FE 2016 Fall AM Question 53 (English translation)

With the function point method, which information is required when estimating the development scale of the system?

a. Number of developers
b. Number of screens
c. Number of program steps
d. Number of users

JITEC FE 2016 Fall AM Question 54 (English translation)

Plan for a project with a development period of 10 months and development man-hours of 200 people. Assuming the following allocation table, how many people are at peak hours? Here, the number of personnel from the start to the end of each process is fixed.

Name of process items	Requirement gathering	Design	Development/ test	System test
Man power allocation	16	33	42	9
Time allocation	20	30	40	10

a. 18
b. 20
c. 21
d. 22

JITEC FE 2016 Fall AM Question 55 (English translation)

According to ITIL, which of the characteristics of the service desk organization is that of the virtual service desk?

a. Service desk staff are distributed in multiple regions, but by using communication technology, users seem like a single service desk.
b. There is no dedicated service desk / staff, and people in charge of work such as research, development, sales and so on are managed in a concurrent position.
c. Concentrate service desk staff in single or a few places for improving cost effectiveness and improving communication efficiency.
d. It exists in the same place as the user's base or physically close.

JITEC FE 2016 Fall AM Question 56 (English translation)

JIS Q 20000-1 requires application of PDCA methodology in all aspects of service management system (SMS) and service. Which activities are included in SMS plan (Plan)?

a. Implementation of management review at preset intervals and maintenance of its record
b. Create a framework for authority, responsibility and role in the process
c. Introduction and operation of SMS through activities of allocation and management of funds and budget
d. Preparation of plans for approved improvements, implementation and improvement of improvement

JITEC FE 2016 Fall AM Question 57 (English translation)

In ITIL, as an example of a key performance indicator (KPI) in availability management, it mentions that shortening of index value indicating maintainability. Which of the following corresponds to this indicator?

a. Number of interruptions within a certain period
b. Mean time to failure
c. Average service · incident interval
d. Average service recovery time

JITEC FE 2016 Fall AM Question 58 (English translation)

Based on the "system management standards", when auditing the reliability, safety and efficiency of the system, as the safety verification item as to whether the system is protected from invalid use, which is the most appropriate one?

a. Validation of access management function
b. Verification of fail-soft function
c. Verification of fault tolerance function
d. Verification of recovery function

JITEC FE 2016 Fall AM Question 59 (English translation)

In the information security audit, which check item to check availability?

a. The prohibition of unauthorized taking out of the external storage medium is prohibited
b. Management of the level of the SLA that defines the interruption time is kept
c. Error checking at the time of data input is properly done
d. The database is encrypted

JITEC FE 2016 Fall AM Question 60 (English translation)

Which of the following is judged to be appropriate after conducting auditing the Business Continuity Plan (BCP)?

a. Created an employee's emergency contact list and updated it to the latest version.
b. Important documents are stored in one place without duplication.
c. Formulated the same level of BCP without priorities for all the task.
d. BCP is kept private to employees during non-emergency period.

JITEC FE 2016 Fall AM Question 61 (English translation)

Which one explained the Enterprise Architecture (EA)?

a. It is a unified and standardized various methods for supporting object-oriented design, and is a technique for analyzing and designing a system with a model diagram such as a class diagram.
b. It is a technique to clarify relationships between data structures and data items by expressing conceptual data models with entities and relationships.
c. It is a technique to analyze each business and information system with four systems of business, data, application, technology and review it from the viewpoint of overall optimization.
d. It is a technique for representing an enterprise business process by abstracting it with four basic elements of data flow, process, file, data source / data absorption.

JITEC FE 2016 Fall AM Question 62 (English translation)

A company is considering purchasing two kinds of IT equipment a, b with annual profit which is the minimum necessary to recover the investment amount. they decided to set the payment period of investment taking each useful life into consideration and decide to use the entire profit obtained by this investment to collect investment amount. In each of a and b, which of the descriptions on the set collection period is appropriate? Here, the annual profit is raised evenly every year, and the interest rate is not considered.

	a	b
Investment amount	90	300
Collection period	3	5

a. a and b need to raise the same annual profit.
b. a needs to raise annual profit twice as b.
c. b needs to raise annual profit 1.5 times a.
d. b needs to raise the annual profit twice as much as a.

JITEC FE 2016 Fall AM Question 63 (English translation)

Which is the purpose of Business Process Management (BPM) in corporate activities?

a. Continuous improvement of business process
b. Effective utilization of management resources
c. Management and analysis of customer information
d. Analysis and effective utilization of information resources

JITEC FE 2016 Fall AM Question 64 (English translation)

When evaluating the effect of improvement quantitatively, weighing comprehensive evaluation method is a method of integrating and quantifying results evaluated with multiple items. Which improvement proposal should be prioritized in the table?

Evaluation items	Weight	Improvement proposal			
		P1	P2	P3	P4
Power saving	4	6	8	2	5
Period shortening	3	5	5	9	5
Resource reduction	3	6	4	7	6

a. P1
b. P2
c. P3
d. P4

JITEC FE 2016 Fall AM Question 65 (English translation)

Which is applicable to CSR procurement?

a. To minimize costs, choose the cheapest product.
b. To avoid situations where procurement becomes impossible in the event of a disaster, multiple suppliers are made.
c. To consider for natural environment, human rights as procurement standards and seek compliance from suppliers.
d. To use EDI to purchase goods and make prompt and accurate procurement.

JITEC FE 2016 Fall AM Question 66 (English translation)

RFP was presented to each vendor who responded to RFI. In selecting future vendors, which ones should be implemented beforehand to proceed fairly?

a. To respond to vendors with a high evaluation of RFI 's answer contents, take measures to make remedies available for re - proposal in case it is out of selection.
b. For vendors who are familiar with the current system, please increase the evaluation to make it easier to select the vendor, apart from RFP requirements.
c. Establish a selection procedure such as setting a rule that weights the evaluation criteria of the proposal and the degree of conformity of the requirements.
d. After selection of the vendor, to promptly conclude a contract, issue an internal notice to all vendors who presented the RFP and ask for the creation of the contract and the work scope description.

JITEC FE 2016 Fall AM Question 67 (English translation)

Which one represents a pricing method by cost plus method?

a. By price analysis, the price is determined step by step taking into consideration the maximum profit and the minimum risk.
b. On the premise of discounts on customers, we decide the price by adding a margin from the beginning.
c. Decide the price at a level that can be estimated to be competitive in the market.
d. Based on manufacturing cost and operating expenses, decide the price by incorporating the desired margin.

JITEC FE 2016 Fall AM Question 68 (English translation)

Which of 4C, which is the point of view of the buyer that corresponds to the 4P of the marketing mix that is the viewpoint of the seller, is applicable to a in the figure? Here, a ~ corresponds to any one of a to d.

4P		4C
Product	→	a
Price	→	b
Place	→	c
Promotion	→	d

a. Communication
b. Convenience
c. Cost
d. Customer Value

JITEC FE 2016 Fall AM Question 69 (English translation)

Which is the purpose of CRM?

a. Acquire customer loyalty and maximize customer lifetime value
b. Reduction of sales opportunity losses due to shortage of inventory
c. Determination of order quantity and ordering time of materials necessary for manufacturing
d. Understand sales information for each product at the point of sale

JITEC FE 2016 Fall AM Question 70 (English translation)

Which is appropriate as an explanation of "S curve of technology"?

a. It shows the process of dissemination of new technology, and the frequency distribution curve shows that the penetration rate of the penetration rate gradually decreases as products applying the technology penetrate the market.
b. It shows the process of advancement of the technology, which will gradually progress at first, but it will show a process of rapid progress and then slowly stagnate.
c. It shows the maturation process of technology and shows the transition of awareness which changes with the passage of time until the new technology actual spreads.
d. It shows the relationship between the production volume and the unit cost and shows the process of decreasing the unit cost as the cumulative production volume increases.

