Computer Science and business systems
Comprehensive Examination - 2022

"Workers should receive orders from only one manager" , this principle is termed as	1. Unity of command 2. Unity of direction 3. Unity of group 4. Unity of management
"The Hawthorne Experiments" are related to	1. Scientific Management 2. Administrative Management 3. Human Relations School 4. Bureaucratic Organization
"Managers have long realised that there is no one best way to do things". This statement is suitable for which management approach?	1. Systems Theory 2. Contingency Theory 3. Organizational Humanism 4. Management Science
"g(n) is an upper bound for f(n) that is not asymptotically tight", statement holds true for	1. Big oh 2. Big theta 3. Big omega 4. Amortized

“Functional foremanship” is related to	1. Scientific Management 2. Administrative Management 3. Human Relations School 4. Bureaucratic Organization
“Fayol’s principles” are related to	1. Scientific Management 2. Administrative Management 3. Human Relations School 4. Bureaucratic Organization
X.25 standards covers how many layers?	1. Two 2. Three 3. Seven 4. Six
Working set model for page replacement is based on the assumption of _____	1. Modularity of references 2. Working Set Size 3. Locality of references 4. Random access

Within an organisation, leadership influence will be dependent upon the type of _____ that the leader can exercise over the followers.	1. knowledge 2. power 3. delegation 4. friendship
Why, according to stakeholder theory, is it in companies' best interests to pay attention to their stakeholders?	1. If firms only act in their own self-interest, employees may feel exploited. 2. If firms only act in their own self-interest, the government might put more regulation on them. 3. If firms only act in their own self-interest, customers might not like the image that the company portrays. 4. If firms only act in their own self-interest and inflict harm on stakeholders, then society might withdraw its support

Why is it necessary for all employees to sign the Confidentiality and Security Agreement each year?	1. To check if you still work there. 2. No reason, they just like paperwork. 3. To remind everyone of what their responsibilities are. 4. Will be used for moving to a higher position.

Why is autocratic leadership considered negative?	1. people are uninformed, insecure and afraid of the leader 2. leader is extra friendly 3. too much confusion arises 4. it is very participative
Who suggested a system of cards?	1. Henry Metcalfe 2. Henry Robinson Towne 3. Peter Drucker 4. Robert Owen
Who published the famous book "The Cost of Manufacture and Administration of Workshop: Public and private"?	1. Henry Metcalfe 2. Henry Robinson Towne 3. Peter Drucker 4. Robert Owen
Who presented the paper “Engineer as an Economist”?	1. F W Taylor 2. Henry Robinson Towne 3. Peter Drucker 4. Robert Owen

Who plays an important role in the success of products and services and in increasing the marketing share of the firm in business?	1. Functional level Managers 2. Corporate level Managers 3. Business level Managers 4. All of the above
Who is the father of scientific management?	1. F W Taylor 2. Henry Fayol 3. Peter Drucker 4. None of these
Who is the father of Personnel Management?	1. F W Taylor 2. Henry Fayol 3. Peter Drucker 4. Robert Owen
Who is the father of modern management?	1. F W Taylor 2. Henry Fayol 3. Peter Drucker 4. None of these

Who developed the force-field analysis theory?	1. Carl Rogers 2. B.F.Skinner 3. Kurt Lewin 4. James Johnson

Who believed that workers performance was influenced by the total environment?	1. F W Taylor 2. Henry Fayol 3. Peter Drucker 4. Robert Owen
Who are the organisational stakeholders?	1. Government 2. Employees 3. Customers 4. All the other answers are correct.
White Box techniques are also classified as_____?	1. Design based testing 2. Structural testing 3. Error guessing technique 4. None of the mentioned

While selecting a string w such that w belongs to L, where L is a regular language, and w=mno. Which of the following parts cannot be an empty string?	1. m 2. n 3. o 4. no
While applying Pumping lemma over a regular language, we consider a string w that belong to L and separate it into _____ components.	1. 3 2. 4 3. 2 4. 5
Which type of software can be used to merge data of two files in one file ?	1. System software 2. Networking software 3. Documenting software 4. Utility Software
Which type of attack requires multiple handler on various system?	1. Man in the Middle Attack 2. DoS 3. DDoS 4. Backdoor Attack

Which transmission media has the highest transmission speed in the network.	1. Coaxial cable 2. Twisted pair cable 3. Optical fibre cable 4. Electrical cable
Which term refers to a systematic assessment of a company's activities in terms of social impact?	1. managerial appraisal 2. social audit 3. social responsibility metric 4. ethics audit
which technique was introduced because a single job could not keep both the CPU and the I/O devices busy?	1. Time-sharing 2. SPOOLing 3. Preemptive scheduling 4. Multiprogramming

Which sublayer of the data link layer performs data link functions that depend upon the type of medium?	1. logical link control sublayer 2. media access control sublayer 3. network interface control sublayer 4. none of the mentioned

Which style of leadership focuses on goals, standards, and organization?	1. task leadership 2. social leadership 3. semantic leadership 4. transformational leadership
Which statement is CORRECT	1. The internal data model represents the data's physical storage details 2. To communicate with the business user, mainly, the logical data model is used 3. The logical data model is implementation-independent 4. A database state contains the description of the database data and is stored in the catalogue
Which server translates the alphanumeric name into numeric addresses?	1. Network server 2. Protocols 3. DNS 4. System server
Which process model deals with understanding of the problem domain and architecture framework and developing the project plan with identification of risks?	1. Agile Process Model 2. Iterative Process Model 3. Incremental Process Model 4. Spiral Model

Which process model deals with review of project and a decision is made whether to continue with a further loop or not in the planning phase?	1. Agile Process Model 2. Waterfall Process Model 3. Incremental Process Model 4. Spiral Model
Which principle of general management advocates that “Employee turnover should be minimized to maintain organizational efficiency.”?	1. Stability of personnel 2. Remuneration of employees 3. Equity 4. Esprit de Corps
Which organisation structure is generally followed by big steel plants?	1. Line organisation 2. Line and staff organisation 3. Functional organisation 4. All the other answers are correct
Which option is incorrect. Monitors can contain	1. multiple (user) procedures. 2. only a single user procedure. 3. only one procedure will be active in the monitor at any one time 4. multiple procedures can share variables.

Which one of these scenarios are ethical issues? (i) A company is thinking of employing a robot that will make most of the workforce redundant (ii) Someone creates an AI (iii) A judge decides to give someone a prison sentence (iv) Someone hacks a computer	1. (i) and (ii) 2. (i) and (iii) 3. (ii) and (iii) 4. (iii) and (iv)

Which one of the following would be classified as sensitive personal data?	1. Address 2. Religion 3. CCTV Video 4. Name
Which one of the following regular expressions over {0,1} denotes the set of all strings not containing 100 as a substring?	1. 0*(10+1)* 2. 0*(11*0)* 3. 0*1010* 4. 0*1*01
Which one of the following regular expressions over {0,1} denotes the set of all strings not containing 100 as a substring?	1. 0*(11*0)* 2. 0*1010* 3. 0*(10+1)* 4. 0*1*01

Which one of the following languages over the alphabet {a,b} is described by the regular expression: (a+b)*a(a+b)*a(a+b)*?	1. The set of all strings containing the substring aa. 2. The set of all strings containing at most two a's. 3. The set of all strings containing at least two a's. 4. The set of all strings that begin and end with either a or b.
Which one of the following is not a 'hygiene factor' of Herzberg's Two Factor theory ?	1. Interpersonal relations 2. Working conditions 3. Responsibility 4. Job security
Which one of the following is not a transmission medium.	1. Coaxial cable 2. Telephone Lines 3. Modems 4. Microwave systems
Which one of the following is not a responsibility of the government?	1. Enacting the pollution laws. 2. Establishment of norms for the industrial undertakings. 3. Providing after sales service. 4. None of the other answers is correct.

Which one of the following is correct?	1. A relationship can have one or more attributes directly linked to it 2. All relationships attributes may be attached to one of the participating entities 3. All relationships may be converted to 1:1 relationships 4. All relationships may be converted to binary relationships
Which one of the following is an element of motivation according to Vroom's Vector Valence theory ?	1. Involvement 2. Equity 3. Instrumentality 4. Existence
Which one of the following is an application of Stack Data Structure?	1. Managing function calls 2. The stock span problem 3. Arithmetic expression evaluation 4. All of these

Which one of the following is a synchronization tool?	1. Thread 2. Pipe 3. Semaphore 4. Socket

Which one of the following describes the leadership style in which the leader generally gives the group complete freedom to make decisions and complete the work in whatever way it sees fit?	1. facilitative style 2. delegative style 3. democratic style 4. laissez-faire style
Which one of the following describes the leadership style in which a leader tends to centralize authority, dictate work methods, make unilateral decisions, and limit employee participation?	1. authoritarian style 2. autocratic style 3. democratic style 4. laissez-faire style
Which one of the following communication lines is best suitable for interactive process applications.	1. Narrow band channel 2. Half-duplex 3. Full-duplex 4. Simplex
Which one of the below is not a file infecting virus?	1. Cavity Virus 2. Prepending Virus 3. Appending Virus 4. Stealth Virus

Which of these statements concerning Weber's concept of Bureaucracy is not correct?	1. It is based on rules and procedures rather than personal preference and judgment. 2. It is still a relevant concept in today's organization. 3. It has acquired a negative reputation for inefficiency and rigidity. 4. It rejects rational approaches to managing organizations
Which of these is an application of linked lists?	1. To implement file systems 2. For separate chaining in hash-tables 3. To implement non-binary trees 4. All of these
Which of these expresses the specific number of entity occurrences associated with one occurrence of the related entity?	1. Degree of relationship 2. Connectivity of relationship 3. Cardinality of relationship 4. None of these
Which of the two features match each other	1. Inheritance and Encapsulation 2. Encapsulation and Polymorphism 3. Encapsulation and Abstraction 4. Abstraction and Polymorphism

Which of the three pillars of digital privacy does not apply?	1. Information privacy 2. Individual privacy 3. Communication privacy 4. Family privacy

Which of the statement is true regarding the dequeue operation?	1. Element are deleted at both end 2. any element beside the last one 3. Designing of the operation is simple 4. All of these
Which of the statement is false as part of asymptotic notation?	1. Discuss about rate of growth of the function 2. Asymptotically weakly bound based on the function 3. Functions that are dependent are non-negative 4. Bigoh notation speaks on defined constant
Which of the following ways should organizations use to protect personal information?	1. Security clearances and access restrictions on a "need-to-know" basis are examples of organizational measures. 2. Technological measures, for example, the use of passwords and encryption. 3. Physical measures, for example, shredding documents and locking desk drawers. 4. All of the these

Which of the following true about FILE *fp	1. FILE is a keyword in C for representing files and fp is a variable of FILE type. 2. FILE is a stream 3. FILE is a buffered stream 4. FILE is a structure and fp is a pointer to the structure of FILE type
Which of the following technique is used for fragment?	1. a technique used in best-effort delivery systems to avoid endlessly looping packets 2. a technique used by protocols in which a lower level protocol accepts a message from a higher level protocol and places it in the data portion of the low level frame 3. one of the pieces that results when an IP gateway divides an IP datagram into smaller pieces for transmission across a network that cannot handle the original datagram size 4. Compaction technique
Which of the following TCP/IP protocol is used for transferring electronic mail messages from one machine to another?	1. FTP 2. SNMP 3. SMTP 4. RPC
Which of the following statements are true? I. Shortest remaining time first scheduling may cause starvation II. Preemptive scheduling may cause starvation III. Round robin is better than FCFS in terms of response time	1. I only 2. I and III only 3. II and III only 4. I II and III only

Which of the following statements about the Privacy Data Breach Incident is correct?	1. A Privacy incident is a theft of an asset 2. A privacy event occurs when personal information is lost in any way. Both suspected and confirmed occurrences involving PII that provide a reasonable risk of harm are covered by this term. 3. A Privacy Incident is one that may not cause serious injury or harm to the individual and/or involves a few numbers of affected individuals 4. A Privacy incident is an attack on an asset
Which of the following statements about leadership is false?	1. Leadership does not necessarily take place within a hierarchical structure of an organisation 2. Not every leader is a manager 3. When people operate as leaders their role is always clearly established and defined. 4. All the other answers are correct.
Which of the following statement(s) is/are correct? S1: When Bjarne stroustrup designed C++, there is no such concept of exception handling. S2: Exception handling is a new feature added to ANSI C++; not available in earlier compilers.	1. Only S1 2. Only S2 3. Neither S1 nor S2 4. Both S1 and S2

Which of the following statement is true?	1. DFA is more powerful than NFA 2. NFA and DFA have equal power 3. NFA is more powerful than DFA 4.

	All options are true
Which of the following standard algorithms is not a Greedy algorithm?	1. Dijkstra's shortest path algorithm 2. Prim's algorithm 3. Kruskal algorithm 4. Bellmen Ford Shortest path algorithm
Which of the following risk is the failure of a purchased component to perform as expected?	1.Product risk 2.Project risk 3.Process risk 4.Program risk
Which of the following represents the rights inherent in a managerial position to give orders and expect them to be obeyed ?	1. Power 2. Authority 3. Influence 4. Responsibility
Which of the following regular expression identity is true?	1. r(*) =r* 2. (r * s*)*= (r+s) * 3. (r+s) *=r*+s* 4. r*s*=r*+s*
Which of the following regular expression denotes a language comprising of all possible strings over {a,b} of length n where n is a multiple of 3?	1. ((a+b) (a+b) (a+b))* 2. (aaa+ab+a)+(bbb+bb+a) 3. (aaa+bbb)* 4. (a+b+aa+bb+aba+bba)*

Which of the following regular expression denotes a language comprising of all possible strings over {a,b} of length n where n is a multiple of 3?	1. (a+b+aa+bb+aba+bba)* 2. (aaa+bbb)* 3. ((a+b) (a+b) (a+b))* 4. (aaa+ab+a)+(bbb+bb+a)
Which of the following properties is associated with a queue?	1. First In Last Out 2. First In First Out 3. Last In First Out 4. None
Which of the following properties are necessary for an Algorithm?	1. Definiteness 2. Correctness 3. Effectiveness 4. A and C
Which of the following pair is correctly matched ? A. F.W. Taylor – Human Relations Approach B. Henry Fayol – Universality of Management C. Elton Mayo – Psychological Approach D. M. Parker Follet – Scientific Management	1. A 2. B 3. C 4. D

Which of the following options are correct for the given question? The usage of “virtual” keyword before the member function is to achieve…… (i). Inheritance (ii). Compile time Polymorphism (iii). Runtime Polymorphism (iv). Static binding	1. (i) only 2. (ii) and (iv) only 3. (ii) and (iii) only 4. (iii) only
Which of the following operation take worst-case linear time in the array implementation of the stack?	1. Push 2. Pop 3. IsEmpty 4. None
Which of the following one can relate to the statement: If x items are put into y containers, with x>y, then at least one container must contain more than one item.	1. Pumping Lemma 2. Pigeon Hole Principle 3. Counting principle 4. None
Which of the following must you do if a laptop holding client account information is stolen?	1. Log the breach immediately with the DPO 2. Notify the individuals concerned if their rights or freedoms are at risk 3. Notify your manager 4. Notify the regulators

Which of the following keys in a table can uniquely identify a row in a table?	1. Candidate key 2. Alternate key 3. Primary key 4. All of these
Which of the following is/are White box technique ?	1. Statement Testing 2. Decision Testing 3. Condition Coverage 4. All of the mentioned
Which of the following is/are not shared by the threads of the same process? Program counter (b) Logical Address space (c) Stack (d) Registers (e) Virtual Address space (f) File descriptor table (g) Message queue (h) Code	1. (a), (b) and (e) 2. (a), (c) and (f) 3. (a), (c) and (h) 4. (a), (c) and (d)
Which of the following is TRUE?	1. Every finite subset of a non-regular set is regular 2. Every subset of a regular set is regular 3. Infinite union of finite sets is regular 4. The union of two non-regular sets is not regular

Which of the following is true	1. P is a subset of NP 2. NP is a subset of P 3. P and NP are equal 4. NP is a subset of NP-hard
Which of the following is true of a divisional structure?	1. It is also known as chain of command. 2. It is also called a U-form (unitary) structure. 3. It is a centralized structural form. 4. It is used to promote flexibility and change.