JITEC FE 2016 Fall AM Question 71 (English translation)

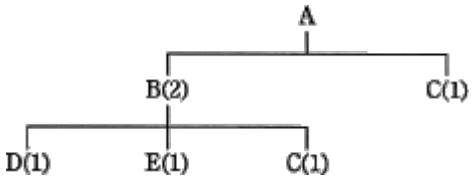
One factory manufactures three products shown in the table. What is the maximum achievable profit? Here, the monthly demand amount of each product has an upper limit, and the time of the factory that can be used for the assembly process is up to 200 hours per month, and it is impossible to manufacture multiple types of products concurrently at the same time.

	X	Y	Z
Profit per piece (yen)	1,800	2,500	3,000
Time for manufacturing (min)	6	10	15
Monthly demand upper limit (piece)	1,000	900	500

a. 2,635,000
b. 3,000,000
c. 3,150,000
d. 3,300,000

JITEC FE 2016 Fall AM Question 72 (English translation)

The figure shows the components of the product A, and the numbers in parentheses are the required quantity per upper product / part. When producing 10 products A, how many pieces of parts C will be ordered? Here, the inventory of the current part C is five pieces.



a. 15
b. 20
c. 25
d. 30

JITEC FE 2016 Fall AM Question 73 (English translation)

Which example of CGM (Consumer Generated Media)?

a. Companies are requesting information on their business situation, financial situation, performance trends from their website
b. The company's website that transmits information on the features and usage of its products to consumers
c. Administrative organizations publish information on policies and administrative services to the public for their own website
d. Websites such as blogs and SNS that individuals transmit information on the evaluation of items used by themselves for unspecified persons

JITEC FE 2016 Fall AM Question 74 (English translation)

Which one should be prescribed in the information expression convention for implementing EDI?

a. Contract contents of business between companies
b. System operation time
c. Transmission control procedure
d. Message format

JITEC FE 2016 Fall AM Question 75 (English translation)

Which roles should CIOs play?

a. As a representative of each division, present systemization plan of own department to information system department.
b. Investigate information technology, utilize research, educate related departments, etc.
c. Formulate an information strategy from a company-wide perspective and confirm and evaluate consistency with management strategy.
d. Have abundant work experience, knowledge of information technology, leadership, and manage the operation of the project.

JITEC FE 2016 Fall AM Question 76 (English translation)

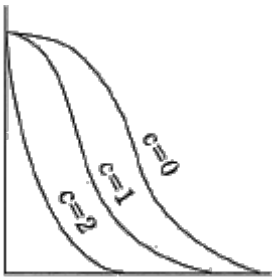
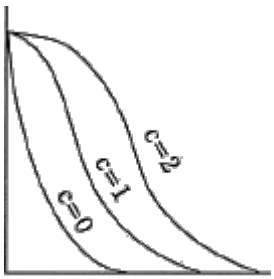
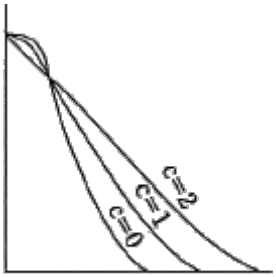
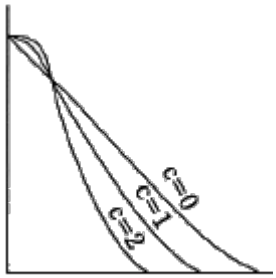
Which one explained the matrix organization?

a. It is an organization that can develop self-contained management activities by having functions and profit responsibilities necessary for business execution, by product, by customer, or by region.
b. It is an organization that belongs to both the functional department which is specialized in the person and the department which carries out the specific business.
c. It is an organization that has functional divisions by functions such as purchasing, production, sales, finance, and work.
d. It is a temporary and flexible organization that collects and organizes experts from each division under specific tasks and establishes periods and targets.

JITEC FE 2016 Fall AM Question 77 (English translation)

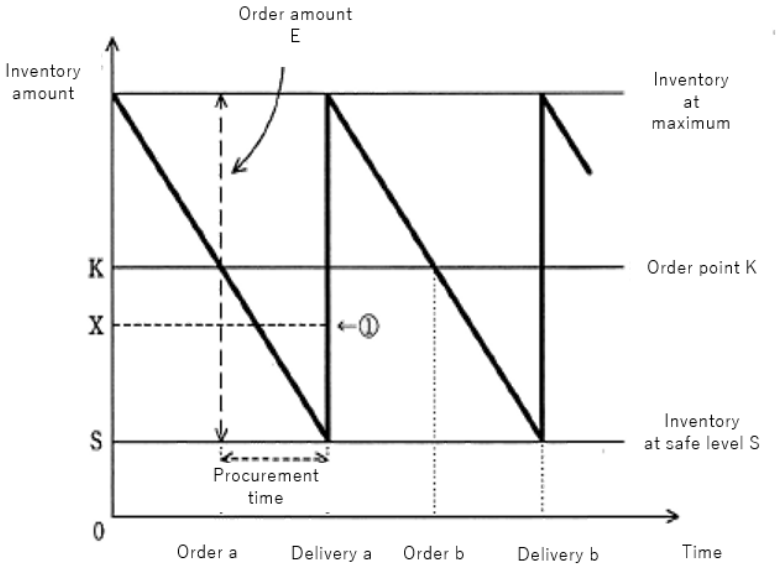
In general, the inspection characteristic curve (OC curve) in quality control is obtained by grading the failure rate of the lot on the horizontal axis and the probability of acceptance of the lot on the vertical axis. A sample of size n is extracted from a lot of size N. If the number of defects found in this sample is less than or equal to the acceptance number c, the lot is accepted, and if it exceeds c, the lot is rejected.

Which figure shows the tendency of change in OC curve when c and 0 are replaced with 0, 1 and 2 with N and n fixed.

a. 	b. 
c. 	d. 

JITEC FE 2016 Fall AM Question 78 (English translation)

The figure shows the stock model of the fixed quantity ordering method. When the prediction of material usage is changed immediately after order a and the inventory forecast at the point immediately before delivery a becomes the value of X indicated by ① from the safety stock amount S, which change is the appropriate amount for the order quantity E at the time of order a ? Here, it is possible to change the order quantity immediately after placing an order, and the inventory quantity immediately after delivery should not exceed the maximum inventory quantity.



a. Additional order of E+S-X
b. Additional order of K+S-X
c. Cancel order of K-X
d. Cancel order of X-S

JITEC FE 2016 Fall AM Question 79 (English translation)

In program development, which of the copyright laws prescribes copyrighted work under the corporate name based on the corporate intention?

a. Unless there are specific arrangements such as employment rules, the rights belong to the corporation.
b. The right belongs to the employee in charge, but it can be transferred to the corporation.
c. The right belongs to the employee in charge, but the corporation can use the program.
d. When a corporation acquires rights, it is necessary to pay substantial consideration to the employee in charge.

JITEC FE 2016 Fall AM Question 80 (English translation)

Which law is subject to punishment for the act of erasing the stored contents of computers used in companies by using computer viruses?

a. Criminal law
b. Product liability law
c. Unauthorized Computer Access Prohibition Act
d. Provider liability limit method

JITEC FE 2016 Fall AM Question 51-80

Answer

51 a	61 c	71 d
52 a	62 d	72 c
53 b	63 a	73 d
54 d	64 b	74 d
55 a	65 c	75 c
56 b	66 c	76 b
57 d	67 d	77 b
58 a	68 d	78 d
59 b	69 a	79 a
60 a	70 b	80 a

JITEC FE 2016 Spring AM_Management&Strategy

JITEC FE 2016 Spring AM Question 51 (English Translation)

Which is appropriate for using WBS (Work Breakdown Structure) in software development projects?

a. Optimize total cost when the number of days required for development and cost are in a trade-off relationship.
b. Clarify the order relation of the work and grasp the critical path to be key management.
c. Express the schedule of work with a bar (bar), clarify the progress of the work at the beginning and the end and the current time.
d. Disassemble the work into hierarchies and subdivide them into manageable sizes

JITEC FE 2016 Spring AM Question 52 (English Translation)

Which management process will clarify the purpose and scope of the project?

a. Cost management
b. Scope management
c. Time management
d. Risk management

JITEC FE 2016 Spring AM Question 53 (English Translation)

In "crashing", which is one of the techniques for shortening the schedule of the entire project, by increasing the overtime of members and by adding new members who are familiar with the work content. Which schedule activity should be prioritized resources when using "crashing"?

a. Schedule activity with the highest task difficulty level
b. Schedule activity on critical path
c. Schedule activity to start at the time when resources can be secured
d. Schedule activity requiring the longest period

JITEC FE 2016 Spring AM Question 54 (English Translation)

When the number of project members is 16, how many meeting sessions are required to make the meeting of project members with each other at a brute force of two? Here, the time required for one meeting is 0.5 hours.

a. 8
b. 16
c. 30
d. 60

JITEC FE 2016 Spring AM Question 55 (English Translation)

What is the meaning of a mission critical system?

a. A system essential for operating a business system, such as an OS
b. A system that operates under conditions in which the system operation conditions are close to the limits of performance
c. A system that has a serious effect on business activities when a failure occurs
d. A system that is introduced in advance and successfully introduced if it succeeds

JITEC FE 2016 Spring AM Question 56 (English Translation)

Which of the descriptions on the relationship between incident records and problem records in IT service management is appropriate?

a. Classify and record problems by criteria different from incident classification.
b. One record of the problem is always associated with one incident record.
c. To record the problem, add cross-reference information of incidents that originated the problem recording.
d. If known errors are identified at the end of the problem recording, the records of the incidents that originated the problem recording are deleted.

JITEC FE 2016 Spring AM Question 57 (English Translation)

Which of the following notes is appropriate for monitoring the use of capacity and capacity of online systems in the capacity management process of IT service management?

a. Always monitor multiple measurement items such as response time and CPU usage rate.
b. Since measuring the performance in the online leads to a decrease in the service level, the measurement is performed during offline
c. Record incidents relating to capacity and performance.
d. Focus on only the maximum value within the certain period of the performance data and check whether it deviates from the limit of management.

JITEC FE 2016 Spring AM Question 58 (English Translation)

Which is effective means to prevent the information system from being damaged by overvoltage caused by lightning?

a. Connect the communication cable and the computer via the surge protection device (SPD).
b. Install in-house power generator.
c. Make the communication lines into two different paths.
d. Digitize the control circuit of the power supply facility.

JITEC FE 2016 Spring AM Question 59 (English Translation)

Which of the actions taken by the system auditor to audit access control is appropriate?

a. Create and store software access control management table
b. Confirm management status of access control of data
c. Establish management policy for access control on network
d. Implement operation management of access control on hardware

JITEC FE 2016 Spring AM Question 60 (English Translation)

Which of the objectives of the organization audits the system audit under "System audit standards"?

a. Set a new management strategies and business fields for organizing for the company's strengths and weaknesses, opportunities and threats surrounding the company
b. Investigate the vulnerability of internal network environment by testing the system operation department, and improve the network environment.
c. Contribute to the realization of IT governance by evaluating the control development and operation situation for risks related to information systems and leading to improvement.
d. Acknowledge the productivity level of software development and improve the capabilities of the development organization to achieve higher production.

JITEC FE 2016 Spring AM Question 61 (English Translation)

Which checkpoint is used to audit controls that reduce the risk of a system failure in application of software patches?

a. Establishment of capacity planning procedures
b. The database administrator has been appointed and has specified the master data management procedure
c. Create a hardware management register and manage it by a system administrator
d. Be sure to fully confirm the operation of the system before actual operation

JITEC FE 2016 Spring AM Question 62 (English Translation)

Which architecture, business architecture, technology architecture, application architecture and the other are included in the "four classification schemes" of the enterprise architecture?

a. System architecture
b. Software architecture
c. Data architecture
d. Bus architecture

JITEC FE 2016 Spring AM Question 63 (English Translation)

According to "system management standards", which deliverable is prepared at the information strategy development stage?

a. To realize the function that shares roles with other relevant information systems and maximizes the effect as an organization, a development plan formulated taking into consideration the consistency with the overall optimization plan
b. To promote informatization that ensures consistency and consistency throughout the organization based on management strategy, an overall optimization plan formulated based on policies and targets
c. To facilitate the operation of the information system, based on the operation design and operation management rules, the operation procedure to be formulated further taking the scale, period, and system characteristics into consideration
d. To consistently and efficiently carry out development work as an organization, development procedures developed based on standardized development method as an organization

JITEC FE 2016 Spring AM Question 64 (English Translation)

Which scene is used when UML is adopted as a method for visualizing business processes?

a. Objects are captured in relation to entities and their attributes and entities, and shown in the figure by the representation of a data centric approach.
b. To express the process by the flow of data, source, sink, data store, and process are expressed by connecting arrows indicating data flow.
c. To express the process in multiple viewpoints, model diagram method according to purpose is used and expressed by descriptive rule standardized for object modeling.
d. To express the functions of the process comprehensively, events occurring for one requirement are described in the form of conditional branching.

JITEC FE 2016 Spring AM Question 65 (English Translation)

Which one explained IoT (Internet of Things)?

a. It is a data center which is designed on the premise of connection with the Internet, designed for connection with the Internet, so as not to hinder the operation of the server, a power supply corresponding to quality control of the communication line, server maintenance, and air conditioning have been equipped
b. It is one form of e-commerce carried out through the Internet, in which an exhibitor posts information such as name of product, photo, lowest price, and the like on the website, and bidders who bid on the item bid for the maximum amount within the deadline, and a typical C to C transaction.
c. Advertisements using the Internet, such as banner advertisements that post images that set links to advertiser websites on websites that become advertising media, and advertisements that post advertisers' website advertisements on e-mail magazines.
d. By providing communication functions not only to information communication devices such as computers but also to various kinds of devices, it enables automatic recognition and remote measurement by connecting to the Internet, collects and analyzes a large amount of data, and provides advanced judgment service and automatic control

JITEC FE 2016 Spring AM Question 66 (English Translation)

Which one of the explanations for green procurement?

a. Companies implementing environmental conservation activities widely appeal the contents of their activities and seek funds for environmental conservation from investors.
b. It is an international standard on environmental labeling such as Eco Mark that third parties certify products that contribute to environmental preservation based on certain standards.
c. It is a certificate that enables green electricity generated by natural energy such as sunlight, biomass, wind power, geothermal, etc. to be traded on the market.
d. It is not only to satisfy the requirements of quality and price, but also to purchase products and services with low environmental burden from operators who strive to reduce environmental burden.