Which of the following is true of effective information sharing in an organization?	1. Information should be shared vertically, but not horizontally. 2. Vertical linkages are designed primarily for coordination and collaboration. 3. The structure should fit the information requirements of the organization. 4. It is not possible to give people a lot of information.

Which of the following is the most accurate description of an access control method that allows the data owner to develop and manage access control?	1. MACs (Mandatory Access Control) 2. RBACs (Role-Based Access Control) 3. LBACs (List Based Access Control) 4. DACs (Discretionary Access Control)
Which of the following is referred as part of restricted data structure?	1. Stack 2. Queue 3. Linked list 4. All of these
Which of the following is odd one out?	1. Evaluating a postfix expression 2. Matching Balancing Parentheses 3. Luggage checking in airports 4. Depth first search of graphs
Which of the following is NOT a valid access control mechanism?	1. DAC (Discretionary Access Control) list. 2. SAC (Subjective Access Control) list. 3. MAC (Mandatory Access Control) list. 4. RBAC (Role-Based Access Control) list.

Which of the following is NOT a key concept associated with scientific management?	1. One best way 2. Formalization 3. Time-and-motion studies. 4. Systematic selection
Which of the following is not a good way to protect one's privacy?	1. Use privacy-focused SE 2. Use private Browser-window 3. Disable cookies 4. Uninstall Antivirus
Which of the following is element of the database?	1. Constraints and schema 2. Relationships 3. Data 4. All of these
Which of the following is an example of the implementation of an access control policy for a bank teller?	1. Rule-based policy 2. Identity-based policy 3. User-based policy 4. Role-based policy
Which of the following is an ethical behaviour?	1. Giving less remuneration to the employees. 2. Selling inferior goods. 3.

	Honest behaviour with the customer. 4.Polluting the environment.

Which of the following is a vulnerability in a network environment with discretionary access controls?	1. SYN flood 2. Impersonation 3. Denial of service 4. Birthday attack
Which of the following is a project scheduling method that can be applied to software development?	1.EPM 2.CPM 3.CMM 4.NONE OF THE ABOVE
Which of the following is a MAC (Mandatory Access Control) feature?	1. Uses levels of security to classify users and data. 2. Allows owners of documents to determine who has access to specific documents. 3. Uses access control lists that specify a list of authorized users. 4. Uses access control lists that specify a list of unauthorized users.
Which of the following is a leadership trait?	1. Dominance 2. energy 3. cognitive ability 4. All the other answers are correct

Which of the following does not require additional temporary space?	1. Stack 2. Queue 3. Linked list 4. All of these
Which of the following condition is used to transmit two packets over a medium at the same time?	1. Contention 2. Collision 3. Synchronous 4. Asynchronous
Which of the following claims about DAC (Discretionary Access Control) is correct?	1. Files that don't have an owner CANNOT be modified. 2. The administrator of the system is the owner of each object. 3. The operating system is the owner of each object. 4. Each object has an owner, which has full control over the object.
Which of the following are objectives of an information systems security program	1. Threats, vulnerabilities, and risks 2. Security, information value, and threats 3. Integrity, confidentiality, and availability 4.

	Authenticity, vulnerabilities, and costs
Which of the following are components of a database except?	1. User data 2. Metadata 3. Reports 4. Indexes
Which of the following application generally use a stack?	1. Parenthesis balancing program 2. Syntax analyzer in compiler 3. Keeping track of local variables at run time 4. All of the above

Which of the below statement(s) is/are true? (i). By using pure virtual function, it is possible to achieve a pointer to base class points to refer derived class objects. (ii). By using pure virtual function, it is possible to achieve a pointer to derived class points to refer base class objects.	1. Both (i) and (ii) 2. Neither (i) nor (ii) 3. only (i) 4. only (ii)
Which of the below is used for designing real time networking capabilities?	1. Packet Tracer 2. WireShark 3. Network Simulator 2 4. TinyOS

Which of the below is not a business continuity disaster?	1. Flooding 2. Covid19 3. Earth Quake 4. Tsunami
Which of the below is an inline device?	1. Switch 2. Router 3. VPN 4. Host
Which of the below is a network sniffer tool?	1. Packet Tracer 2. WireShark 3. Network Simulator 2 4. TinyOS
Which of the following would LEAST likely be a source of ethical guidance?	1. holy books 2. laws 3. tests 4. friends

Which of the following term is the practice of hiding data in graphic, audio, or other text file?	1. Masking 2. Steganography 3. Cryptography 4. None of the choices
Which of the following statement(s) is/are NOT true? (i). Virtual function help to achieve a pointer to base class points to refer base class objects only. (ii). Virtual function help to achieve a pointer to base class points to refer derived class objects. (iii). Virtual function has no role in supporting a pointer to achieve polymorphism. (iv). Virtual functions are not member functions of a class.	1. (i) and (iv) only 2. (i), (ii) and (iv) only 3. (i), (iii) and (iv) only 4. (ii) only
Which of the following relations is correct, when comparing the best-case complexity?	1. insertion<merge<selection 2. merge <insertion<selection 3. insertion<selection<merge 4. none of the above

Which of the following principles of management was not given by Fayol?	1. Unity of direction 2. Subordination of individual interest to common interest 3. Stability of tenure 4. Standardisation

Which of the following is true of a functional structure?	1. It reacts quickly to environmental changes. 2. It has a strong horizontal coordination. 3. It often results in hierarchy overload. 4. It cannot work in small organizations.
Which of the following is the encryption/decryption key known only to the party or parties that exchange secret messages?	1. E-Signature 2. Digital Signature 3. Private key 4. Security token
Which of the following is NOT one of the triple bottom line factors of corporate social responsibility?	1. society 2. environment 3. economy 4. culture

Which of the following is **NOT** a topic included in the social responsibility audit focus?	1. open communication 2. treatment of employees 3. leadership 4. management structure
Which of the following is an advantage of a peer-to-peer network?	1. Files and folders cannot be centrally backed up 2. Does not need an expensive server as individual workstations are used to access files 3. The server is expensive to purchase 4. Network security can be carried out centrally
Which of the following is an advantage of a client-server network?	1. If one computer fails it will not disrupt the network 2. There is little or no security 3. Users can access shared data which is centrally controlled 4. If any part of the network fails, a lot of disruption can occur

Which of the following firms has NOT been exposed for ethical abuses and corrupt conduct?	1. Satyam Computers 2. Lehman Brothers 3. Enron 4. General Electric(GE)
Which of following linked list has the feature of its elimination of the need for a pointer to a node's predecessor to delete the node?	1. Singly 2. Doubly 3. Circular 4. All of these

Which of the given option is correct?
#include<stdio.h>
main(){
int a[4]={1,2,3,4};
int *b[4];
int *(c[4]);
printf("%d %d %d",a,b,c);
}
	1.
	a. a is an integer array, b is an array of pointers, c is an array of pointers
	2.
	a. a is an integer array, b is an array of pointers, c is a pointer to an array
	3.
	a. a is an array of pointers, b is a pointer to an array, c is an array of pointers
	4.
	a. a is an array of pointers, b is a pointer to an array, c is a pointer to an array

Which network protocol is often used for gaming?	1. TCP 2. FTP 3. UDP 4. HTTP

Which network topology is the most common way of setting up a network?	1. Ring 2. Bus 3. Star 4. Mesh
Which model can be selected if a user is involved in all the phases of SDLC?	1. Waterfall Model 2. Prototyping Model 3. RAD Model 4. Build AND Fix Model
Which method is meant for coordinating access to resources with respect to the available IP addresses?	1.MAC 2. ACL 3. DAC 4. None of the choices
WHICH LAYER IS RESPONSIBLE FOR PROCESS TO PROCESS DELIVERY?	1. NETWORK LAYER 2. TRANSPORT LAYER 3. SESSION LAYER 4. DATA LINK LAYER
Which key skill was not mentioned by Kanter as needed by managers of innovative organisations?	1. Coping 2. Political 3. Communicating 4. Leading a team

Which is/are the application(s) of stack	1. Function calls 2. Large number Arithmetic 3. Evaluation of arithmetic expressions 4. All of these
Which is used for predicting virus?	1. Firewall 2. CWE 3. IPS 4. Exposures
Which is the most optimal scheduling algorithm?	1. FCFS-First Come First Served 2. Shortest Job First 3. Round Robin 4. None of the Mentioned
Which is the most efferent phone directory search?	1. Binary search tree 2. Balanced BST 3. Trie 4. Linked List

which is the fastest storage unit in a usual memory hierarchy?	1. cache 2. main memory 3. hard disk memory 4. register

Which is not the application of queue?	1. Printing jobs 2. Process waiting 3. Function nesting 4. Network packet forwarding
Which is not one of Fayol's principles?	1. Authority and responsibility 2. Globalization 3. Unity of direction 4. Unity of command
Which is first loaded into the BUS by the data transfer initiator?	1. Data 2. Address 3. Control Information 4. Address, Control Information

Which is a true statement.	1. Breadth-first search is the shortest path algorithm that works on un-weighted graphs 2. Depth first search is the shortest path algorithm that works on un-weighted graphs 3. Both of the above are true 4. None of the above are true
Which HR practice would most likely be improved through a firm's efforts at corporate social responsibility?	1. benefits 2. recruitment 3. compensation 4. succession planning
Which directory implementation is used in most Operating System?	1. Single level directory structure 2. Two level directory structure 3. Tree directory structure 4. Acyclic directory structure
Which database level is closest to the users?	1. Internal 2. Physical 3. Conceptual 4. External

Which data structure is used for implementing recursion?	1. Queue 2. Stack 3. Arrays 4. List
Which data structure is needed to convert infix notation to postfix notation?	1. Branch 2. Queue 3. Tree 4. Stack
Which data model is independent of both hardware and DBMS?	1. External 2. Internal 3. Conceptual 4. All of these

Which approach recognises that there is no optimal organisational design?	1. Flexible 2. Virtual 3. Contingency 4. Boundaryless

Which among the following is equivalent to the given regular expression? ab*+b	1. (ab)*+b 2. a((b)*+b) 3. (a(b)*)+b 4. ((a*b)b*)*
Which access control type has a central authority that determines what objects people have access to depending on their role or organizational security policy?	1. Mandatory Access Control 2. Discretionary Access Control 3. Non-Discretionary Access Control 4. Rule-based Access control
Which term refers to the discipline that deals with what is good and bad or right and wrong?	1. morals and traditions 2. social responsibility 3. ethics 4. cultural norms
Which of the following statements regarding inline functions is correct?	1. It speeds up execution. 2. It slows down execution. 3. It increases the code size. 4. It increases the code size and length.

Which of the following is the correct representation of pure virtual function?	1. class base { public: virtual void display=0;}; 2. class base {public: virtual void display!=0;}; 3. class base {public: virtual void display () = 0 ;}; 4. class base {public: virtual void display () > 0 ;};
Which of the following is suitable to be considered as an object?	1. Name 2. Email 3. Transaction 4. Quantity
Which of the following concept of oops allows complier to inset arguments in a function call if it is not specified?	1. Call by value 2. Default arguments 3. Call by reference 4. Call by pointer
Which access control model can be suited for bank teller application?	1. Discretionary 2. Mandatory 3. Role-based 4. Rule-based

When class B is inherited from class A, what is the order in which the **destructors** are called?	1. Class A first Class B next 2. Class B first Class A next 3. Class B's only as it is the child class 4. Class A's only as it is the parent class

When we concatenate two languages L1 and L2 recognized by machine M1 and M2 we obtain a machine with final state same as that of _____	1. M2 2. M1 3. M1 and M2 4. M1 or M2
When we concatenate two languages L1 and L2 recognized by machine M1 and M2 we obtain a machine with final state same as that of _____	1. M1 or M2 2. M1 3. M1 and M2 4. M2
When there is more than one final state in the reduced FA, then its regular expression will contain _____ operator surely	1. dot 2. star 3. binary+ 4. unary+

When there is more than one final state in the reduced FA, then its regular expression will contain _____ operator surely	1. unary + 2. dot 3. binary + 4. star
When there is complete DFA with Five states out of which two are final states if F is modified such that it recognizes complement of the original language then there will be at least _____final states.	1. 2 2. 3 3. 7 4. 5
When there are infinite distinguishable strings then there cannot be a ----------	1. automata 2. finite automata 3. regular expression 4. both finite automata and regular expression
When there are infinite distinguishable strings then there cannot be a ----------	1. finite automata 2. automata 3. regular expression 4. both finite automata and regular expression

When the project deals with developing a well understood application, then the model is called as	1. Waterfall Model 2. Spiral Model 3. COCOMO Model 4. Agile Model
When the entries in the segment tables of two different processes point to the same physical address then _____	1. the segments are invalid 2. the processes get blocked 3. the address space is invalid 4. the segments are shared
When the computer processor does not get a data item it requires in the cache, then the problem is known as	1. Cache miss 2. Cache hit 3. File caches 4. Name cache

When FA M is given which recognizes language L and reverse of L is found by using M then there can be _____Final states	1. Two 2. Three 3. Only one 4. Any number

When employee satisfaction is measured, employees seemed to be more satisfied under a(n) _____ leadership style than under a(n) _____ one.	1. laissez-faire; participative 2. supportive; laissez-faire 3. democratic; directive 4. democratic; autocratic
When determining the most appropriate form of leadership, which of the following should be considered?	1. The manager. 2. The work environment. 3. The group. 4. All the other options are correct.
When determining the most appropriate form of leadership, which of the following should be considered?	1. The manager. 2. The work environment. 3. The group 4. All the other answers are correct.
When designing apps, a software company considers data protection issues. So, what should we call this strategy?	1. Data protection by default 2. Legitimate data protection 3. Data protection by design 4.

	Organisational data protection
When a state in a FA has self loop its regular expression will have ----------	1. dot 2. star 3. binary+ 4. unary+
When a state in a FA has self loop its regular expression will have ----------	1. dot 2. binary+ 3. unary + 4. star
When a program tries to access a page that is mapped in address space but not loaded in physical memory, then	1. segmentation fault occurs 2. fatal error occurs 3. page fault occurs 4. no error occurs
What would be the asymptotic time complexity to insert an element at the second position in the linked list?	1. O(1) 2. O(n) 3. O(n^2) 4. None

What will be the value of top, if there is a size of stack STACK_SIZE is 5	1. 5 2. 6 3. 4 4. none

What will be the output?
#include<stdio.h>
#include<string.h>
main(){
char arr1[5]={'a','p','p','l','e'};
char arr2[5];
arr2=arr1;
printf("%s",arr2);
}
	1.
	apple
	2.
	Error
	3.
	a
	4.
	0

What will be the output?
#include<stdio.h>
main(){
char arr[]="ab.cd.ef";
printf("%s",strrchr(arr,'.'));
}
	1.
	ab
	2.
	.cd
	3.
	.cd.ef
	4.
	.ef

What will be the output?
#include<stdio.h>
int value=100;
void myFunction(int parameter)
{
printf("%d",parameter);
}
main(){
int value=200;
myFunction(value);
}
	1.
	200
	2.
	100
	3.
	100 200
	4.
	200 100

What will be the output
#include<stdio.h>
void myFunction()
{
return 1;
}
main(){
printf("%d", myFunction());
}
	1.
	1
	2.
	0
	3.
	Error
	4.
	None of these

What will be the output
#include<stdio.h>
main(){
int arr[4]={0,1,2,3};
int one,two,three;
one=++arr[1];
two=arr[one]+1;
three=arr[one+1];
printf("%d %d %d",one,two,three);
}
	1.
	a. 1 2 3
	2.
	a. 2 3 3
	3.
	a. 2 2 3
	4.
	a. 0 1 26

What will be the output
#include<stdio.h>
main(){
float a[]={1.23,2.34,3.45,4.56,5.67};
printf("%d",sizeof(a)/sizeof(a[-1]));
}
	1.
	5
	2.
	1
	3.
	Error
	4.
	0

What will be the output
#include<stdio.h>
int myFunction1(int parameter)
{
return parameter;
}
int myFunction2(int *parameter)
{
return *parameter++;
}
main(){
int value=100;
printf("%d %d", myFunction1(value), myFunction2(&value));
}
	1.
	100 101
	2.
	101 101
	3.
	100 100
	4.
	101 100

What will be the output
#include <stdio.h>
char* cut(char *parameter) {
parameter+=5;
return parameter;
}
main() {
printf("%s",cut("AllisWell!"));
}
	1.
	Allis
	2.
	Well!
	3.
	AllisWell!
	4.
	Error

What will be the output of the given program?
#include<stdio.h>
int myFunction(int parameter)
{
return parameter++;
}
main(){
int value1=100;
int value2=myFunction(value1);
printf("%d",--value2);
}
	1.
	100
	2.
	101
	3.
	99
	4.
	Error

What will be the output of the given code
#include<stdio.h>
void myFunction(int parameter)
{
printf("%d ",parameter);
}
main(){
int value1=1;
myFunction(value1);
static int value2;
if (value2<value1)
{
value2++;
main();
}
}
	1.
	Error
	2.
	1
	3.
	2
	4.
	1 1

What will be the output of the below code
#include<stdio.h>
int myFunction(int *parameter)
{
 	
return ++*parameter;
}
main(){
int value=100;
printf("%d ",value);
myFunction(&value);
printf("%d",value);
}
	1.
	100 100
	2.
	101 101
	3.
	101 100
	4.
	100 101

What will be printed?
 	
#include<stdio.h>
int myFunction()
{
return 1;
return 2;
}
main(){
printf("%d", myFunction());
}
	1.
	1
	2.
	2
	3.
	1 2
	4.
	2 1

What will be printed?
#include<stdio.h>
main(){
int myFunction()
{
return 1;
}
printf("%d", myFunction());
}
	1.
	Invalid function definition
	2.
	myFunction() should be defined outside main method
	3.
	1
	4.
	0

What will be printed?
#include<stdio.h>
main(){
char arr[]="ab.cd.ef";
printf("%s",strchr(arr,'.'));
}
	1.
	ab
	2.
	.cd
	3.
	.cd.ef
	4.
	.ef

What will be printed
#include<stdio.h>
main(){
char arr[5]="apple";
printf("%c",0[arr]);
}
	1.
	a. apple
	2.
	a
	3.
	97
	4.
	Error

What type of teams are composed of workers from different functional departments of the organization that meet to solve an important organizational problem?	1. Line teams. 2. Cross-functional teams. 3. Staff teams. 4. Multi-dimensional teams.
What type of computer chips are volatile?	1. RAM chips 2. ROM chips 3. CDROM 4. FLASH MEMORY

What type of encryption is capable of encrypting a fixed-length plaintext block into a 128-bit cipher text block at the same time?	1. Block 2. Symmetric 3. Hash 4. None of the choices
What type of encryption encrypts the plain text byte by byte or bit by bit?	1. Block 2. Hash 3. Stream 4. Elliptic
What terms are applied by sociologists to two contrasting pictures of organizations: competing individuals and groups or people acting with common interests?	1. contingent, functional 2. pooled, reciprocal 3. pluralist, unitary 4. co-operative, conflictual

What should you do with someone's personal data once you've finished using it?	1. Pass it on to someone else 2. Throw it out. 3. Give it back to the owner. 4. Securely delete or destroy it.
What should a project manager do or follow to ensure clear boundaries for project completion?	1.Scope verification 2.Completing a scope statement 3.scope definition 4.Risk management plan

What oracle backup and recovery file contains user and system?	1. Datafile 2. Control file 3. Online ReDo file 4. Redolog file
What is {1,2}* intersection {2,3}*	1. {12,2}* 2. {23,2}* 3. {2}* 4. {12,23}*
What is the value of the postfix expression 6 3 2 4 + - *	1. Something between -15 and -100 2. Something between -5 and -15 3. Something between 5 and -5 4. Something between 5 and 15
What is the status of array after the first iteration of selection sort for the given array of elements:5,7,10,12,2,8	1. 5,7,10,12,2,8 2. 2,5,10,12,7,8 3. 2,7,10,12,5,8 4. 5,7,10,2,8,12

What is the result of the following operation? Top (Push (S, X))	1. X 2. Null 3. S 4. None
What is the real disadvantage of a linear list of directory entries?	1.size of the linear list in memory 2.linear search to find a file 3.it is not reliable 4.all of the mentioned
What is the real disadvantage of a linear list of directory entries?	1. size of the linear list in memory 2. linear search to find a file 3. it is not reliable 4. all of the mentioned
What is the postfix form of the following prefix * + a b – c d	1. a b + c d – * 2. a b c + * – 3. a b + * c d – 4. a b + * c d –

What is the name of the process in which an employee informs another responsible employee in the company about potentially unethical behavior?	1. Whistleblowing 2. Purging and releasing 3. Identification 4. Information transfer
What is the level of recursion if the input array is { 4, 8, 32, 58,98,129,201 } and key is 8?	1. 5 2. 2 3. 3 4. 4
What is the difference is graph traversal and tree:	1. There can be a loop in the graph 2. DFS and BFS are the same 3. There can't be a loop in the graph 4. DFS and BFD are different
What is the current industry for the measure of Software Quality?	1.Iterations to Successful Build 2.Number of Bugs Fixed 3.Number of Defects per KLOC 4.None in the list
What is the function of HTTP?	1. webserver and browser activity according to command 2. Mark-up language 3. Forming authority of the page 4. Tag files and create effects

What is the complexity of quick sort algorithm, if the array to be sorted is already in sorted order?	1. O(n2) 2. O(nlogn) 3. Constant 4. O(n)
What is split horizon?	1. Information about a route should not be sent back in the direction from which the original update came. 2. It splits the traffic when you have a large bus (horizon) physical network. 3. It holds the regular updates from broadcasting to a downed link. 4. It prevents regular update messages from reinstating a route that has gone down.
What is Cyclomatic complexity ?	1. Black box testing 2. White box testing 3. Yellow box testing 4. Green box testing
What is Address Binding?	1. going to an address in memory 2. locating an address with the help of another address 3. binding two addresses together to form a new address in a different memory space 4.

	a mapping from one address space to another
What is a network?	1. A group of 1 or more devices that communicate 2. A group of 2 or more devices that communicate 3. When 2 or more computers are in the same building 4. A group of 3 or more devices that communicate

What is a Network Protocol	1. Formal standards and policies comprised of memes 2. Formal standards and policies 3. Formal standards and policies comprised of rules, procedures and formats 4. None of the above
What is a disadvantage of a star network?	1. It is cheap 2. It uses one cable 3. It is expensive 4. It has a terminator

What happens to a task force after it finishes its assignment?	1. It is integrated with the organisation. 2. It is disbanded. 3. It continues after accomplishment. 4. None of the other answers is correct.
What does DPIA expand as?	1. Data Privacy Impact Assessment 2. Data Protection Impact Assessment 3. Data Privacy Identification Assessment 4. Data Protection Identification Assessment
What does biometrics have to do with access control?	1. Authorization 2. Authentication 3. Confirmation 4. Certification
What are the mid values in each level of recursion in the binary search for the input array { 4, 8, 58,98,129,201 } and key 201?	1. 58, 129, 201 2. 98, 129, 201 3. 98,201 4. 58,129,201

What are all candidate keys, other than the primary keys called?	1. Partial keys 2. Alternate keys 3. Superkey keys 4. None of these
What Access Control paradigm was created to deal primarily with computer system information flow?	1. Lattice-Based 2. Integrity Based 3. Flow-Based 4. Area Based
What is another way to describe a parent-child relationship?	1. Has-A 2. Is-A 3. Does-A 4. Gets-A
Virtual memory technique facilitates sharing of memory among	1. processes 2. threads 3. instructions 4. programs

Unity of command means:	1. Parity of authority and responsibility 2. The flow of command from superior to a subordinate 3. Parity in controlling 4. None of the above
Unit testing is done by_____?	1. Users 2. Developers 3. Customers 4. None of the mentioned
Triple Bottom Line reporting refers to:	1. using a low, medium, and high estimates for profitability forecasts. 2. measuring the impact of the firm on stockholders, customers, and employees 3. measuring the social, environmental, and financial performance of the firm. 4. measuring the impact of local, state, and federal governments on the firm.

Transfer time is ...	1. the time is taken to locate the disk arm to a specified track where the data is to be read or write. 2. the time is taken by the desired sector of disk to rotate into a position so that it can access the read/write heads. 3. the time to transfer the data. 4. the time taken to complete the execution.
Traits or skills on which leaders differ from non-leaders include:	1. Honesty and integrity 2. Self-confidence 3. Drive and desire to lead 4. All the other options are correct
Trait theory ignores _____.	1. the physical traits of leaders. 2. the aspects of honesty and integrity. 3. the interactions of leaders and their group members as well as situational factors. 4. the fact that leaders should be able to create visions and solve problems.
Total number of levels in DFD	1. 1 2. 2 3. 3 4. 4

Total Development in programmer months of Utility programs	1. TDEV=2.5xPM pow 0.38 2. TDEV=2.5xPM pow0.35 3. TDEV=2.5xPM pow0.32 4. None of the above
Total Development in programmer months of Systems programs	1. TDEV=2.5xPM pow 0.38 2. TDEV=2.5xPM pow0.35 3. TDEV=2.5xPM pow0.32 4. None of the above
Total bits for a direct-mapped cache with data of 16 KB and blocks of 4-word, assuming a 32-bit address are	1. 143K 2. 144K 3. 145K 4. 147K

To read and write from a file we are using the standard C++ library called	1. Fstream 2. stream 3. filestream 4. None

To make a process as Zombie, which process needs to delay (sleep()) its execution? The parent process or the child process?	1. parent to sleep for a while, child normal execution 2. child to sleep for a while, parent normal execution 3. parent and child both normal execution 4. parent and child both to sleep for a while
To help the operating system estimate LRU, many processors provide a	1. Use bit 2. Reference bit 3. Fault bit 4. Both a and b
To create a dynamic record which is better?	1. Stack 2. Queue 3. Linked list 4. All of these

To avoid the race condition, the number of processes that may be simultaneously inside their critical section is	1. 8 2. 1 3. 16 4. 0
Time Oriented Diagram	1. class Diagram 2. UseCase Diagram 3. Object Diagram 4. Sequence Diagram
Through this principle of management, Henri Fayol guides the managers to exhibit exemplary behaviour and advises that they should not fall into the temptation of misusing their powers for personal benefit at the cost of the general interest of the organization. Which principle of management is being described in the above statement?	1. Remuneration of employees 2. Centralization and decentralization 3. Subordination of individual interest to general interest 4. Equity
Threat to confidentiality is	1. DDoS 2. Malware 3. Virus 4. DoS

Thomas Tharakan expects his employees to "check their brains at the door." He does all the thinking, makes all the decisions, and issues commands to his subordinates. Thomas uses the _____style of leadership.	1. autocratic 2. authoritarian 3. democratic 4. laissez-faire
This technique of scientific management helps in the development of the concept of the assembly line, which is widely used in automobile companies these days as well. Identify the technique.	1. Motion study 2. Standardization and simplification of work 3. Method study 4. Time study

This code would work but is bad practice because	1. The object attribute is changed by a method 2. The object attribute is being changed directly through mainline code (outside of the class/object itself) 3. There is no object being created 4. The principle of encapsulation has been ignored
There exists a language L. We define a string w such that w belongs to L and w=pqr and |w| >=n for some constant integer n.What can be the maximum length of the substring pq i.e. |pq|<=?	1. n 2. |p| 3. |q| 4. |w|n

There are two abilities that you must have to properly understand ethics. The first is the …….. and the second ability is ……..	1. ability to discern; concentration 2. ability to visualize; devotion 3. ability to distinguish; dedication 4. ability to judge; dedication
There are ____ type's specializations. They are full specialization and partial specialization	1. 1 2. 2 3. 3 4. 4
Theodore New-Comb's balance theory is related to	1. Leadership 2. Group formation 3. Selection 4. Retirement
The word _____ refers to the portion of a _____ that carries a transmission.	1. line; channel 2. channel; link 3. link; channel 4. line; link

The way the work activities and the departments are organised is called	1. chain of command. 2. span of control. 3. unity of direction. 4. esprit de corps.
The view that sees profit maximization as the main objective is known as:	1. Shareholder theory 2. Principal-agent problem 3. Stakeholder theory 4. Corporation theory
The VFS (virtual file system) activates file system-specific operations to handle local requests according to their _____	1. size 2. commands 3. timings 4. file system types
The Unix system call to get the size of a page is _____.	1. pagesize() 2. getpagesize() 3. pagesizeof() 4. sizeof()

The University of Michigan studies used the two dimensions of _____ and _____ to study behavioural characteristics of leaders.	1. employee oriented; production oriented 2. consideration; initiating structure 3. task; people 4. decision-making; employee development
The universal Turing machine U consists of	1. 1 input tape 2. 2 input tape 3. 3 input tape 4. 4 input tape
The underlying technology on which the system is built is superseded by new technology is the _____ type of risk	1.Project 2.Product 3.Business 4.None in the list
The two major benefits are improvement in performance and minimization of cost to process the system	1. True 2. False 3. 4.
The transformational leadership style	1. encourages group members to transform themselves into better people. 2. strives to change the group members' opinions by showing them a better way to think. 3. changes opinions and attitudes without changing behaviours. 4. encourages and inspires group members to go above and beyond selfish interests and do what is best for the common good of the group.

The total number of states required to automate the given regular expression (aa)*(bb)*	1. 4 2. 3 3. 5 4. 7
The three major methods of allocating disk space that are in wide use are _____	1. contiguous 2. linked 3. indexed 4. all of the mentioned
The technology is used to analyze and monitor network and information flow traffic_____	1. Cloud access security brokers (CASBs) 2. Managed detection and response (MDR) 3. Network Security Firewall 4. Network traffic analysis (NTA)
The technique of storing the previously calculated values is called?	1. Saving value property 2. Storing value property 3. Memoization 4. Mapping

The syntax for catching all exceptions in a program is …….	1. catch-all(…) { } 2. catchall(…){ } 3. catch(…) { } 4. catch(.){ }

he sum of the degrees of all vertices in an undirected graph	1. 2V 2. E+1 3. V+1 4. 2E
The subtraction of hit rate (1-hit rate) is known as	1. Hit time 2. Miss penalty 3. Miss rate 4. Cache
The structure or format of data is called _____	1. Syntax 2. Semantics 3. Struct 4. Formatting

The stress which is negative in nature and causes mental and physical problems is known as	1. Eustress 2. Distress 3. Negative stress 4. Permanent stress
The stress that exists for weeks, months, or even years is called	1. Chronic stress 2. Acute stress 3. Negative stress 4. Permanent stress
The software cost estimation is done in stages as	1. Basic COCOMO 2. Intermediate COCOMO 3. A and B 4. None of the above
The single and multi-variable estimation models at different stages of estimation is performed by	1. Halstead 2. FP 3. COCOMO 4. None of the above

The set of all strings over the alphabet {p,q} (including epsilon} is denoted by	1. (q+p)* 2. (q+p)^+ 3. p^+q^+ 4. p*q*
The set of all strings over the alphabet {a,b} (including epsilon} is denoted by	1. (a+b)^+ 2. a^+b^+ 3. a*b* 4. (a+b)*
The semi-detached software is	1. Development of the GUI 2. Database module 3. Networking Module 4. None of the above

The Scalar principle of organisation implies	1. All authority must be vested to one person 2. Manager should directly supervise only a limited number of subordinates 3. Line of authority must be clearly defined 4. A subordinate should have only one supervisor

The result of evaluating the prefix expression */b+-dacd, where a=3, b=6, c=1, d=5 is	1. 0 2. 5 3. 10 4. 15
The recognizing capabilities of NDFSM and DFSM	1. must be same 2. may be different 3. must be different 4. none of the answers given
The purpose of cache memory in a computer is to	1. ensure fast booting 2. reduce load on CPU registers 3. replace static memory 4. speed up memory cycle time
The project plan sets out	1. the resources available to the project 2. the work breakdown 3. a schedule for the work 4. all the above