JITEC FE 2016 Spring AM Question 67 (English Translation)

Which one explained SWOT analysis?

a. To realize the vision and strategy of the company, we examine from the four perspectives of finance, customer, business process, learning and growth and make it concrete to the action plan.
b. From the perspective of internal and external environments, companies are evaluated from the four perspectives of strengths, weaknesses, opportunities, and threats to recognize the environment surrounding enterprises.
c. Evaluate the project with four types of distributed type, specialized type, dead-end type, scale type, and use it for formulating business strategy of the company.
d. We classify the product into four stages of introduction period, growth period, maturity period and decline period, and utilize it for optimum strategy formulation for enterprises.

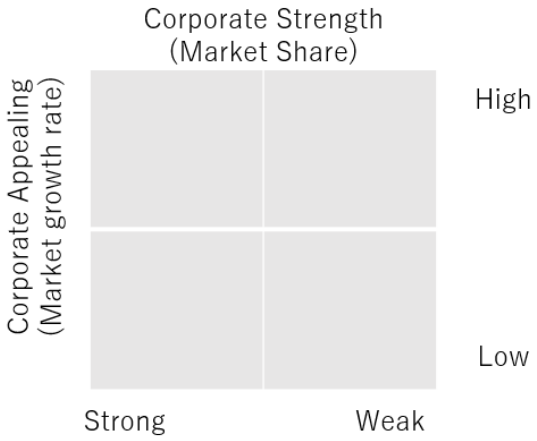
JITEC FE 2016 Spring AM Question 68 (English Translation)

Which one explained benchmarking used in corporate management?

a. To plan and manage the allocation of management resources of the enterprise effectively and comprehensively for the improvement of more efficient management.
b. Compared with competitors or similar developed companies, it is to grasp their products, services, and operations qualitatively and quantitatively.
c. It is to redesign the process of business from the customer's point of view, to fully utilize information technology, and fundamentally change the constitution and structure of the company.
d. It is to concentrate management resources on proprietary skills and technologies that are superior to other companies and can bring profit.

JITEC FE 2016 Spring AM Question 69 (English Translation)

Which purpose is to analyze business plans and competitive advantage by portfolio management using the matrix shown in the figure?



a. To measure the promotion effect set as a target, evaluate the position placed on its own.
b. Establish goals and evaluate their position as the basis for setting the priority of resource allocation.
c. Evaluate ways to maintain superiority in the market by setting targets and improving product quality.
d. evaluate changes in the market by considering the seasonal fluctuation factors and the position spread.

JITEC FE 2016 Spring AM Question 70 (English Translation)

Which is appropriate for explanation of EMS (Electronics Manufacturing Service)?

a. Respond to calls as a reception desk for inquiries on consumer electronics products from general consumers.
b. Not to own manufacturing facilities, and conduct only planning, designing and developing products.
c. Specialize in selling electronic equipment purchased from other manufacturers.
d. Conduct commissioned production of electronic equipment which is ordered from other manufacturers.

JITEC FE 2016 Spring AM Question 71 (English Translation)

Which one explained the digital divide?

a. Economic or social disparity arises due to differences in abilities and opportunities to utilize PCs and communications
b. By utilizing the Internet etc., residents can participate directly in government and municipal policy
c. Communication and broadcasting services that every one of the public can use equally at reasonable rates without disparity in the area
d. Provide all services in one place for each category of civic life events or business activities

JITEC FE 2016 Spring AM Question 72 (English Translation)

Which of the following processes (1) to (3) is processed?

(1) Based on the types and quantities of products scheduled to be produced in a certain period in the future and the parts composition table, the necessary amount for the constituent parts is calculated.
(2) Calculate the net order quantity of each component part from the allocable inventory quantity.
(3) Determine the order time of component parts in consideration of manufacturing / procurement lead time.

a. CAD
b. CRP
c. JIT
d. MRP

JITEC FE 2016 Spring AM Question 73 (English Translation)

On the Internet, which general consumers present the items he or she wishes to purchase, and their purchase terms and which one or more sellers respond accordingly?

a. B to B
b. G to C
c. Reverse auction
d. Virtual mall

JITEC FE 2016 Spring AM Question 74 (English Translation)

Which one explained the long tail?

a. Generally known as an empirical rule of 80:20, 80% of the company's sales are composed of top 20% selling items of all products. It is derived from cause that 80% of the loss due to poor quality accounts for the top 20%
b. In online shops utilizing the Internet, there is the effect of reducing the risk of opportunity loss by having a wide range of items even for products with few sales opportunities.
c. When a company conducts multiple business activities at the same time, it becomes possible to share management resources, and by effectively utilizing it, the cost will be relatively lower than when each business is conducted independently.
d. The value of the network is roughly proportional to the square of the number of subscribers, assuming the usefulness with which each subscriber in the network can access each other is the "value of the network".

JITEC FE 2016 Spring AM Question 75 (English Translation)

To ensure the transparency of corporate management, supervise corporate activities from the viewpoints of who is doing business for whom, what is the structure of top management, self-purification capability inside the organization, etc. Which mechanism is to be monitored?

a. Core competence
b. Corporate identity
c. Corporate governance
d. Stakeholder analysis

JITEC FE 2016 Spring AM Question 76 (English Translation)

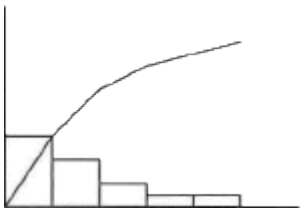
Which one explained the project organization?

a. It is formed only for a certain period to solve a certain problem, and it dissolves with problem solving.
b. Divide tasks by function, and instruct and instruct subordinates about each function.
c. Provide profit responsibility for organizational units composed of products, regions, etc.
d. To actively utilize external management resources such as strategic alliances and joint development, it constitutes an organization that spans companies.

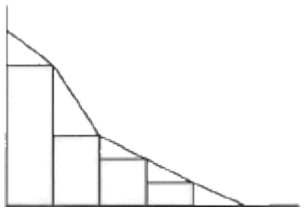
JITEC FE 2016 Spring AM Question 77 (English Translation)

In one factory, the number of defective items that have occurred so far is recorded for each cause. Based on this record, which is the Pareto chart showing the factor that accounts for the top defective generation and the cumulative percentage of cases?

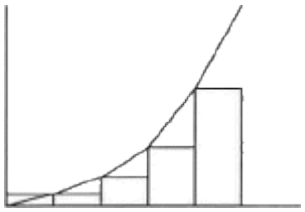
a.



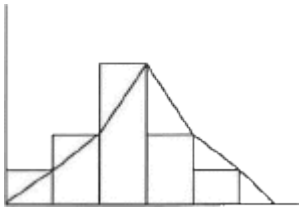
b.



c.



d.



JITEC FE 2016 Spring AM Question 78 (English Translation)

Which of the financial statements displays corporate assets, liabilities and net assets at a certain point in time to clarify the financial condition of the company?

a. Statement of changes in shareholders' equity
b. Cash flow statement
c. Profit and loss statement
d. Balance sheet

JITEC FE 2016 Spring AM Question 79 (English Translation)

Under the Copyright Act, which of the following is not protected?

a. Free software released on the Internet
b. Software operation manual
c. Database
d. Programming language and terms

JITEC FE 2016 Spring AM Question 80 (English Translation)

Which of the descriptions concerning contracts in the case of company A using system of external contractor B is appropriate for A system development?

a. In system development by contract, copyright of the program developed by company B belongs to company B unless otherwise specified in the contract.
b. Regardless of the contract or the temporary contract, in any case of system development, Company B is responsible for completing the system.
c. In the quasi-delegated contract, Company B is not responsible for completing the deliverables, so Company A exercises command and direct command directly to employees of Company B.
d. In the temporary contract, if a serious defect occurs in the developed program, Company B is liable for defects.