The process-related to process control, file management, device management, information about system and communication that is requested by any higher level language can be performed by _____	1. Editors 2. Compilers 3. System Call 4. Caching
The process of planning starts with clearly laying down of_____.	1. Policies 2. Procedures 3. Goals and Objectives 4. All of the Above
The process of perceiving the causes of behavior and outcomes is termed as	1. Perception 2. Stereotype 3. Attribution 4. Personality
The process of accessing data stored in a serial access memory is similar to manipulating data on a _____	1. Heap 2. Binary Tree 3. Array 4. Stack

The process model that represents a way of thinking that allows businesses and team members to quickly innovate and respond to the dynamic demands of an Organization is	1. Waterfall Model 2. Incremental Model 3. RAD Model 4. Agile Model

he process by which an individual gives meaning to the environment is called	1. Perception 2. Stereotype 3. Attribution 4. Personality
The primary or first component of DFD is known as	1. Process 2. Data 3. Square 4. Entity
The postfix form of A*B+C/D is?	1. *AB/CD+ 2. AB*CD/+ 3. A*BC+/D 4. ABCD+/*

The postfix form of A*B+C/D is	1. *AB/CD+ 2. AB*CD/+ 3. A*BC+/D 4. ABCD+/*
The policy for memory hierarchies: L1 data are never found in an L2 cache, refers to	1. Write buffer 2. Multilevel exclusion 3. Write-through 4. Multilevel inclusion
The pager is concerned with the	1. individual page of a process 2. entire process 3. entire thread 4. first page of a process
The page table contains	1. base address of each page in physical memory 2. page offset 3. page size 4. displacement

The page replacement algorithm that suffers highly from Belady's anamoly is	1. Least Recently Used 2. Most Frequently Used 3. First In First Out 4. Least Frequently Used
The output of the requirement analysis and the requirement specification is used as the input for writing _____	1. User Acceptance Test Cases 2. User Rejection Test Cases 3. Product Rejection Test Cases 4. Product Acceptance Test Cases

The output of the below program will be
#include
#include
main(){
char Be[16]="Positive";
char Positive[16]="Be ";
printf("%s", strcpy(Positive, strcat(Positive,Be)));
}
	1.
	a. Be Positive
	2.
	a. Positive Be
	3.
	a. Positive Positive Be
	4.
	a. Be Be Positive

The operation for adding an entry to a stack is traditionally called :	1. add 2. append 3. insert 4. push

The objective of this technique of scientific management is to reduce a given line or a product to fixed type sizes and characteristics. Name the technique.	1. Method study 2. Differential piece wage system 3. Standardization and simplification of work 4. Functional foremanship
The number of states in DFA is --------than the number of states in NFA for the same Language.	1. greater equal 2. less 3. Greater 4. equal
The number of states in a machine M recognizing L1UL2 will be _____ where n is the number of states in M1 and m is the number of states in M2 .	1. m+n 2. m-n 3. m+n+1 4. n-m
The number of comparisons required in the Linear search algorithm, if the search element is not present in the array,	1. n+1 2. n 3. (n+1)/2 4. n-1

The number of auxiliary memory required for a Push Down Machine (PDM) to behave like a Finite State Machine (FSM) is	1. 1 2. 4 3. 0 4. 2
The necessity of cost-benefit analysis in PM is to have a systemic approach to identify the pluses and minuses of various paths through a project	1. True 2. False 3. 4.
The model in which environmental, social, and economic responsibilities are satisfied concurrently is known as _____.	1. corporate social responsibility 2. global activism 3. giving back to the planet 4. restoration and revivification
The MMU is a	1. Hardware 2. Software 3. Malware 4. None of the given choices

The minimum number of transitions to pass to reach the final state as per the following regular expression is: {0,1}*{1000}	1. 4 2. 3 3. 5 4. 7

The minimum number of colors needed to color a graph having n (>3) vertices and 2 edges is	1. 1 2. 2 3. 3 4. 4
The minimum length for strings in the regular expression (ba* + aab*)* is_____	1. 2 2. 0 3. 1 4. infinite
The minimum standards of ethical behaviour in a firm are based on _____, while higher standards are established by _____.	1. corporate policies; human resources 2. co-workers; mission statements 3. organizational culture; laws 4. laws; corporate leadership

The maximum distance between two nodes present in the stack is 1 in the implementation of DFS. (length/edge= 1)	1. True 2. False 3. 4.
The maximum distance between two nodes present in the queue is 1 in the implementation of BFS. (length/edge= 1)	1. True 2. False 3. 4.
The matrix structure is the correct structure when three conditions are met. Which of the following is one of these three conditions?	1. Pressure exists to share scarce resources across product lines. 2. Technical quality is not very important. 3. The environmental domain of the organization is simple. 4. The environmental domain of the organization is certain and stable.
The management of business activities that is conducted in more than one country is called:	1. domestic management. 2. altruistic management. 3. comparative management. 4. international management.

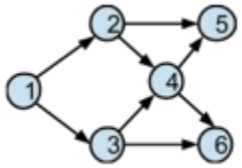
The logical file system maintains structures consisting of information about a file...	1. Program counter 2. file control block 3. Process control block 4. file pointer
The lexical analysis for a modern language such as Java needs the power of which one of the following machine models in a necessary and sufficient sense?	1. Finite state automata 2. Non-deterministic pushdown automata 3. Deterministic pushdown automata 4. Turing machine
The Lattice-Based Access Control paradigm was created primarily to address _____.	1. Affinity 2. Availability 3. Confidentiality 4. Integrity

The language defined by S-->SS is	1. 2 l 2. 2l +1 3. 2l-1 4. Null/Ɛ

The Knapsack problem where the objective function is to minimize the profit is __	1. Greedy 2. Dynamic 0 / 1 3. Backtracking 4. Branch & Bound 0/1
The intersection of CFL and regular language	1. Is always regular and context free 2. Is always regular 3. Need not be regular 4. IS always context free
The interactive transmission of data within a time sharing system may be best suited to	1. simplex lines 2. half-duplex lines 3. full duplex lines 4. diplex-lines
The instruct Kernel to do various operations of the calling program and exchange data between the Kernel at the program	1.Shell 2. Editors 3. System Calls 4. Commands

The initial array elements are 1,7,5,2 after which the following operation are performed enqueue(6), enqueue(8), dequeue, dequeue, enqueue(9), enqueue(0). what are the final elements of the array?	1. 1,7,5,2,9,0 2. 1,7,5,2,6,8 3. 5,2,6,8,9,0 4. 5,2,9,0,6,8
The implied, enforced, or felt obligation of managers, acting in their official capacities, to serve or protect the interests of groups other than themselves is known as _____.	1. human resource ethics 2. environmental morality 3. corporate social responsibility 4. business-centred morality
The idea of developing an initial implementation, getting the user feedback, and evolving it through various versions until an acceptable system is made is	1. Agile Process Model 2. Waterfall Process Model 3. Incremental Process Model 4. RAD Process Model
The group development stage described as "Deforming and Mourning" is	1. Storming 2. Norming 3. Performing 4. Adjourning

The garbage can model is related to	1. Leadership 2. Learning 3. Decision making 4. Recruitment

The fundamental activity of a process arranged in a linear order of software development paradigm is	1. Spiral model 2. Big Bang model 3. V-model 4. Waterfall model
The following graph, which is not a topological ordering of the following graph 	1. 123456 2. 132456 3. 324165 4. 324156
The following is not a type of organisation structure.	1. Line organisation 2. Staff organisation 3. Matrix organisation 4. Flexible organisation

The five items: A, B, C, D and E are pushed in the stack, one after the other starting from A. The stack is popped into four items and each element is inserted in a queue. Then two elements are deleted from the queue and pushed back on the stack. Now one item is popped from the stack. The popped item is.	1. A 2. B 3. C 4. D
The file-position pointer is ___ value that specifies the location in the file as a number of bytes from the file's starting location	1. Interger 2. Float 3. Null 4. None
the file system allows the same system call interface (the API) to be used for different types of file systems.	1. NTFS 2. EXT2 3. VFS(virtual file system) 4. DOS
The extent to which a leader lets followers make decisions themselves rather than making the decisions for them are focused on by _____ leadership styles.	1. Laissez-faire and general 2. Participative and autocratic 3.

	Employee-oriented and job-centred 4. Laissez-faire and close
The execution when it finds the solution otherwise starts the problem from the top	1. Backtracking 2. Divide and conquer 3. Branch and Bound 4. Dynamic programming
The Epsilon-Closure of any state q will contain the state _____ irrespective of q.	1. Epsilon 2. q 3. Final state 4. p
The entity that has a primary key is	1. weak entity 2. Full Entity 3. Complete Entity 4. Strong Entity

The encryption methodology is used in .	1. IDS 2. Firewall 3. Host 4. VPN
The employees should be rewarded for their suggestions which results in a substantial reduction in the cost. Which principle of management advocates this?	1. Science, not the rule of thumb 2. Co-operation, not individualism 3. Harmony, not discord 4. Science, not art
The element of role identity which describes how others believe one should behave in a given situation.	1. Role perception 2. Role expectation 3. Role identification 4. Role description
The element of role identity which describes how an individual is expected to behave according to his own perception in the group is called	1. Role perception 2. Role expectation 3. Role identification 4. Role description

The divisional structure has a special feature of _____.	1. flexibility. 2. reliabilty. 3. both flexibility and reliability. 4. change.
The Directors' responsibilities are unlikely to include.	1. a fiduciary duty 2. a duty to keep proper accounting records 3. a duty to propose high dividends for shareholders 4. A. a duty of care
The device used to **identify fast-spreading threats is ...**	1. IDS 2. IPS 3. Firewall 4. VPN
The device used to **block unauthorized access to your network is ...**	1. IDS 2. Firewall 3. IPS 4. VPN

The device used for **providing secured remote access is ...**	1. IDS 2. IPS 3. Firewall 4. VPN
The decision-making in an organic structure is generally	1. decentralised. 2. centralised. 3. formalised. 4. None of the other answers is correct.

he DBMS language component which can be embedded in a program is	1. The data definition language(DDL) 2. The data manipulation language (DML) 3. The database administrator (DBA) 4. A query language
The data transmission on the asynchronous BUS is also referred as _____	1. Bulk transmission 2. Same time transmission 3. Switch mode transmission 4. Hand-Shake transmission.

The data structure required to check whether an expression contains balanced parenthesis is	1. Stack 2. Queue 3. Tree 4. Array
The Cost benefit analysis evaluates the following benefits	1. Direct costs 2. Intangible costs 3. Opportunity costs 4. None of the above
The control takes place after the action is called as	1. Feed Forward Control 2. Concurrent Control 3. Feedback Control 4. Control measure
The Contingency theory focuses on	1. Situational variables 2. Interrelationships 3. Groups and human behavior 4. Economic needs of workers

The connected graph with n vertices and n edges consists of at least m different spanning trees, what is the largest integer m?	1. 1 2. 2 3. 3 4. 6
The concept of _____ has evolved from the traditional view of corporate social responsibility.	1. social scaffolding 2. planetary progressivism 3. work-life balance 4. corporate sustainability
The COCOMO model depends of time factors	1. True 2. False 3. 4.
The cache term is now applied when a buffering is employed for reusing commonly occurring items, for example	1. File caches 2. Name cache 3. Flash memory 4. Both a and b

The basic limitation of FSM is that	1. all of the comments are true 2. it cannot remember arbitrary large amounts of information 3. it sometimes fails to recognize grammars that are regular

	4. it sometimes recognized grammars that are not regular
The attribute composed of multiple components, each with an independent existence is called	1. Composite attribute 2. Simple attribute 3. Single valued attribute 4. Derived attribute
The attribute age can be a	1. Single Valued 2. Multi Valued 3. Derived 4. Composite
The assumptions about the future in which the planning is implemented are termed as	1. Boundaries 2. Premises 3. Limits 4. Hypothesis
The assignment of individual duties and responsibilities is most appropriately described in which of the following documents?	1. Security policy 2. Enforcement guidelines 3. Acceptable use policy 4. Program manual

The algorithm which chooses the page that has not been used for the longest period of time is _____.	1. First in first out algorithm 2. Least recently used algorithm 3. Additional reference bit algorithm 4. Counting based page replacement algorithm
The aim of this process is to develop low-quality software solutions that exceed or meet user expectations within time frame is development life cycle.	1. True 2. False 3. 4.
The advantage of pure virtual function than normal virtual function is ……	1. It reduces the program code size in terms of number of lines 2. It reduces the memory space 3. the compiler easily finds syntax error in a program 4. the time complexity is linear
The address of a page table in memory is stored in	1. stack pointer 2. page table base register 3. page register 4. program counter

The address generated by the CPU is referred to as _____	1. Physical address 2. Logical address 3. Neither physical nor logical 4. Network Address

he actual count of elements associated with the connectivity is called _____ of the relationship connectivity.	1. Cardinality 2. Entity type 3. Entity set 4. None of these
The access mode of Magnetc Disk is	1. Sequential access 2. Random access 3. Associative access 4. SemiRandom access
The ability to temporarily halt the CPU and use this time to send information on buses is called	1. Direct memory access 2. Vectoring the interrupt 3. System Interrupt 4. Cycle stealing

The _____ must design and program the overlay structure.	1. programmer 2. system architect 3. system designer 4. system analyst
The _____ model defines the stored data structures in terms of the database model used.	1. Physical level 2. Conceptual level 3. External level 4. None of these
The _____ style of leadership describes a leader who tends to involve employees in decision making, delegate authority, encourage participation in deciding work methods and goals, and uses feedback as an opportunity for coaching employees.	1. participative 2. autocratic 3. democratic 4. laissez-faire
The _____ theory states a manager's choice of organizational structures and control systems depends on the characteristics of the external environment.	1. Mechanistic 2. Management science 3. Organic 4. Contingency

The _____ technique expands the bandwidth of a signal by replacing each data bit with n bits.	1. DSSS 2. FHSS 3. FDM 4. TDM
The "means" of leadership involve	1. getting results through others. 2. the ability to build cohesive, goal-oriented teams. 3. the process of influencing an organized group toward accomplishing its goals 4. the process of forcibly making others comply..
The Simple Security Condition requires that a subject S can read an object O only if _____and any DAC permits	1. Is > Io 2. LO ≤ LS 3. L0≤ LS 4. Is ≤ Io

The number of subordinates a superior can effectively handle is called	1. Organising people 2. Span of control 3. Direction 4. Coordination

The easiest form of offline password hash attack which can be used for capturing insecure passwords is?	1. Hybrid 2. Dictionary 3. Brute-force 4. Man-in-the-middle
The ---------- access control model in which users are not given much freedom to decide who can access their files and is recognized for its structure and use of security labels?	1. Discretionary 2. Mandatory 3. Role-based 4. Nondiscretionary
That an enterprise must behave as a good citizen is an example of its responsibility towards:	1. owners. 2. workers. 3. consumers. 4. community.
Thackeray Manufacturing recently developed a code of ethics. Which of the following topics is most likely covered in the document?	1. business conduct 2. fair competition 3. HR issues 4. All the other answers are correct

Testing the end to end functionality of the system as a whole is defined as _____	1. Unit Testing 2. Functional Testing 3. Stress Testing 4. Load Testing
Templates ___ some common errors found in code that makes heavy use of function-like macros	1. Reject 2. Allow 3. Discard 4. None
Template uses ___ keyword?	1. class 2. typename 3. both class & typename 4. function
Template creates___ versions of a function at run time	1. Similar 2. Different 3. None 4. Both similar and different

Template classes and functions ____ the code duplication of different data types and thus makes the development easier and faster.	1. Allow 2. Eliminate 3. Permit 4. None

TCP/IP MODEL DOES NOT HAVE _____ LAYER BUT OSI MODEL HAVE THIS LAYER.	1. SESSION LAYER 2. PRESENTATION LAYER 3. APPLICATION LAYER 4. Both Session and Presentation layer
Tangible premises in planning doesn't include	1. capital investment 2. Unit of production 3. Cost per unit 4. Goodwill

Synchronous and Asynchronous data transfer classification is based on _____	1. Time at which data transfer happens 2. Type of data transfer occurs 3. Type of devices connected to them 4. None of the mentioned options
Suppose the following disk request sequence (track numbers) for a disk with 100 tracks is given: 45, 20, 90, 10, 50, 60, 80, 25, 70. Assume that the initial position of the R/W head is on track 50. The additional distance that will be traversed by the R/W head when the Shortest Seek Time First (SSTF) algorithm is used compared to the SCAN (Elevator) algorithm (assuming that SCAN algorithm moves towards 100 when it starts execution) is _____ tracks	1. 8 2. 9 3. 10 4. 11
Suppose that a system has a paging system with 8 entries in a page table. Given that there are three processes of equal sizes, creating 8 valid entries in their page tables. What would be the total number of frames allocated to these three processes under the condition that 2 pages are shared by the three processes?	1. 24 2. 20 3. 18 4. 30

Suppose a disk has 201 cylinders, numbered from 0 to 200. At some time the disk arm is at cylinder 100, and there is a queue of disk access requests for cylinders 30, 85, 90, 100, 105, 110, 135 and 145. If Shortest-Seek Time First (SSTF) is being used for scheduling the disk access, the request for cylinder 90 is serviced after servicing _____ number of requests.	1. 1 2. 2 3. 3 4. 4
Supervision of employees is greatly enhanced by having a small span of control, but it is	1. expensive. 2. time-consuming. 3. resource-consuming. 4. complex.
Stress that usually lasts for short time and may be due to work pressure, meeting deadlines pressure or minor accident, or any related matters is called	1. Chronic stress 2. Acute stress 3. Negative stress 4. Permanent stress
State true or false. i) Unix, support multiple user processes but only support one thread per process. A java run time environment is an example of a system of one process with multiple threads.	1. True, False 2. True, True 3. False, True 4.

	False, False
SP 800 series standard are defined by....	1. NIST 2. COBIT 3. COSO 4. ISO

Sort out the following virus based on their severity: Resident virus, non-resident virus, boot sector virus, and macro virus	1. Resident virus, non-resident virus, boot sector virus, and macro virus 2. Boot sector virus, resident virus, non-resident virus and macro virus 3. Boot sector virus, non-resident virus, resident virus and macro virus 4. Boot sector virus, non-resident virus, macro virus and resident virus
Social responsibility is _____.	1. the same as legal responsibility. 2. broader than legal responsibility. 3. narrower than legal responsibility.

	4. None of the other answers is correct.
Significant percentage of the spent time in moving data in two levels in the memory hierarchy, then the memory-hierarchy is said to	1. Mixed 2. Write stall 3. Averaging 4. Thrash

Select the output of the following
#include<stdio.h>
main(){
char arr1[5]="apple";
char arr2[5]="apple";
if (arr1==arr2)
printf("Same");
else
printf("Not Same");
}
	1.
	a. Same
	2.
	a. Not Same
	3.
	a. Error
	4.
	a. None of these

Seek Time is --------	1. the time taken to locate the disk arm to a specified track where the data is to be read or write. 2. the time taken by the desired sector of disk to rotate into a position so that it can access the read/write heads 3. the time to transfer the data. 4. the time is taken to complete the execution.

SDLC stands for	1. Software Development Life Cycle 2. System Development Life cycle 3. Software Design Life Cycle 4. System Design Life Cycle
Scientific Management is related to	1. Elton Mayo 2. Henry Fayol 3. F W Taylor 4. Max Weber
Scalar chain is a	1. Leadership chain 2. Authority chain 3. Decision making chain 4. Control chain
Sanjana works as a production supervisor, and she believes one of her subordinates is drinking during his lunch break. Sanjana's employer does not have a specific rule regarding the subordinate's behaviour. Which of the following would most likely assist Sanjana with her problem in this situation?	1. corporate code of ethics 2. corporate vision statement 3. corporate code of conduct 4. labour legislation

RTM stands for _____	1. Repeated Trade Matrix 2. Redundant Trace Module 3. Robust Test Mechanism 4. Requirement traceability matrix

Routing is performed by _____ in OSI architecture	1. network layer 2. data link layer 3. transport layer 4. session layer
Rotational Latency is ---	1. the time is taken to locate the disk arm to a specified track where the data is to be read or write. 2. B. the time taken by the desired sector of disk to rotate into a position so that it can access the read/write heads. 3. the time to transfer the data. 4. the time is taken to complete the execution.
Reverse polish notation is used by	1. Stack 2. Queue 3. Linked list 4. All of these

Return type of is_open() function is ___	1. int 2. bool 3. float 4. char *
Resource allocation graph can be used to avoid deadlock for 'n' processes	1. Yes 2. No 3. 4.
Requirement of two pointer is not mandatory in	1. Stack 2. Queue 3. Linked list 4. All of these
Relationship set in ER diagram	1. Divided Rectangle 2. Non Divided Rectangle 3. Line 4. Diamond
Relations produced by ER model will always be in	1. 1 NF 2. 2 NF 3. 3 NF 4. 4 NF

Relation between two different function with two constant are applicable in	1. F(n)=O(g(n)) 2. F(n)=θ(g(n)) 3. F(n)=Ω(g(n)) 4. All of them
Related to Fibonacci sequence, which of the following is more appropriate.	1. Integer sequence 2. Irrational number 3. Both are true 4. None is correct

Regular expressions that do not contain the star operator can represent only finite languages	1. True 2. False 3. Can't determined 4. Neither True and Nor False
Regular Expression recognizes --------grammars	1. type-1 2. type-2 3. type-3 4. type-0

Recursion fails due to fixed size	1. Linked list 2. Queue 3. Stack 4. All of these
Random access memories are useful in applications where	1. Data consists of numbers 2. Short access time is required 3. Each stored word is processed differently 4. Data naturally needs to flow in and out in serial form
Queues serve a major role in	1. Simulation of recursion 2. Simulation of arbitrary linked list 3. Simulation of limited resource allocation 4. All of these
Program always deals with _____	1. logical address 2. absolute address 3. physical address 4. relative address

Prims algorithm is based on	1. Divide and conquer method 2. Dynamic programming 3. Greedy method 4. Branch and bound
Plan-driven process is a process where all the activities are planned first and the progress is measured against the plan is	1. Agile Process Model 2. Waterfall Process Model 3. Prototyping Process Model 4. RAD Process Model
Pharming is an attack which referred to	1. Collecting social data from victim device 2. Installing any software or app in victim device 3. Attacking victim device 4. Attacking victim social network
Persons who can influence others and who possess managerial authority are termed _____.	1. entrepreneurs 2. leaders 3. managers 4. visionaries

Periodically adding, changing and deleting file records is called as File?	1. Updating 2. Upgrading 3. Reconstructing 4. Renewing
Parallel computing means doing several tasks simultaneously thus improving the performance of the _____.	1. Data system 2. Computer system 3. Memory 4. Vector system
Page fault occurs when the referenced page is	1. not in main memory 2. not in secondary memory 3. not in tertiary memory 4. not in shared memory
overflow condition was raised by the stack, which of the condition holds false	1. maximum limit exceeds 2. top of the stack is reached 3. limited stack size 4. none of these

Output will be
#include<stdio.h>
int myFunction(int parameter)
{
return parameter;
}
main(){
int value=100;
printf("%d %d", myFunction(value), myFunction(value+100));
}
	1.
	100 100
	2.
	100 200
	3.
	Error
	4.
	Warning during compilation

Output will be #include<stdio.h> #include<string.h> main(){ char Be[16]="Positive "; char Positive[16]="Positive "; printf("%d",strcmp(Be,Positive)); }	1. 1 2. -1 3. 0 4. Error
Output of the given code will be #include<stdio.h> #include<string.h> main(){ char Be[16]="Positive "; char Positive[16]="positive "; printf("%d",strcmp(Be,Positive)); }	1. 1 2. -1 3. 0 4. Error

Output of the following code will be
#include<stdio.h>
int myFunction()
{
return 1;
}
int myFunction(int a)
{
return 2;
}
main(){
printf("%d %d", myFunction(), myFunction(1));
}
	1.
	1 1
	2.
	1 2
	3.
	2 2
	4.
	Error

Operating System maintains the page table for	1. each process 2. each thread 3. each instruction 4. each address
Open mail relays are	1. Mail user agent 2. Mail transfer agent 3. Mail delivers agent 4. Internet mail extension

Only one external reference is required for	1. Linear linked list 2. Circular linked list 3. Double ended list 4. None of these
Nusrat sees her role as someone who provides direction and resources for her team then gets out of their way and lets them do their work however they think best. Nusrat uses the _____ style of leadership.	1. autocratic 2. participative 3. democratic 4. laissez-faire
Non-type template parameters provide the ability to pass what type of data at compile time	1. int 2. float 3. constant expression 4. none of the mentioned
Non-type parameters are mainly used for specifying _____ values or any other constant value for a particular instance of a template.	1. max and min 2. max or min 3. min 4. max

Nesting of try block is ……..	1. syntax error 2. possible in C++ 3. logical error 4. both (a) and (c)
Nesting of catch block is ……	1. syntax error 2. possible in C++ 3. logical error 4. None of the above
Negative cash flow is one of the classification when desired rate of return is minimum by actual rate of return	1. True 2. False 3. 4.
Narrow span of control results into	1. Tall structure 2. Flat structure 3. Mechanistic structure 4. All the above

N Ach, N Aff and N Pow are related	1. McClelland's Learned Needs 2. ERG theory 3. Justice Theory 4. Equity theory
Multivalued attribute Example	1. Student Name 2. Student address 3. Student Phone number 4. Student Id number

Minnesota Multi-phasic Personality Inventory (MMPI) is used to assess	1. Attitude 2. Personality 3. Work engagement 4. Wellbeing
Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called	1. fragmentation 2. paging 3. mapping 4. spooling

Memory Address locations are specified using which data representation?	1. Sign-magnitude 2. one`s complement 3. Unsigned 4. two`s complement
McKinsky's 7S framework doesn't include:	1. System 2. Shared value 3. Share holders 4. Staff
MBTI is used to measure	1. Attitude 2. Behaviour 3. Personality 4. Response
Max Weber belongs to which school of Management thought?	1. Scientific 2. Administrative 3. Bureaucratic 4. Human relations

Match the following: i. Breadth-first search a. Heap ii. Depth-first search b. Stack iii. Sorting c. Queue	1. i-a ii-b iii-c 2. i-c ii-b iii-a 3. i-c ii-a iii-b 4. i-a ii-b iii-c
Match the following elements of organisation with their characteristics A) 1. Strategic apex ----- A. Decentralised and professional bureaucracy B) 2. Techno - structure ------ B. Centralised and Simple structure C) 3. Middle line ------ C. Dominant standardisation and machine bureaucracy D) 4. Support staff ------ D. Autonomy and Divisional structure E) 5. Operating core ------- E. Mutual adjustments and machine bureaucracy	1. 1-B, 2-C, 3-D, 4-E, 5-A 2. 1-C, 2-B, 3-E, 4-D, 5-A 3. 1-E, 2-C, 3-B, 4-A, 5-D 4. 1-B, 2-A, 3-E, 4-C, 5-D
Management as a process refers to _____	1. Group of managers 2. Functions of management 3. Subject of management 4. All of these

Management as a Noun refers to _____	1. Group of managers 2. Functions of management 3. Subject of management 4. All of these

Magnetic tape is a	1. serial access medium 2. Random access medium 3. A parallel access medium 4. NONE
LSD stands for _____	1. Lean Software Development 2. Live Software Development 3. Less Software Data 4. Least Software Data loss

Lower and upper limits are present in which chart ?	1. Run chart 2. Bar chart 3. Control chart 4. None of the mentioned
Logical memory is broken into blocks of the same size called _____	1. frames 2. pages 3. backing store 4. registers
Linked list uses	1. Random memory allocation 2. Static memory allocation 3. Fixed memory allocation 4. Dynamic memory allocation
Like normal parameters, we can specify _____arguments to templates.	1. Default 2. Function 3. Class 4. None

Let w be a string and separated by three variable m, n, and o as per pumping lemma for regular language. What does these variables represent?	1. string 2. string count 3. string and string count 4. none

Let the initial value of count be 5. What will be the final value of count if the instructions are executed in the following order:
S1;T1;S2;T2;S3;T3.
Process P0:
{
S1: register1=count;
S2: register1=register1 - 5
S3: count=register1
}
Process P1:
{
T1: register2=count;
T2: register2=register2 X 5
T3: count=register2
}
	1.
	50
	
	2.
	25
	
	3.
	10
	
	4.
	0

Let the initial value of count be 10. What will be the final value of count if the instructions are executed in the following order:
S1;T1;S2;T2;S3;T3.
Process P0:
{
S1: register1=count;
S2: register1=register1 - 5
S3: count=register1
}
Process P1:
{
T1: register2=count;
T2: register2=register2 X 5
T3: count=register2
}
	1.
	50
	2.
	20
	3.
	10
	4.
	1

Let int arr[4]={0,1,2,3}. Which of the following are valid operations? I. arr++ II. ++arr III. arr+4 IV. arr*4	1. a. I and II 2. a. III 3. a. IV 4. a. All

Legitimate power is based on the subordinate's perception that the leader has a right to exercise influence because of the leader’s	1. role or position within the organisation. 2. expertise and knowledge. 3. personal characteristics and personality. 4. ability to punish or reward.

Left linear grammars are ..... of CFG	1. Power set 2. Sub set 3. Super set 4. Nullable
Lean philosophy regards everything not adding value to the customer as _____	1. Unnecessary 2. Waste 3. Useful 4. Necessary
Lean Development follows the principle of _____	1. Decide as late as possible 2. Deliver as late as possible 3. Decide as early as possible 4. Not building integrity
Leadership is the process whose important ingredient is the _____ exercised by the leaders on the group members.	1. friendship 2. loyalty 3. trust 4. influence

Leadership has a lot of characteristics, and a leader must not maintain this trait in his behaviour:	1. co-existence 2. taking responsibility 3. avoiding responsibility 4. All the other answers are correct
Leaders that focus on the individuality and personality needs of their employees and emphasize building good interpersonal relationships are:	1. job-centred 2. laissez-faire 3. employee-oriented 4. task-oriented
Leaders that focus on production and the job's technical aspects are:	1. job-centred 2. laissez-faire 3. general 4. autocratic
Lakshan sends an encrypted message to Ruhan but it is intercepted by Tanish. Tanish cannot read it but forwards it on to Ruhan from an anonymous address she controls. Which precept of the CIA Triad would have been violated?	1. Confidentiality 2. Integrity 3. Availability 4. Authentication

Keerthana solicits input from her subordinates before making decisions that will affect them. She often praises them for good work and gently offers suggestions to improve their performance. Keerthana uses the _____ style of leadership.	1. autocratic 2. participative 3. democratic 4. supportive

Kalam Enterprises recently fired two employees who were caught stealing tools from the firm's warehouse. As a result, the CEO of Kalam wants to strengthen the firm's ethical culture and prevent future violations by redesigning the firm's ethics program. Which of the following questions is the **LEAST** relevant when developing Kalam's new ethics program?	1. What behaviour is expected of Kalam employees? 2. What is the opinion of stakeholders regarding Kalam's ethics? 3. How are ethical situations communicated and resolved at Kalam? 4. What is the process for Kalam establishing a corporate giving program?
Josephus problem is a best example of	1. Singly linked list 2. Doubly linked list 3. Circular linked list 4. All of these

It is through _____ that group members can be inspired, motivated, and guided to be successful and productive.	1. fellowship 2. sportsmanship 3. coercion 4. leadership
It is possible to use more than one generic data type in a class template, and each generic data type is separated by the ___.	1. . 2. , (Comma) 3. ; 4. ""
It is often difficult to estimate size at an early stage in a project when only a specification is available	1. True 2. False 3. 4.
it is necessary for a programming language that it must support all these_____ features completely to become a pure Object-Oriented Language.	1. encapsulation, inheritance, and polymorphism 2. encapsulation and polymorphism 3. Inheritance, and polymorphism 4. Encapsulation and inheritance

is a placeholder name which will be determined when the class is instantiated.	1. Ttype 2. type 3. Type 4. None
Internal premises in planning doesn't include	1. Money 2. Materials 3. Machines 4. Competitors strategy
Interaction Diagram	1. class + Object 2. state + Activity 3. component + Deployment 4. Sequence + collaboration
int main(){fork();fork();fork();fork();exit(0);printf("hello");}How many "hello" messages will be printed if the following program is executed?	1. 16 2. 8 3. 4 4. 0