JITEC FE 2016 Spring AM Question 51-80

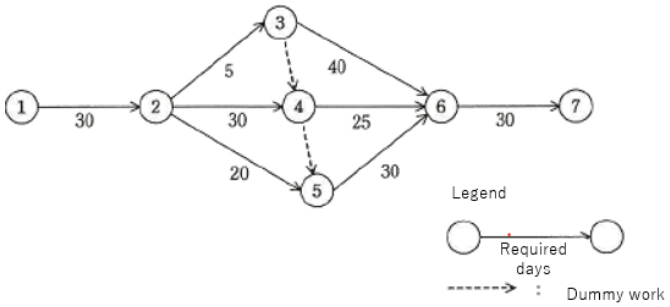
Answer

51 d	61 d	71 a
52 b	62 c	72 d
53 b	63 b	73 c
54 d	64 c	74 b
55 c	65 d	75 c
56 c	66 d	76 a
57 a	67 b	77 a
58 a	68 b	78 d
59 b	69 b	79 d
60 c	70 d	80 a

JITEC FE 2015 Fall AM_Management & Strategy

JITEC FE 2015 Fall AM Question 51 (English translation)

How many days is required for the project represented by the diagram in the shortest time to complete?



a. 115
b. 120
c. 125
d. 130

JITEC FE 2015 Fall AM Question 52 (English translation)

What is the Function Point Value of the program with table functions and characteristics? Note that the complexity correction coefficient is set to 0.75.

User Function type	Number of item	Coefficient
External input	1	4
Internal input	2	5
Internal logic file	1	10
External interface file	0	7
External reference	0	4

a. 18
b. 24
c. 30
d. 32

JITEC FE 2015 Fall AM Question 53 (English translation)

When 10 people work with productivity of 0.5k step / person a day, there is a programming work which takes 30 days. At the end of the 10th day the number of steps completed was 30 k steps for the total of 10 people. To complete this programming in the planned 30 days, how many personnel should it be added? Note that the productivity of the personnel to be added is the same as the current personnel.

a. 2
b. 7
c. 10
d. 20

JITEC FE 2015 Fall AM Question 54 (English translation)

As a strategy to cope with the risk of the project, we decided to participate in damages insurance in preparation for the risk of damage occurrence. According to PMBOK, which strategy is applicable?

a. Avoidance
b. Mitigation
c. Reception
d. Passing over

JITEC FE 2015 Fall AM Question 55 (English translation)

Which structure of the service desk organization and its characteristics are those of the local service desk?

a. By concentrating the service desk at one site or a few locations, it is possible to arrange service personnel and respond to many calls efficiently
b. By placing the service desk close to the user, it is possible to respond to users with different languages and cultures, and to support VIP by dedicated personnel.
c. Service personnel are distributed to multiple regions and departments, but by using communication technology, it is possible to provide services as if they are a single service desk
d. By centralizing and managing all members including the service personnel of the distributed base, it is possible to provide a well-controlled service.

JITEC FE 2015 Fall AM Question 56 (English translation)

Which of the ideas to improve the safety and reliability of information systems is fail-safe?

a. Even if the system partially fails, the necessary functions are maintained as the whole system.
b. When a system failure occurs, switch to the standby system and continue processing.
c. When the equipment making up the system fails, ensure that the system stops safely and minimize the damage.
d. Even if the user performs an erroneous operation, it prevents abnormality in the system.

JITEC FE 2015 Fall AM Question 57 (English translation)

When entering data at information system department of the input document that the business division has issued, which is appropriate for the task of the information system department?

a. The processing result list is sent to the business division so that the business department can confirm the processing result for each input document.
b. When there is an error in the entry content of the input document, only when the content of the error is clear, only the person in charge of input corrects the input document and inputs it.
c. The input document is kept in the information system department till the processing date, and confirmation of receipt etc. such as inspection of the number of receipts is decided collectively immediately before the processing date.
d. To prevent unauthorized use and leakage of confidential information, all inputted documents are decided to be discarded immediately after input.

JITEC FE 2015 Fall AM Question 58 (English translation)

Which of the descriptions on the system for implementing the system audit is appropriate?

a. The system auditor reports the audit results to the audit client so that the audit client can instruct improvement based on the audit report.
b. In the case of auditing the information system as a part of the business audit, the audit team of members of the utilization department is organized and conducted.
c. When the system auditor receives assistance from other experts, judgment of the extent and method of support, judgment of audit results, etc. shall be carried out at the responsibility of other experts.
d. In the case of auditing the development situation in the information system department, we will organize an audit team by members of the information system department that is familiar with the development content.

JITEC FE 2015 Fall AM Question 59 (English translation)

Which is appropriate to add source code confidentiality checkpoint in the system audit when the source code version control system is introduced?

a. The responsible person approves the change result of the source code registered in the version control system
b. The access control setting of the version control system is appropriate
c. The introduction cost of the version control system is at an appropriate level
d. The development department has selected version control system

JITEC FE 2015 Fall AM Question 60 (English translation)

Which checkpoints are used to audit the control over the accuracy of the processing logic of the spreadsheet?

a. The creator of the spreadsheet and the user are the same
b. Spreadsheet backup is done
c. The content of the program of the spreadsheet has been documented and verified
d. What the user of the spreadsheet is defined

JITEC FE 2015 Fall AM Question 61 (English translation)

Which of the following describes the application architecture that makes up the enterprise architecture?

a. Contents of data necessary for business, systematically showing relationships and structures among data
b. Systematically showing functions and configurations of systems supporting business processes
c. Systematic presentation of technical components necessary for construction and operation of information system
d. Systematically showing the flow of business processes and information necessary for business strategy

JITEC FE 2015 Fall AM Question 62 (English translation)

Which points to keep in mind when drastically redesigning business processes in the system planning stage?

a. Set high targets from a new viewpoint and examine the top-level business functions and business model models that will be needed in the future.
b. To accumulate business improvement, reconsider business process with emphasis on dealing with needs and tasks at the site level, without being concerned with the future image of the business model.
c. It is not a non-routine task such as decision-making by managers or administrators, but it covers routine tasks such as purchasing, manufacturing, selling, shipping, and service.
d. Collect information on organizations, technologies and others related to current operations and redesign business processes based on current organization and business procedures.

JITEC FE 2015 Fall AM Question 63 (English translation)

Which of the following description is SOA?

a. A concept of raising sales efficiency and quality by utilizing IT for sales activities to increase sales and profits and improve customer satisfaction
b. To concentrate management resources on core business, outsource non-core business out of internal business
c. Concept of fundamentally redesigning business processes to innovatively improve cost, quality, service and speed
d. The concept of constructing a system by considering software functions as parts called services and combining the services

JITEC FE 2015 Fall AM Question 64 (English translation)

Which method is used to find useful information and relationships from enormous amounts of data such as customers and markets owned by companies?

a. Data warehouse
b. Data dictionary
c. Data flow diagram
d. Data mining

JITEC FE 2015 Fall AM Question 65 (English translation)

In the case of IT investment projects, when evaluating the investment effect of five years by ROI (Return On Investment), which of the four projects a to d has the highest effect? Note that the internal rate of return (IRR) is 0.

a.