Institute of Electrical and Electronics Engineers (IEEE) is the largest international professional group. What are the standards developed by this organization?	1. Computing, communication, electrical engineering, and electronics 2. Communication, electrical engineering, and electronics 3. Electrical engineering and electronics 4. Electrical engineering and computing
Information security is the protection of data. Information will be protected mainly based on	1. Its sensitivity to the company 2. Its confidentiality 3. Its value 4. All the above
Independent testers are _____ and identify different defects at the same time.	1. Isolated 2. Biased 3. Unbiased 4. Modular

In working with his employees, Rahman involves them in decision making and encourages them to participate in deciding their work methods and goals. Rahman's leadership style can best be described as _____.	1. autocratic 2. laissez-faire 3. democratic 4. participative
In which cache organization, index field is not required during block identification	1. Direct mapping 2. set associative 3. 2-way associative 4. fully associative
In which attack, text messages (other than email) are used for hacking personal information?	1. Phishing 2. Moshing 3. Vishing 4. Smishing
In which attack, phone calls are used for hacking personal information?	1. Phishing 2. Moshing 3. Vishing 4. Smishing
In which attack, email is used for hacking personal information?	1. Phishing 2. Moshing 3. Vishing 4. Smishing

In this type of culture the behaviour of individuals are shaped by tradition, loyalty, personal commitment, extensive socialization and self-management	1. Clan 2. Market 3. Entrepreneurial 4. Bureaucratic
In this type of topology data travels only in one direction	1. Bus 2. Ring 3. Star 4. Mesh

In the segment table the segment base contains the _____	1. starting logical address of the process 2. starting physical address of the segment in the memory 3. segment offset 4. segment length
In the linked list, each node contains a minimum of two fields. One field is the data field to store the data second field is?	1. Pointer to character 2. Pointer to integer 3. Pointer to node 4. Node

In the graph traversing, Stack is useful for which searching algorithm?	1. Depth first search 2. Breadth first search 3. In-order search 4. Pre-order search

In the below function “factorial”, all automatic variables are stored in
#include <stdio.h>
int factorial(int i) {
if(i <= 1) {
return 1;
}
return i * factorial(i - 1);
}
main() {
printf("%d",factorial(5));
}
	1.
	Array
	2.
	Register
	3.
	Stack
	4.
	Queue

In synchronous TDM, for n signal sources of the same data rate, each frame contains _____ slots.	1. n + 1 2. n - 1 3. 0 to n 4. n
In segmentation technique, each address is specified by _____	1. an offset and value 2. a value and segment number 3. a key and value 4. a segment number and offset

In regular language pumping lemma, w= mn^io belongs to L then i ranges from?	1. i>=0 2. i<=0 3. i>=1 4. i<0
In Mintzberg's management roles, the role that evaluate the performance of managers in different functions is called	1. Liaison 2. Figurehead 3. Monitor 4. Disseminator
In Mintzberg's management roles, the role that describes ethical guidelines and the principles of behavior employees are to follow in their dealings with customers and suppliers is	1. Liaison 2. Figurehead 3. Monitor 4. Disseminator
In Mintzberg's management roles, the role that coordinates between different departments and establish alliances between different organizations, is termed as	1. Liaison 2. Figurehead 3. Monitor 4. Disseminator

In memory management , a technique called as paging, physical memory is broken into fixed-sized blocks called _____.	1. Pages 2. Frames 3. Blocks 4. Segments
In interactive environments such as time-sharing systems, the primary requirement is to provide reasonably good response time and in general, to share system resources equitably. In such situations, the scheduling algorithm that is most popularly applied is _____.	1. Shortest Remaining Time Next (SRTN) Scheduling 2. Priority Based Preemptive Scheduling 3. Round Robin Scheduling 4. None of the above
In India, whose law governs data privacy and information technology?	1. Banking Regulation Act 1949 2. IT Act 2000 3. Indian Penal Code 4. IT (amendment) Act 2008
In hospitals, the following type of departmentalisation is common -	1. By function 2. By committee 3. By geographical region 4. All of the above

In his speech the previous day, the new CEO had discussed his experience in the industry and his education. Haripriya thought that the new CEO would do a great job given these characteristics, coupled with his good oratory skills and the fact that he just looked like a CEO. Haripriya realized that she had been judging the new CEO in a manner consistent with the _____ theories of leadership.	1. trait 2. behavioural 3. contingency 4. situational
In FIFO page replacement algorithm, when a page must be replaced	1. oldest page is chosen 2. newest page is chosen 3. random page is chosen 4. first page is chosen
In expectancy theory, the belief that effort will lead to performance is termed as	1. Expectancy 2. Instrumentality 3. Valence 4. Values
In contiguous allocation _____	1.each file must occupy a set of contiguous blocks on the disk 2.each file is a linked list of disk blocks 3.all the pointers to scattered blocks are placed together in one location 4.none of the mentioned
In CIA Triad, CIA refers to	1. Confidentiality, Integrity and Authentication 2. Confidentiality, Integrity and Availability 3. Confidentiality, Integrity and Accessibility 4.

	Confidentiality, Integrity and Authorization
In Big Five Personality dimensions, a person's range of interest in new things. Open people are creative, curious, and artistically sensitive, as opposed to being closed-minded is called as	1. Conscientiousness 2. Extraversion–Introversion 3. Agreeableness 4. Openness to Experience

In Big Five Personality dimensions, the hardworking, diligent, organized, dependable, and persistent behavior of a person is termed as	1. Conscientiousness 2. Extraversion–Introversion 3. Agreeableness 4. Emotional Stability
In an optical fiber, the inner core is _____ the cladding.	1. less dense than 2. denser than 3. the same density as 4. another name for

In an inverted page table scheme	1. One page table is used in a system 2. One page table for each process is used in a system 3. One page table for each file is used in a system 4. One page table for each program is used in a system
In ABC University, there are several 'Departments' including Computer Science, Information Technology, Mechanical, Civil, Finance and Maintenance. Some departments have students and some are not. If department and student are entity sets in this university database and they are linked through a relationship named DS, which among the following is a partial participation?	1. Participation of department in student 2. Participation of department in DS 3. Participation of student in department 4. Participation of student in DS

In a time sharing scheduling algorithm which of the data structure is used?	1. Stack 2. Queue 3. Linked list 4. Circular queue
In a stack, the command to access an nth element from the top of the stack s will be	1. S[Top –n] 2. S[Top +n] 3. S[top-n-1] 4. None of the option
In a Segmentation scheme, given the logical address (4, 50) and the corresponding base address in the segment table as 5000, what is the physical address mapped to the given logical address?	1. 0050 2. 4050 3. 5050 4. 4000
In a reactive approach, the bulk of the test design work begins _____	1. Before any software is made 2. After some modules are completed 3. After every module, testing is done 4. After the software has been produced

In a Paging scheme with page sizes of 1K, given the logical address (2, 35) and the corresponding frame number in the page table as 4, what is the physical address mapped to the given logical address?	1. 5131 2. 2030 3. 2083 4. 4131
In a Page replacement algorithm, which of the following type of page is the best page to replace.	1. not recently used but modified 2. recently used but clean 3. neither recently used nor modified 4. recently used and modified

In a circular queue, the value of r will be	1. r=r+1 2. r=(r+1)%[queue_size-1] 3. r=(r+1)%queue_size 4. r=(r-1)%queue_size
In _____ each component at lower hierarchy is tested individually and then the components that rely upon these components are tested.	1. Top down testing 2. Unit testing 3. Bottom up 4.

	Load testing
In _____ transmission, the channel capacity is shared by both communicating devices at all times.	1. simplex 2. half-duplex 3. full-duplex 4. half-simplex
In MAC Tuples ,Process can read object when: Object MAC range (lr, hr); process MAC label pl	1. pl $\sum$ (lr, hr) 2. pl U (lr, hr) 3. pl $\in$ (lr, hr) 4. pl dom hr
Imposing a total ordering of all resource types, and ensuring process requests resources in an increasing order of enumeration voilates the _____ condition for deadlock	1. Mutual exclusion 2. Hold and Wait 3. Circular Wait 4. No Preemption

If there is a unique LMD , the grammar is	1. ambiguous 2. un ambiguous 3. LLG 4. RLG
If there is a complete DFA M1 recognizing a language L1 and has m states out of which two are final states then the machine M recognizing L1 complement will have _____ final states.	1. m 2. m+2 3. 2 4. m-2
If the stringent regulations on the operational procedures exist, the project is considered as Semi -detached	1. True 2. False 3. 4.
If the data transfers are done asynchronously, which of the data structure is possible?	1. Stack 2. Queue 3. Linked list 4. All of these

If the characters 'D' 'C' 'B' 'A' are placed in a queue (in that order), and then removed one at a time, in what order will they be removed?	1. DCAB 2. ABCD 3. ABDC 4. DCBA

R is a regular language and M is a finite language then L U M must be regular language	1. True 2. False 3. Can't determined 4. Neither True and Nor False
If M1 machine recognizing L with n states, then M2 recognizing L* constructed Using Thompson construction will have ---------- states.	1. n-1 2. n+2 3. n+1 4. n
If L1 and L2 are languages such that L2, L1L2, and L2L1 are all regular, then L1 must be regular.	1. True 2. False 3. Can't determined 4. Neither True and Nor False

If L1 and L2 are CFL and R a regular set, one of the languages below is not necessarily a CFL. which one?	1. L1nL2 2. L1nR 3. L1L2 4. L1UL2
If an item is referenced once, then it again be referenced soon; given statement is stated by	1. Temporary locality 2. Spatial locality 3. Temporal locality 4. Spectral Locality
If a selection sort algorithm in the worst case is taking 20sec for processing an array of size 32. Which of the following is close to the maximum input size that can be solved in 5 minutes?	1. 256 2. 512 3. 1024 4. 128
If a problem can be broken into subproblems that are reused several times	1. Overlapping subproblems 2. Optimal substructure 3. Memoization 4. Greedy

Identity and Access Management (IdAM) is for ...	1. Storing multiple passwords 2. Protecting multiple data 3. Providing Data Leakage Prevention 4. Providing Data Leakage in cloud
Identify which one feature explains Indian Ethos.	1. Belief in Ego Assertion. 2. Spirit of Sacrifice and Self Control 3. Emphasis on Individual Achievement 4. Your Status defines your Character
Identify the organisational risk from the following	1.Software components which should be reused contain defects which limit their functionality 2.Required training for staff is not available 3.Customers fail to understand the impact of requirements changes 4.None in the list

Identify the model which is not coming under the four categories of access control models?	1. Discretionary 2. Mandatory 3. Role-based 4. Delegated
Human Relations School is related to	1. Elton Mayo 2. Henry Fayol 3. F W Taylor 4. Max Weber

How often should your data be backed up?	1. In accordance with your organization's backup policy 2. Once a fortnight. 3. Once a month. 4. Once a week.

How many "SCOPE"s are printed?, how many "SCOPE"s are printed by only child processes?
int main()
{
if(fork() || fork())
fork();
printf("SCOPE");
}
	1. 5,2
	2. 5,3
	3. 5,4
	4. 5,1

How many "SCOPE"s are printed?, how many "SCOPE"s are printed by only child processes?
int main()
{
if(fork() && fork())
fork();
printf("SCOPE");
}
Answer is 4,3 according to me
	1. 5,2
	2. 5,3
	3. 5,4
	4. 5,1

How many “hello” messages will be printed if the following program is executed?
int main()
{
pid_t p;
fork();
if (p >0)
{
fork();
fork();
}
if (p==0)
{
fork();
fork();
exit(0);
}
printf(“hello”);
}
	1. 2
	2. 3
	3. 1
	4. 4

How many “hello” messages will be printed if the following program is executed?
int main()
{
pid_t p;
fork();
if (p >0)
{
fork();
fork();
exit(0);
}
if (p==0)
{
fork();
fork();
exit(0);
}
printf(“hello”);
}
	1.
	1
	2.
	3
	3.
	0
	4.
	4

How many undirected graphs (not necessarily connected) can be constructed out of a given set V = {v1, v2, ... vn} of n vertices?	1. n(n-1)/2 2. 2^n 3. 2n! 4. 2^(n(n-1)/2)
How many principles of the Data Protection Act are there?	1. 8 2. 5 3. 6 4. 7

How many minimum no of stack is required for the runtime executable script	1. 1 2. 2 3. 3 4. 4

How many address lines are needed to address each memory locations in a 2048 x 4 memory chip?	1. 10 2. 12 3. 11 4. 8
How many rounds are there in DES?	1. 15 2. 8 3. 64 4. 16
How does your personal computer (end device/host) recognize its IP address and the Gateway IP address to use for transmitting packets to remote hosts without any manual configuration when you connect it to the internet?	1. A. DNS (Domain Name System) 2. A. ARP (Address Resolution Protocol) 3. A. DHCP (Dynamic Host Configuration Protocol) 4. A. FTP (File transfer protocol)

Hospitals, banks, and supermarkets are all linked using which network type?	1. WAN 2. LAN 3. BUS 4. WiFi
Hofstede's framework is regarding	1. Personality 2. Culture 3. Perception 4. Stereotype
Hit-rate of the processor is the memory fraction, found in	1. DRAM 2. SRAM 3. Magnetic disk 4. Cache
Hiding internal data from the outside world and accessing it only through publicly exposed methods is known as data	1. inheritance 2. polymorphism 3. abstraction 4. encapsulation

Harsha Electronics has used several methods to create an ethical culture that both employees and customers appreciate. What is the most effective way for the firm to sustain its ethical culture?	1. asking job candidates ethical questions 2. implementing an ethics audit regularly 3. publishing the firm's code of ethics periodically 4. ensuring that new employees receive ethics training
Hardware, Personnel ,Facility are not the factors of Cost	1. True 2. False 3. 4.
Hardware unavailability risk is the _____ type of risk	1.Project 2.Product 3.Business 4.None in the list

Hardware solution to the critical section problem using test&set
while (true) {
while (TestAndSet (&lock)); /* do nothing
// critical section
lock = FALSE;
// remainder section
}
	1. Implements mutual exclusion and progress
	2. Implements only mutual exclusion
	3. Implements progress and bounded waiting.
	4. Implements mutual exclusion and bounded waiting.

Hardware solution to the critical section problem using swap:
while(true)
{key = TRUE;
while(key==TRUE)
Swap(&lock,&key);
//critical sectionlock = FALSE;
//remainder section}
	1. Implements mutual exclusion and progress
	2. Implements only mutual exclusion
	3. Implements progress and bounded waiting.
	4. Implements mutual exclusion and bounded waiting.

Guess the output.
#include<stdio.h>
#include<string.h>
main(){
char Be[16]="Positive ";
char Positive[16]="Be ";
strcat(Be,Positive);
printf("%s",Be); }
	1. Be
	2. Positive
	3. Positive Be
	4. Be Positive

Guess the output
#include<stdio.h>
main(){
int value=100;
myFunction(value);
}
void myFunction(int parameter)
{
parameter=200;
printf("%d", parameter);
}
	1. 100
	2. 200
	3. 100 200
	4. Error

Guess the output
#include<stdio.h>
main(){
int a=100;
int b=200;
int c[1][2][3]={&a};
c[1][1][1]=&b;
printf("%d",c[1][1][1]);
}
	1.
	200
	2.
	100
	3.
	a. Address of variable a
	4.
	a. Address of variable b

Guess the output of the following
#include
main(){
typedef char arr[4];
arr arr1[4];
printf("%d",sizeof(arr1));
}
	1.
	Error
	2.
	4
	3.
	44
	4.
	16

Guess the output of the below code
#include<stdio.h>
int myFunction1(int parameter)
{
return parameter;
}
int myFunction2(int *parameter)
{
return ++*parameter;
}
main(){
int value=100;
printf("%d %d", myFunction1(value), myFunction2(&value));
}
	1.
	100 100
	2.
	101 100
	3.
	100 101
	4.
	101 101

Greetwell Technologies wants to gain the confidence of employees and customers by developing a strong ethical culture. Which of the following methods would be the best way for the firm's HR department to accomplish this goal?	1. placing the code of ethics on the firm's intranet 2. posting the code of ethics in the breakroom 3. providing ethics training to employees 4. having employees sign ethics contracts
Given grammar G as follows: G { S --> aB | B --> Sb } This grammar is	1. regular and context-free 2. not regular and not context-free 3. regular, but not context-free 4. context-free, but not regular
Given five memory partitions of 200Kb, 500Kb, 200Kb, 300Kb, 600Kb (in order), which algorithm would be able to successfully place the following processes of 212 Kb, 417 Kb, 112 Kb, and 126 Kb?	1. Best Fit 2. Worst Fit 3. First Fit 4. All the given choices.