Year	0	1	2	3	4	5
Profit		15	30	45	35	15
Investment	100					

b.

Year	0	1	2	3	4	5
Profit		105	75	45	15	0
Investment	200					

c.

Year	0	1	2	3	4	5
Profit		60	75	90	75	60
Investment	300					

d.

Year	0	1	2	3	4	5
Profit		105	105	105	105	105
Investment	400					

JITEC FE 2015 Fall AM Question 66 (English translation)

Using comprehensive evaluation bidding method, a procurement is conducted under the following conditions. When the bid prices and technical points of A to D companies are as shown in the table, which one is the highest bidder?

Conditions

1. Make bidders with the highest total evaluation score, which is the sum of the price points (100 points perfect score) and the technical points (100 points full points), as the highest bidder.
2. Set the planned price to 10 million yen. Bidding beyond the planned price will not be evaluated.
3. The price point is calculated by the following formula.

[1- (bid price / planned price)] × 100

	Bid price (10,000 yen)	Technical points
Company A	700	50
Company B	800	65
Company C	900	80
Company D	1,100	100

a. Company A
b. Company B
c. Company C
d. Company D

JITEC FE 2015 Fall AM Question 67 (English translation)

According to Kotler's competitive strategy, which company has a high market share in the industry, but whose strategic objective is to concentrate management resources on specific products and services, thereby increasing profit and acquiring its own position.

a. Market challenger
b. Market nicher
c. Market follower
d. Market leader

JITEC FE 2015 Fall AM Question 68 (English translation)

Which SWOT analysis is used for formulating management strategy?

a. Analyze opportunities and threats in the competitive environment and strengths and weaknesses of the business.
b. Analyze the factor that affects competition, the movement of others, the movement of the company.
c. Analyze the optimal combination of marketing tools for the market.
d. Analyze the position of each project from the viewpoint of market growth potential and occupancy rate.

JITEC FE 2015 Fall AM Question 69 (English translation)

Which characteristics of the growth period in the product lifecycle?

a. The market begins to understand the value of the product. Both product lines and channels must be expanded. Although sales will increase at this time, investment is also necessary.
b. Demand will increase, product differentiation and market segmentation will become clearer. Competition between competitors also intensifies, adding new varieties and cost reduction are important.
c. Demand will come down and some companies will withdraw. Judge whether you can become a strong player at this time and consider advancing to alternative market.
d. Demand is partial, and development of new demand is a game. Belief-filled persuasion for a specific target is necessary.

JITEC FE 2015 Fall AM Question 70 (English translation)

The table organizes investment classifications and KPIs according to investment objectives. Which of the following applies to C for investment purposes? Note that a ~ d will apply one of A to D.

Investment Purpose	Investment classification	KPI
A	Investment for work efficiency	Compliance rate of delivery date, number of days required for monthly settlement
B	Investment for information utilization	Number of proposal cases registered, number of proposals to customers
C	Investment for strategy	ROI of new business, market share of new products
D	Investment for IT infrastructure	Number of system failure, response time of search

a. Improve work process, improve work quality
b. Reduce system maintenance cost, improve system performance
c. Knowledge visualization, knowledge sharing
d. Create business, establish competitive advantage

JITEC FE 2015 Fall AM Question 71 (English translation)

Which of the following can be used advantage of cell production method?

a. To increase productivity, those requiring mass production
b. Those products whose specifications have not changed for a long time
c. Many kinds and flexible production is required
d. Standardization, simplification, requiring expert division of labor

JITEC FE 2015 Fall AM Question 72 (English translation)

Which is the characteristic of IC tag (RFID)?

a. Use GPS to display position information and attribute information of the current location.
b. Insert it in a dedicated magnetic reader and use it.
c. Since it deals with a large amount of information, an external storage device is used for storing information.
d. It is resistant to contamination and can read the recorded information from outside the package.

JITEC FE 2015 Fall AM Question 73 (English translation)

Which case is using social media in business?

a. The sales department frequently posts product articles in magazines with many circulated circles, aiming to improve recognition of products.
b. Establish a place for companies to share opinion such as usage situation of their products on the Internet, leading to improvement of products.
c. The company aims to improve the reliability of the company by posting management strategies tailored to market changes in business magazines.
d. Corporate researchers acquire the latest specialty magazines that are not sold in Japan through mail-order sales, leading to the promotion of research and development.

JITEC FE 2015 Fall AM Question 74 (English translation)

Which is NOT appropriate for introducing a smart meter which is a high-function type power meter with communication function and management function of other equipment?

a. Improve the efficiency of meter reading work by automatic meter reading.
b. Continue to supply electric power for a certain time by auxiliary power supply at power failure.
c. Suppress peak power by power demand control.
d. Increase consciousness of energy saving by visualizing power consumption.

JITEC FE 2015 Fall AM Question 75 (English translation)

Which role is CIO required from management?

a. Planning and implementation of financial strategy for corporate management
b. Drafting and implementing company's research and development policy
c. Construction and operation of corporate compliance system
d. Promotion of utilization of IT services to maximize business value

JITEC FE 2015 Fall AM Question 76 (English translation)

Which behavior is to improve cash flow?

a. Receive the bill due date longer.
b. Shorten the period until collecting accounts receivable.
c. Shorten the period until you pay the accounts payable.
d. Pay by shortening the due date of the bill.

JITEC FE 2015 Fall AM Question 77 (English translation)

When selling a PC purchased for 300,000 yen in April 2015 at 10,000 yen in 3 years, the loss on sales of fixed assets is tens of thousands of yen. Note that the useful life is 4 years, the depreciation is the straight-line method, the depreciation rate of the straight-line method is 0.250, and the residual value is 0 yen.

a. 6.0
b. 6.5
c. 7.0
d. 7.5

JITEC FE 2015 Fall AM Question 78 (English translation)

From the table, when inventory items at the end of the term are evaluated by the first-in first-out method, the inventory valuation is thousands of yen.

		Amount (unit)	Unit price (1,000 yen)
Beginning of the term		10	10
Purchase	April	1	11
	June	2	12
	July	3	13
	September	4	14
End of the term		12	???

a. 132

b. 138

c. 150

d. 168

JITEC FE 2015 Fall AM Question 79 (English translation)

Which of the following describes Cyber Security Basic Law?

a. There is a provision that requests the people to deepen their interest and understanding about the importance of cyber security and strive to pay attention necessary to secure them.

b. It stipulates the responsibilities of national and information telecommunications carriers on cyber security, and there is no mention of local public entities and educational research institutions.

c. It stipulates the responsibilities of national and local governments concerning cyber security, and there is no provision on matters to which private business operators should strive.

d. Local governments are positioned as "important social infrastructure operators" and it is stipulated that they will be responsible for the planning and implementation of cyber security related measures.

JITEC FE 2015 Fall AM Question 80 (English translation)

Which is appropriate for the purposes of the Anti-Monopoly Act?

a. Promote fair and free competition.
b. Prevent transactions that impede the maintenance of international peace and security.
c. Define the manufacturer's responsibility when damage is caused by product defects.
d. Give the patentee the right to implement the invention and protect the invention.