Given five memory partitions of 100Kb, 500Kb, 200Kb, 300Kb, 600Kb (in order), which algorithm would be able to successfully place the following processes of 212 Kb, 417 Kb, 112 Kb, and 426 Kb?	1. Best Fit 2. Worst Fit 3. First Fit 4. All the given choices.
Given an arbitrary non-deterministic finite automaton (NFA). with N states, the maximum number of states in an equivalent minimized DFA is at least.	1. 2N 2. N! 3. 2^N 4. N^2
Generic functions perform ____ operation for all the versions of a function except the data type differs	1. A. Different 2. A. Same 3. A. Similar 4. A. None
Frustration-Regression is related to	1. Maslow's Hierarchy 2. ERG theory 3. Justice Theory 4. Equity theory

Frames from one LAN can be transmitted to another LAN via the device	1. Router 2. Bridge 3. Repeater 4. Modem
Frames from one LAN can be transmitted to another LAN via the device	1. Router 2. Bridge 3. Repeater 4. Modem
For every pair of regular expressions r and s, the languages denoted by r(sr)* and (rs)*r are the same.	1. True 2. False 3. Can't determined 4. Neither True and Nor False
For every ....grammar there is equivalent grammar for the same language which is	1. ambiguous grammar, un ambiguous grammar 2. un ambiguous grammar, ambiguous grammar 3. ambiguous grammar, ambiguous grammar 4.

	un ambiguous grammar, un ambiguous grammar
For declaring function templates, __ arguments in template declaration must be generic (class T).	1. all 2. Any one 3. One 4. none
For declaring class ***templates***, ___ of the arguments in template declaration may be non-generic ordinary data types.	1. Some 2. all 3. None of the argument 4. One

For any two functions g(n) and f(n), f(n) = Q(g(n)) iff	1. f(n) = O(g(n)) and f(n) = W(g(n)) 2. f(n) > O(g(n)) and f(n) = W(g(n)) 3. f(n) = O(g(n)) and f(n) =>W(g(n)) 4. None of these

Finite automata recognizes --------grammars	1. type-3 2. type-1 3. type-2 4. type-0
Finite automata ---------- memory	1. Infinite 2. No auxiliary memory 3. Finite 4. auxiliary memory
Find the shortest path from the root to a given node v. Which algorithm would one use to find this shortest path?	1. DFS 2. BFS 3. Either BFS or DFS 4. The statement is incomplete
Find the correct syntax of throw statement:	1. throw (exception); 2. throw exception; 3. throw; 4. All of the above

Find the correct statement(s) (i). A try block can throw an exception using “throw” (ii). A catch block always catch and handle the exception and never ever throws the exception. (iii). A catch also sometimes throws the exception using “throw”	1. only (i) 2. only (i) and (iii) 3. only (ii) and (iii) 4. (i), (ii) and (iii)
Find out the true statement(s) from the following: (i). Virtual constructors are not at all possible. (ii). It is possible to have virtual destructor without virtual constructors. (iii). Both virtual constructors and virtual destructors are not possible in C++. (iv). Only Virtual constructors are allowed; but not virtual destructors.	1. (i) and (ii) only 2. (i) only 3. (iii) only 4. (iv) only
Find out the incorrect statement(s). (i). There are only predefined exception handling mechanism available in C++ (ii). User-defined exception handling is possible in C++ (iii). Both (i) and (ii) is possible in C++	1. (i) and (ii) only 2. (i) only 3. (iii) only 4. None of the above
Find out the incorrect statement(s) (i). pure virtual functions should be defined in derived class. (ii). virtual function concept can be implemented even without inheritance. (iii). the keyword “virtual” prevents compile-time binding	1. (ii) and (iii) only 2. (i) and (iii) only 3. (iii) only 4. (ii) only

F.W. Taylor has done the following studies for improving the production process:	1. Time Study, Fatigue Study and Fatal Study. 2. Time Study, Motion Study and Fatal Study. 3. Time Study, Motion Study and Fatigue Study. 4. Time Study, Motivation Study and Fatigue Study.

Exhaustive testing is_____?	1. always possible 2. practically possible 3. impractical but possible 4. impractical and impossible
Executives and managers at ABC Enterprises actively encourage a strong ethical culture at the firm. Which of the following would be the most likely result of the firm's actions?	1. increased employee interest in development programs 2. frequent use of human resource information systems 3. changes in corporate communication methods 4. improvements in organizational performance
Exceptions are……..	1. Syntax error 2. Logic error 3. Compile time error 4.

	Run time error
Exception handling is the correlation between ……	1. try and catch block 2. retry and recatch block 3. both (a) and (b) 4. Neither (a) nor (b)
Example for Associative type of memory	1. Main Memory 2. Cache Memory 3. Magnetic 4. Optical
Every weak entity set can b	1. Using generalization 2. Adding appropriate attributes 3. Using aggregation 4. None of the above
Every context free language is context sensitive language	1. True 2. False 3. nothing 4. True and False

Event based modelling in UML	1. Activity Diagram 2. State Diagram 3. Class Diagram 4. Object Diagram
Evaluate the following prefix expression * - + 4 3 5 / + 2 4 3	1. 8 2. 4 3. 1 4. None
Evaluate the following postfix expression 1 4 1 8 6 / 3 + + 5 / +	1. 2 2. 8 3. 3 4. None

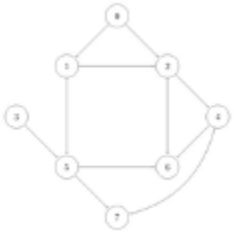
Ethics training should _____.	1. start at the bottom and move upward through all organizational levels. 2. focus only on the employees who deal with the public on a day-to-day basis. 3. begin at the top and continue through all levels of the organization. 4. start with mid-level management and move laterally through the organization.

Esprit de corps refers to	1. Team work and cooperation 2. A Single Boss 3. Flexibility 4. None of these
Environmental protection can best be done by the efforts of _____.	1. business people. 2. the scientists. 3. the government. 4. all the people.
Ensuring processes request resources only if all resources are available in the system, violates the _____ condition of deadlock	1. Mutual exclusion 2. Hold and Wait 3. Circular Wait 4. No Preemption
End-to-end connectivity is provided from host-to-host in:	1. Network layer 2. Session layer 3. Transport layer 4. Datalink layer

Empty stack top pointer indicates to	1. Last memory location 2. Set to 1 3. Set to -1 4. Beginning of memory location
Effort is mostly used to estimate_____	1. Project resource costs 2. Project duration 3. Remaining calendar time 4. Contingencies
Effort Adjustment Factor is the product of effort multipliers of all the_____attributes	1. 11 2. 12 3. 14 4. 15
Effective access time is directly proportional to _____	1. page read/write time 2. hit ratio 3. memory access time 4. page-fault rate

Early research on leadership traits _____.	1. sought to prove that charisma was an essential trait of leadership 2. focused on behavioural traits rather than physical traits of a leader 3. found consistent and unique traits that would apply to all effective leaders 4. focused on characteristics that might differentiate leaders from non-leaders

EA stands for_____.	1. Effective add 2. Effective absolute 3. Effective address 4. End address
Dynamic growing stack finds the solution with the help of	1. Array implementation 2. Pointer implementation 3. Linked list implementation 4. All of these
During the _____ design phase of database design, the properties of data is given importance, rather than its storage details	1. conceptual 2. logical 3. physical 4. actual

DSDM stands for _____	1. Dynamic systems development method 2. Dynamic solutions development method 3. Database systems development method 4. Database solutions development method
Draw up plans to avoid or minimise the effects of the risk is called _____	1.Risk identification 2.Risk analysis 3.Risk planning 4.Risk monitoring
Double Diamond representation in ER diagram	1. weak Entity Set 2. Total Participation 3. Strong Entity Set 4. Complete Entity Set
Does an algorithm solve the all-pair shortest path problem?	1. Floyd's algorithm 2. Prim's algorithm 3. Dijkstra's algorithm 4. Warshall's algorithm
Do vertices dominate over vertex 6 in the given graph? 	1. 1,2,4,5 2. 0,1,2,4,7 3. 1,3,4,5,7 4. 0,1,2,3,4,5

Disk scheduling policies results in minimum amount of head movement.	1. FCFS 2. Circular SCAN 3. Elevator 4. CSCAN
Disk Response Time is...	1.the average of time spent by a request waiting to perform its I/O operation. 2.the time taken to locate the disk arm to a specified track where the data is to be read or write. 3.the time taken by the desired sector of disk to rotate into a position so that it can access the read/write heads. 4.the time taken to complete the execution.

Dialogue control and Token management are responsibility of which OSI Layer	1. session layer 2. network layer 3. transport layer 4. data link layer
Design techniques which one is used to finding all the pairs of shortest distances in a graph?	1. Backtracking 2. Greedy 3. Dynamic programming 4. Divide and Conquer

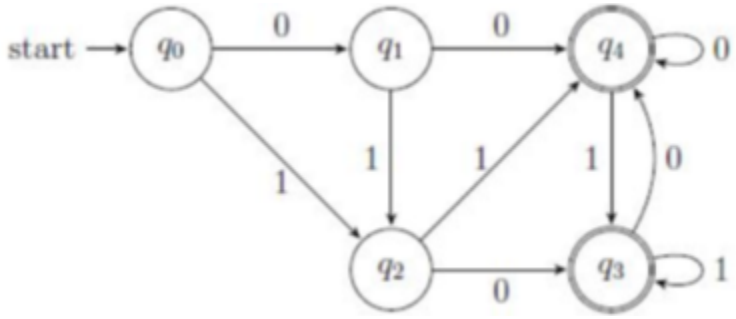
Departmentalization is a process in which	1. Tasks are grouped into jobs 2. Jobs are grouped into effective work groups 3. Work groups are grouped into identifiable segments 4. All the other answers are correct
Definition of a language L with alphabet {a} is given as following. L= { a^nk | k > 0, and n is a positive integer constant} What is the minimum number of states needed in a DFA to recognize L	1. 2^n+1 2. n+1 3. k+1 4. 2^k+1
Decision table technique is sometimes also referred to as a _____ table.	1. Cause-effect 2. Redundant 3. Extreme 4. Isolated
Databases overall structure is maintained in a file called	1. Redolog File 2. Data file 3. Control file 4. All

Data on someone's racial or ethnic heritage, political, philosophical, or religious beliefs, union affiliation, and health or sex life and sexual orientation, either directly or indirectly. What kind of personal information is this?	1. Direct personal data 2. Indirect personal data 3. Pseudonymized data 4. Special category personal data
CPU fetches the instruction from memory according to the value of _____	1. program counter 2. status register 3. instruction register 4. program status word
Correct relationship	1. O(log n) < O(n) < O(n* log n) < O(2^n) < O(n^2) 2. O(n) < O(log n) < O(n* log n) < O(2^n) < O(n^2) 3. O(n) < O(log n) < O(n* log n) < O(n^2) < O(2^n) 4. O(log n) < O(n) < O(n* log n) < O(n^2) < O(2^n)
Control that monitors ongoing employee activities during their progress, to ensure they are consistent with quality standards, is called as	1. Feed Forward Control 2. Concurrent Control 3. Feedback Control

	4. Control measure

Control that attempts to identify and prevent deviations before they occur is called as	1. Feed Forward Control 2. Concurrent Control 3. Feedback Control 4. Control measure
Contingency theories of leadership are based on the belief that:	1. there is no single style of leadership appropriate to all situations. 2. there is a single style of leadership appropriate to all managers. 3. there is a single style of leadership appropriate to all situations. 4. None of the other answers is correct.
Contemporary organizations are redesigning their ethics programs to facilitate a broader, more consistent process that _____.	1. embraces chaos and forges new paradigms. 2. incorporates the analysis of outcomes and continual improvement . 3. uses outcome analysis to focus on short-term goals. 4. relies on expediency and situational management.

Consider the regular language L = (111 + 11111)*. The minimum number of states in any DFA accepting the language is	1. 3 2. 5 3. 8 4. 9
Consider the followings right-linear grammar G = (N,T,P,S) N={S} P{ S-->aS|aA A-->bA|b} T={a,b} Which of the following regular expression denotes L(G)?	1. a*b* 2. aa*bb* 3. a(ab)*b 4. (a+b)*
Consider the following languageL={a^nb^n| n>=1} L is	1. regular 2. CFL but not regular 3. type 0 language but not type 1 4. CSL but not CFL
Consider the following language L={a^nb^mc^pd^q | n,m, p,q>=1} L is	1. CFL but not regular 2. CSL but not CFL 3. type 0 language but not type 1 4. regular

Consider the following DFA. How many states does the DFA has after minimization?  	1. 5 2. 4 3. 3 4. 2
Consider the following statement: virtual void show() = 0; It is called as …….	1. Virtual function 2. Pure virtual function 3. Syntax Error 4. Only variable can be equated to Zero; not functions- So it is not supported by C++.
Consider that a page is 1KB in size and a process is 9485 bytes in length. What would be the number of valid entries in the corresponding page table?	1. 8 2. 10 3. 9 4. 11

Consider pumping lemma of regular language, here w= pqr and q refers to the middle part and |q|>0.What do we call the process of repeating q 0 or more times before checking that they still belong to the language L or not?	1. Pumping 2. Generating 3. Creating 4. Producing

Consider an operating system capable of loading and executing a single sequential user process at a time. The disk head scheduling algorithm used is First Come First Served (FCFS). If FCFS is replaced by Shortest Seek Time First (SSTF), claimed by the vendor to give 50% better benchmark results, what is the expected improvement in the I/O performance of user programs?	1. 50% 2. 40% 3. 25% 4. 0%
CONCERT and CONDUCTOR are entity sets with attributes as follows; CONCERT(coid, location, time, date), CONDUCTOR(soloid, fname, lname, phone). CONDUCTS is a one-to-many relationship from CONDUCTOR to CONCERT. While reducing the ERD to schemas, what would be the schema for CONDUCTS?	1. CONDUCTS(coid, soloid) 2. CONDUCTS(coid, location, time, date, soloid, fname, lname, phone) 3. CONDUCTS(soloid, coid) 4. None of the above
Components of attitude doesn't include	1. Cognitive Component 2. Behavioral component 3. Affective component 4. Personality Component
Comparison of two results and to make sure its accuracy is a process of	1. Waterfall model 2. Big Bang model 3. V-model 4. Spiral model

Company (cid, name, department). Here, the ‘name’ is a ---------- and ‘Company’ is a ----------	1. Relation, Attribute 2. Attribute, Relation 3. Tuple, Relation 4. Tuple, Attribute
Compaction is _____	1. a technique for overcoming internal fragmentation 2. a paging technique 3. a technique for overcoming external fragmentation 4. a technique for overcoming fatal error
Communication between a computer and a keyboard involves _____ transmission.	1. Automatic 2. Half-duplex 3. Full-duplex 4. Simplex
Communication between a computer and a keyboard involves _____ transmission	1. Automatic 2. Half-Duplex 3. Full-Duplex 4. Simplex

Class contains.....	1. Members 2. data types 3. variables 4. all of them

Choose the software quality activites from the below	1.Prepares an SQA plan for a project 2.Records any noncompliance and reports to senior management 3.Participates in the development of the project's software process description 4.All the options
Choose the purpose of reviews from the below	1.Serve as a filter for the software process 2.Uncover errors that can then be removed 3.Catch large classes of errors that escape the originator more than other practitioners 4.All the options
Choose an internal software quality from given below:	1. scalability 2. usability 3. reusability 4. reliability
Charles Babbage was a professor of _____ subject	1. Computer Science 2. Mathematics 3. Management 4. None of these

Change control procedures are developed by organizations to ensure that _____	1. All changes are authorized, tested, and recorded. 2. Changes are controlled by the Policy Control Board (PCB). 3. All changes are requested, scheduled, and completed on time. 4. Management is advised of changes made to systems.
Centralisation	1. Increasing the importance of subordinate role 2. Decreasing the importance of subordinate role 3. Both are correct 4. None
Build a new product will cost 55,000 with expected sales of 55,000 per unit (unit price = 4)	1. 1,65,750 2. 1,68,750 3. 1,78,750 4. 1,75,750
Boehm divided the historical project data into following types of projects	1. Application 2. Utility programs 3. A and B 4. None of the above