JITEC FE 2015 Fall AM Question 51-80

Answer

51 b	61 b	71 c
52 a	62 a	72 d
53 c	63 d	73 b
54 d	64 d	74 b
55 b	65 a	75 d
56 c	66 c	76 b
57 a	67 b	77 b
58 a	68 a	78 c
59 b	69 a	79 a
60 c	70 d	80 a

JITEC FE 2015 Spring AM_Management&Strategy

JITEC FE 2015 Spring AM Question 51 (English translation)

In XP (Extreme Programming), which ones are proposed to practice？

a. Structured design
b. Utilization of test tools
c. Pair programming
d. Utilize use case

JITEC FE 2015 Spring AM Question 52 (English translation)

Which of the explanations of stakeholders involved in the project is appropriate?

a. It belongs to the inside of the organization and it is never outside the organization.
b. It joins the project directly and stays indirectly.
c. Some project outcomes will be profitable, and some will be unprofitable.
d. Like a project manager, it is necessary to be able to specify as an individual.

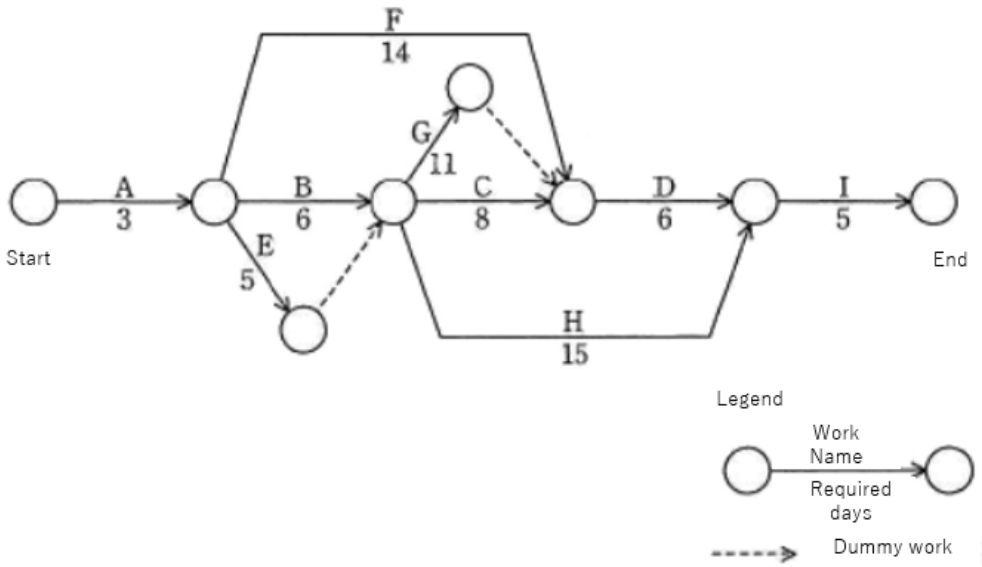
JITEC FE 2015 Spring AM Question 53 (English translation)

In Project Scope Management, which ones are done in the process of creating WBS?

a. Estimate the cost by calculating the man-hours of work
b. Subdivide work hierarchically
c. Order the work and assemble it as a schedule
d. Define activities that produce final output

JITEC FE 2015 Spring AM Question 54 (English translation)

The figure shows the work (A to I) of a project and its working days. What is the minimum number of days required for this project to end?



a. 27
b. 28
c. 29
d. 31

JITEC FE 2015 Spring AM Question 55 (English translation)

To confirm whether the system operates normally, users of the system department and operators of the information system department jointly conducted operation tests before the actual operation. Which items should the user preferentially confirm?

a. Online processing, batch processing, etc., to operate according to operational procedures
b. The system operates according to the determined business procedure
c. All application programs function as specified in the specification
d. It meets the target performance requirement

JITEC FE 2015 Spring AM Question 56 (English translation)

In ITIL, as an example of a key performance indicator (KPI) in availability management, it mentions shortening of index value indicating maintainability. Which of these indicators corresponds to?

a. Number of interruptions within a certain period
b. Mean time to failure
c. Average service recovery time
d. Average service · incident interval

JITEC FE 2015 Spring AM Question 57 (English translation)

Which activities are initially implemented for incidents in the IT service management incident and service request management process?

a. Recording
b. Step by step management
c. Classification
d. Priority assignment

JITEC FE 2015 Spring AM Question 58 (English translation)

Which is appropriate as a meaning of TCO (total cost of ownership) representing the cost of the system?

a. Total expenses related to the development of business systems
b. Total expenses including system introduction to operation and maintenance and management
c. Total cost of system introduction
d. Total operating expenses of systems related to communications and networks

JITEC FE 2015 Spring AM Question 59 (English translation)

Which of the following is the subject of the system audit to evaluate and verify the internal control of IT related issues?

a. Background of the medium-term management plan that the corporate planning department is developing
b. Results of personnel evaluation of employees performed by human resources department
c. Status of review of production facilities for manufacturing division to reduce inferior goods
d. Method of ensuring accuracy in database input / update performed by sales department

JITEC FE 2015 Spring AM Question 60 (English translation)

Which of the system audit implementation systems should be avoided in terms of the independence of the system auditor?

a. Mr. A in the General Affairs Department, who is appointed as an audit team member, audits the status of entry and exit management by the General Affairs Department along with other members.
b. Mr. B of the Audit Division audits the status of personal information management of external companies outsourcing the task of handling personal information.
c. Mr. C who transferred to the Audit Division 5 years ago from the development manager of the Information Systems Department audits the usage of the Internet at the marketing department.
d. Mr. D of the Law Department cooperates with the auditor in the audit of the validity of the outsourcing agreement at the request of the Audit Division

JITEC FE 2015 Spring AM Question 61 (English translation)

Which of the items stated in the audit report by the system auditor departs from the scope of the auditor's business?

a. Recommendation for improvement
b. Determining the urgency of improvement
c. Improvement pointed out
d. Order for improvement

JITEC FE 2015 Spring AM Question 62 (English translation)

Which is the purpose of Business Process Management (BPM) in corporate activities?

a. Continuous improvement of business process
b. Effective utilization of management resources
c. Management and analysis of customer information
d. Analysis and effective utilization of information resources

JITEC FE 2015 Spring AM Question 63 (English translation)

When improving work using a workflow system, which one is appropriate as an expected effect?

a. Depending on the purchase amount of the customer, discounts and other services can be provided.
b. Standard agreement on data exchange between company and business partner can be provided.
c. Processing speed of administrative procedures from application of documents to approval increases.
d. Enabling automate loading and unloading work in the warehouse of stored goods.

JITEC FE 2015 Spring AM Question 64 (English translation)

The results of analyzing the day's business activities of a sales member are as shown in the table. By introducing sales support system, “hours of client visit preparation” can be shortened by 0.1 hour per case. How many hours of "hours of other works" needs to be reduced to make the number of client visits per day 6 without changing the total work hours and client visit time per case?

Time table for daily activity analysis

Total Working hours					The number of client visit per day
	Hours of client visit	Hours of in-house work			
			Hours of client visit preparati on	Hours of other works	
8.0	5.0	3.0	1.5	1.5	5

a. 0.3
b. 0.5
c. 0.7
d. 1.0

JITEC FE 2015 Spring AM Question 65 (English translation)

Which of the target examples of the learning and growth KPIs of the balanced scorecard used in promoting solution business at IT vendors? Note that the solution is "to support through information technology and expert professional services toward achieving customer management issues".

a. Conduct survey of satisfaction with customers who provided the service and set the satisfaction level on average 3.5 or more in 5 grades evaluation.
b. Increase registrations of solution cases by establishing a recycling environment and set the number of customer proposals to 1.5 times the previous year.
c. Train 30 internal personnel as IT professionals to place emphasis on consulting services of information strategy
d. Set the order value of consulting for information strategy planning and system planning to be more than 15% of the total.

JITEC FE 2015 Spring AM Question 66 (English translation)

According to the "Common Frame", which is defined in the planning process?

a. Requirements such as the way of new work and procedures, input / output information, responsibility and authority in carrying out work, rules and restrictions on business
b. Requirements such as system functions necessary to realize business requirements, system development method, system operation procedure, failure recovery time
c. Requirements such as management needs related to the system necessary for achieving management / business objectives and goals, systemization, business problems requiring system improvement
d. Requirements such as the functions of the software making up the system, the environmental conditions for the capability, the operation, the external interface, operation and maintenance methods

JITEC FE 2015 Spring AM Question 67 (English translation)

Which of the external factors identified for the company's products identified using the SWOT analysis?

a. Strengths in sales force
b. Functional strengths
c. Threat from new entry
d. Weakness in quality

JITEC FE 2015 Spring AM Question 68 (English translation)

Value chain analysis for clothing manufacturing and sales companies was conducted. If the company's activities are classified as purchase logistics, manufacturing, shipping logistics, sales and marketing, services, which activity is purchasing logistics?

a. Deliver clothing items to buyers
b. Order the fabric, inspect, inventory control
c. Perform advertisement
d. Perform sewing work

JITEC FE 2015 Spring AM Question 69 (English translation)

Which one represents a pricing method by cost plus method?

a. By price analysis, the price is determined by stage taking into consideration the maximum profit and the minimum risk.
b. Determine the price by adding a margin from the beginning considering of discounting
c. Determine the price at a level that can be estimated to be competitive in the market.
d. Based on manufacturing cost and operating expenses, price is decided by incorporating desired margin

JITEC FE 2015 Spring AM Question 70 (English translation)

Which one explained the knowledge management?

a. Share knowledge scattered inside the company and manage management to increase the overall solving power
b. For rapid decision-making, management is carried out by a flat-type organization structure that minimizes the organization's hierarchy
c. Conduct management innovation of company from comparative analysis with companies that have excellent achievements
d. Manage with the core strengths of company's unique expertise and technology that other companies cannot imitate

JITEC FE 2015 Spring AM Question 71 (English translation)

Which one explained the digital divide?

a. People who do not know how to use information communication equipment such as PCs or do not have information communication equipment and are difficult to obtain information.
b. It is an environment that was developed to enable everyone to utilize information communication so that elderly people and persons with disabilities have difficulty in using information and communications in terms of social and economic disparities.
c. It is the degree of whether information communication equipment, software, information service, etc. are available or easy to use by all people, including elderly and handicapped people.
d. It is a social or economic disparity caused by the presence or absence of information literacy and the difference in the usage environment of IT.

JITEC FE 2015 Spring AM Question 72 (English translation)

In electronic local government, which of the following is G to B?

a. Electronic authorization within the municipality and electronic public document management are carried out
b. Electronic procurement of electronic goods and materials used by local governments, electronic bidding
c. Resident registration card data is transmitted and received between local governments by the basic resident registry network
d. Electronic application for resident card, family register, marriage notification, passport etc

JITEC FE 2015 Spring AM Question 73 (English translation)

Which of the following is a description of CGM (Consumer Generated Media)?

a. Those that serve as intermediaries for individual trading between consumers by providing a function of buying and selling goods in an auction form
b. Those collecting personal shopkeeper's online shops, acting on issuing common points and credit card transactions
c. Those that allow distribution of digital contents created by individuals to viewers / viewers and sharing among users
d. Those of our customers who wanted to subscribe to mailing lists and periodically distribute information via e-mail

JITEC FE 2015 Spring AM Question 74 (English translation)

Which one explained e-marketplace?

a. A method to promote purchasing by guiding customers to real world stores after developing sales promotion campaigns and the like on the Internet
b. Many sellers and buyers encounter through markets established on the Internet and conduct direct transactions without intermediary distributors
c. A method of seeking overall optimization from raw material procurement to product distribution by sharing information such as ordering, ordering, inventory, sales, logistics, etc. between the company and the trading company
d. A method of electronically exchanging data related to estimates, ordering, shipping / delivery, settlement, etc. among companies by unifying information on commercial transactions in a standard format

JITEC FE 2015 Spring AM Question 75 (English translation)

Which of the measures that companies should take to fulfill their social responsibilities, which are implemented from the viewpoint of environmental measures?

a. Make shareholders transparent to the management situation of the company
b. Establish internal structure for green purchasing
c. Establish a system to support employee volunteer activities in the event of a disaster
d. Establish an ethics helpline within the company

JITEC FE 2015 Spring AM Question 76 (English translation)

Which is to reduce employment hours per employee to maintain employment and increase employment opportunities for society as a whole?

a. Cafeteria plan
b. Free agent system
c. Work sharing
d. Work sharing

JITEC FE 2015 Spring AM Question 77 (English translation)

Which one of the applications of ABC analysis method?

a. Divide the area into a plurality of lattice-shaped sections and conduct regional analysis more precisely based on various data (population, purchasing power, etc.)
b. Repeat research on the same panel (respondents) many times. Use the data to grasp local trends and changes in purchasing layer
c. Sales prices, gross profit amount, etc. are arranged in order from the highest to the lowest, and the products are divided into several hierarchies according to the cumulative ratio, and the sales volume of the products belonging to the higher hierarchy is expanded
d. Analyze related sales power analysis and purchase situation of the same product by classifying and summarizing multiple survey data by factor

JITEC FE 2015 Spring AM Question 78 (English translation)

Process three products A, B, C with two machines M1, M2. Processing must be done in order of M 1 → M 2. The time required to process each product with each machine is as shown in the table. In the given case, if the three products are processed in which order, will the time from the start of machining to the end of the machining of all the products be the shortest? When processing of M1 of a certain product is completed, another product can be continuously processed by M1. Also, ignore preparation time such as setup.

Machine / Production	M1	M2
A	7	3
B	5	6
C	4	2

a. A→C→B
b. B→A→C
c. B→C→A
d. C→B→A

JITEC FE 2015 Spring AM Question 79 (English translation)

Which crime is related to the so-called computer virus?

a. Creating a new virus for the development and testing of antivirus software
b. Forwarding an e-mail infected with the virus to others without notifying
c. Discovered a virus which was sent, provided tot to antivirus organization
d. Discovered a virus which was created by others, and kept it for operating it on a third-party computer

JITEC FE 2015 Spring AM Question 80 (English translation)

Which of the following explained the Japan Industrial Standards Committee(JISC)?

a. The council established at the Ministry of Economy, Trade and Industry (METI) conducts surveys and deliberations on industrial standardization based on the Industrial Standardization Law and deliberates JIS establishment, revision, etc.
b. It is a not-for-profit association concerning electric and electronic technology, and as the main activity contents, it is conducting academic activities, issue of books, and standardization of IEEE standards.
c. Materials related to standardization of electrical machinery, equipment and materials are investigated and deliberated, and JEC standard enactment and dissemination projects are undertaken.
d. It is an organization aimed at contributing to the comprehensive development of the electronic information technology industry, and is engaged in the establishment and dissemination of standards starting with JEITA

JITEC FE 2015 Spring AM Question 51-80

Answer

51 c	61 d	71 D
52 c	62 a	72 B
53 b	63 c	73 C
54 d	64 c	74 B
55 b	65 c	75 B
56 c	66 c	76 C
57 a	67 c	77 C
58 b	68 b	78 B
59 d	69 d	79 D
60 a	70 a	80 A