Blocks to be placed at the upper level of the hierarchy scheme used, is from direct memory to	1. Set definitive 2. Block associative 3. Fully associative 4. Set associative
Because it is difficult to find one single person with all the needed qualities, Taylor suggested the appointment of a specialist through this technique of scientific management. Identify the technique.	1. Standardization and simplification of work 2. Method study 3. Functional foremanship 4. Motion study

baa*c denotes the set	1. {b^na^mc^p|n,m,p>=1} 2. {ba^nc|n>=0} 3. {ba^nc|n>=1} 4. {w|w is a string of a,b,c}
Authority always flows from	1. Superior to subordinate 2. Subordinate to superior 3. Both Superior to subordinate and Subordinate to superior 4. None of the other answers is correct

Attributes, relations and map entities in oracle is represented by	1. Conceptual schema 2. Physical schema 3. Logical schema 4. All of above
Attack against availability is	1. Trojan Horse 2. Malware 3. VIRUS 4. DoS
Assuming that memory is byte-addressable, if a frame size is 2KB, what is the number of bits required to represent the page offset?	1. 12 2. 10 3. 9 4. 11
Assume that a process has 3 user threads assigned to one kernel thread. Thread 1 is blocked, Tread2 is running and thread 3 is ready. What will be the state of the process?	1. Running 2. Ready 3. Terminated 4. Blocked

Assume page size as 2KB and a process is 72750 bytes in length. What is the size of the internal fragment?	1. 878 2. 1078 3. 978 4. 1178
Assume we have an object called Employee. Which of the following best represent this object's identity?	1. Name 2. Staff ID 3. Date of Birth 4. Address
Assess the likelihood and consequences of these risk is called _____	1.Risk identification 2.Risk analysis 3.Risk planning 4.Risk monitoring
Assertion (A): The virtual function supports dynamic-binding Reason (R): The inheritance concept helps in achieving it.	1. A is correct; R is the correct explanation for A 2. A and R are correct; But R is not the actual reason for A 3. A is incorrect; R is correct 4. Both A and R are incorrect

As a professional, what should be your primary source of ethical guidance in the workplace?	1. corporate HR policies 2. corporate code of ethics 3. corporate mission statement 4. corporate procedures

Arunima, an HR manager, has been given the task of strengthening the ethical culture at her firm. Which of the following activities would be most beneficial?	1. e-mailing ethics codes to all employees 2. posting ethics code posters in the hallways 3. writing a memo about ethics to top executives 4. discussing ethics during performance appraisals
Arrange the 32-bit number 0x0A0B0C0D in big endian order starting from address 1000h	1. 1000h-0D, 1001h-0C, 1002h-0B, 1003–0A 2. 1000h-0A, 1001h-0B, 1002h-0C, 1003-0D 3. 1000h-0B, 1001h-0A, 1002h-0D, 1003h-0C 4. 1000h–0C, 1001h-0B, 1002h-0D, 1003h-0A
ARP (Address Resolution Protocol) is....	1. a TCP/IP protocol used to dynamically bind a high level IP Address to a low-level physical hardware address 2. a TCP/IP high level protocol for transferring files from one machine to another 3. a protocol used to monitor computers 4. a protocol that handles error and control messages
Analysis the probabilty and effects for the risk "The size of the software is underestimated"	1.High and Serious 2.Moderate and Serious 3.Moderate and Tolerable 4.High and Tolerable
Analysis the probabilty and effects for the risk "HighCatastrophicKey staff are ill at critical times in the project"	1.High and Serious 2.Moderate and Serious 3.Moderate and Tolerable 4.High and Tolerable

An over-generalized, oversimplified, and self-perpetuating belief about people's personal characteristics is known as	1. Perception 2. Stereotype 3. Attribution 4. Personality
An organisation establishes relationships among	1. People, work, and resources 2. Customer, work, and resources 3. People, work, and management 4. Customer, work, and management
An industry having low growth rate ,but possess high relative market share. In BCG matrix, its placed in:	1. Stars 2. Question Marks 3. Cash cows 4. Dogs
An individuals' ability to cooperate with other members of the organization and work effectively in teams is called as	1. Technical skills 2. Human skills 3. Conceptual skills 4. Employee skills

An implied understanding of mutual contributions between a person and his or her organization, which is not a written document, is called as	1. Psychological contract 2. Legal contract 3. Illegal contact 4. Unwritten contract
An example for external premises in planning is	1. Money 2. Materials 3. Machines 4. Competitors strategy
An evaluative statements that is either favorable or unfavorable about objects, people, or events is called	1. Attitude 2. Stereotype 3. Attribution 4. Personality
An acyclic graph, what is the maximum number of edge.	1. n 2. n+1 3. 2n-1 4. n-1

Amount of data utilized by the stack, which of the content holds	1. not a fixed size 2. the amount of the data fluctuates 3. depends on stack's lifetime 4. all of these
Among the Mintzberg's management roles, figurehead comes under	1. Interpersonal roles 2. Informational roles 3. Decision roles 4. Leader roles
All of the following are elements of planning EXCEPT:	1. Developing Plans 2. Monitoring Performance 3. Establishing Strategies 4. Coordinate Activities
After a study of the work processes on a project, a quality audit team reports to the project manager that irrelevant quality standards were being used by the project, which might lead to rework. What was the objective of the project manager in initiating this study?	1.Quality control 2.Quality planning 3.Checking adherence to processes 4.None in the list
Administrative Management is related to	1. Elton Mayo 2. Henry Fayol 3. F W Taylor 4. Max Weber

Aditi has a reputation of being fair, helpful, and understanding. She even helped her subordinate overcome a personal crisis. Which one of the following dimensions of leadership is Aditi displaying here?	1. consideration 2. initiating structure 3. employee orientation 4. task orientation

Activity Bar charts show schedule against _____	1. task dependencies 2. calendar time 3. critical bar chart 4. defining milestones
According to this principle of general management, “an organization should safeguard against abuse of managerial power, but at the same time, a manager should have the necessary authority to carry out his responsibility.” Name the principle of management described in the given statement.	1. Discipline 2. Authority and responsibility 3. Unity of command 4. Unity of direction
According to the University of Iowa behavioural studies, group members' satisfaction levels were generally _____.	1. higher under a supportive leader in the long run. 2. improved when the leader was production oriented 3. maintained when the leader was directive in the short run

	4. higher under a democratic leader than under an autocratic one
According to the Ohio State studies, the _____ dimension of leader behaviour is defined as the extent to which a leader has job relationships characterized by mutual trust and respect for group members' ideas and feelings.	1. relationship management 2. consideration 3. people orientation 4. integrity
According to the Ohio State studies, _____ refers to the extent to which a leader is likely to define and shape his or her role and the roles of group members in the search for goal attainment.	1. people orientation 2. production orientation 3. initiating structure 4. consideration
According to Henri Fayol, if this principle of general management is violated, “authority is undermined, discipline is in jeopardy, order disturbed, and stability threatened.” Identify the principle.	1. Authority and responsibility 2. Discipline 3. Unity of command 4. Equity

According to Burns and Stalker, which of the following is a feature of organic organisations?	1. Emphasis on vertical communication channels 2. Prestige drawn from personal contribution 3. Stress on obedience to superiors and loyalty to the organisation 4. Knowledge requirement based on job
According to research, what characteristic is most frequently shared by firms that receive high rankings for corporate social responsibility?	1. encouraging employees to participate in civic activities 2. requiring managers to understand ethics laws 3. promoting integrity through ethics training 4. linking compensation to ethical behaviours

Access is determined by rules in Rule-Based Access Control (RuBAC). What type of access control would such restrictions fall under?	1. Discretionary Access Control (DAC) 2. Mandatory Access control (MAC) 3. Non-Discretionary Access Control (NDAC) 4. Lattice-based Access control
Ability of an individual to analyze complex situations and to rationally process and interpret available information is called	1. Technical skills 2. Human skills 3. Conceptual skills 4. Employee skills

ABC Airways uses software to manage reservation of its passengers. After a year of its use, the database administrator decided to add few attributes with the passenger table. If he is able to change the structure of passenger table without adjusting its front-end, how do we call such independence?	1. Physical data independence 2. Logical data independence 3. External data independence 4. View data independence
A **mistake in software code or configuration** that provides an attacker with **indirect access** to a system or network is called as...	1. Vulnerability 2. Virus 3.

	Trojan Horse 4. Exposures
A visual drawing of the reporting relationships within an organization is called a(n):	1. work specialization chart. 2. unity of command chart. 3. organization chart. 4. division of labour chart.
A view of database that appears to an application program is known as _____	1. Virtual table 2. Schema 3. Subschema 4. None of the above
A variable that derive Ɛ is called .	1. Ɛ 2. @ 3. * 4. Nullable

A stable set of characteristics and tendencies that determine commonalities and differences in people's behavior is called	1. Attitude 2. Stereotype 3. Attribution 4. Personality
A software process is a set of related activities that gives outcome to the _____of the software	1. Production 2. Engineeing 3. Sales 4. None of the above
A rule of thumb is if you can find another company which can do a non-core activity better and faster, _____.	1. you should keep producing. 2. you should compete with the company. 3. you should outsource. 4. you should increase your efficiency.

A reporting relationship in which an employee receives orders from, and reports to, only one supervisor is known as:	1. Line of authority 2. Unity of direction 3. Unity of command 4. Responsibility
A relationship between the instances of a single entity type is called _____	1. Recursive relationship 2. Ternary relationship 3. Binary relationship 4. None of these

A pure virtual function implicitly means	1. do-everything function 2. do-nothing function 3. do-something function 4. None of the above.

A process of verifying the validity of a claimed identity of a person is called?	1. Identification 2. Authentication 3. Authorization 4. Accountability
A process is thrashing if	1. it is spending more time paging than executing 2. it is spending less time paging than executing 3. page fault occurs 4. swapping cannot take place
A problem is said to be decidable if it is a	1. recursively enumerable 2. recursive 3. context-sensitive 4. None of the choices.

A period of "testing-out" the leaders in group development stages	1. Storming 2. Norming 3. Performing 4. Adjourning
A mistake in the software code that provides an attacker with direct access to a system or network is called as....	1. Vulnerability 2. Virus 3. Trojan Horse 4. Backdoor Attack
A memory buffer used to accommodate a speed differential is called _____	1. stack pointer 2. cache 3. accumulator 4. disk buffer
a logical disk component that manages a disk's internal operations as it relates to a computer and is abstract to a human user.....	1. disk management 2. scheduler 3. memory management 4. file management system

A leader uses _____ when giving the individual or group the authority and responsibility to decide.	1. consultatiom 2. laissez-faire 3. joint decision 4. delegation
A language that can generate the new data types is known as ___ **languages** as they can handle the new data types	1. Overloaded 2. Encapsulated 3. Reprehensible 4. Extensible

A group of experts are taking decision in this through consensus	1. Interacting groups 2. Delphi Methods 3. Nominal groups 4. Participative decision making
A function template can have __template argument.	1. 1 2. 2 3. A. More than one 4. 0

a file system with data stored on a server. The data is accessed and processed as if it was stored on the local client machine.	1. distributed file system 2. stand-alone machine 3. Internet file system 4. EXT2 FS
A dollar value is not used to measure all costs and benefits	1. True 2. False 3. 4.
A department can be created by	1. function 2. product 3. process 4. All the other answers are correct
A DBMS query language is designed to	1. Specify the structure of a database 2. Support end users who use english-like commands 3. Support in the development of complex applications software 4. All of the above
A dataStore in DFD represents	1. Sequential File 2. Disk Store 3. Repository of Data 4. a Random Access Memory

A data dictionary is a special file that contains	1. The Data type of all fields in all files 2. The name of all fields in all files 3. The data type of all fields in all files 4. All of the above
A cost benefit analysis involves measurable metrics such as	1. Revenue earned or costs 2. Quality or costs 3. Benefits or costs 4. None of the above
A contingency model of leadership is the path-goal theory. This suggests that subordinates will see leadership behaviour as a motivating influence if:	1. path-goal relationships are clarified. 2. their effective performance will satisfy their needs. 3. the necessary direction, guidance, training, and support is provided. 4. all the other options are correct.

A complete graph can have	1. n^2 spanning trees 2. n^(n-2) spanning trees 3. n^(n+2) spanning trees 4. n^(n+2) spanning trees

A company is running with a peer-to-peer network of 30 computers. The policy is such that all system users are responsible for their own security and they can set file and folder privileges on their own. Which of the following access control model best suits the configuration at this company?	1.Discretionary 2. Mandatory 3. Role-based 4. Nondiscretionary
A clustered system ____.	1. Gathers together multiple CPUs to accomplish computational work 2. Is an operating system that provides file sharing across a network 3. Is used when rigid time requirements are present 4. Can only operate one application at a time

A bus is one possible local area network topology. One advantage of a bus network is	1. the failure of one node does not affect the rest of the network 2. the performance of the network is unaffected by the number of users 3. failure of the main bus cable will only affect a few users 4. it has the fastest performance of any network topology
A Block can be placed in a restricted set of places in the cache	1. Direct mapping 2. set associative 3. fully associative 4. Indirect associative
A better measurement of performance of memory-hierarchy is the	1. Average memory access time 2. Average memory hit rate 3. Average memory miss rate 4. Write stall

A _____ of an issue consists of weighing and balancing all of the competing demands on a firm by each of those who have a claim on it.	1. stakeholder analysis 2. board of directors' analysis 3. corporation analysis 4. management analysis
A _____ leader avoids power and leaves the group entirely to itself.	1. socialistic 2. democratic 3. autocratic 4. laissez-faire
A _____ is a data communication system within a building, plant, or campus, or between nearby buildings.	1. MAN 2. LAN 3. WAN 4. None of the above
A high-level document which defines the management plan in detail for how security should be practiced throughout the organization is called?	1. Guidelines 2. Policies 3. Procedures 4. Standards

_____is concerned with the safety of a person's personal information while accessing the Internet on any computer or mobile device.	1. Digital agony 2. Digital privacy 3. Digital secrecy 4. Digital protection
_____is not a proper metric of a program's size	1. LOC 2. KLOC 3. KDSI 4. None of the above
_____model provide ideas about historical projects	1. Waterfall 2. Spiral 3. COCOMO 4. Incremental
_____used node as activity and links as precedence	1.on-arrow approach 2.precedence networks 3.Timeline chart 4.None of the above
_____ provides a framework for effective delivery of technology, forms the basis for management, and also provides the context for work products, milestones, quality measures, and change management	1. Prototyping Model 2. Linear Sequential Model 3. Process 4. Cost estimation

_____ ensure there is always an up-to-date system that can be demonstrated to the client.	1. Domain Object Modelling 2. Individual Class (Code) Ownership 3. Visibility of progress and results 4. Regular Builds
_____ is triggered by modifications, migration or retirement of existing software.	1. Regression Testing 2. Unit Testing 3. Maintenance testing 4. Integration Testing
_____ is the system call that the parent has to invoke in order to avoid creating zombie processes?	1. wait() 2. Sleep() 3. exec() 4. execvp()
_____ is a lack of access control policy.	1. Bug 2. Threat 3. Vulnerability 4. Attack

_____ consists of exploring and explaining the domain of the problem to be solved.	1. Feature Teams 2. Inspections 3. Domain Object Modelling 4. Configuration Management

_____ is the technique by which a partially loaded program can be executed.	1. Cache memory 2. Virtual memory 3. Associative memory 4. Shared memory
_____ is very useful in situations when data have to be stored and then retrieved in reverse order.	1. Stack 2. Queue 3.List 4. Linked List
_____ is the system call that has to be invoked by the child to replace the memory image of the child?	1. wait() 2. sleep() 3. exec() 4. exit()
_____ is a model that illustrates how testing activities integrate with software development phases.	1. Waterfall Model 2. V-Model 3. Spiral Model 4. Iterative Model

_____ communication modes support two-way traffic but in only one direction at a time?	1. simplex 2. half duplex 3. three-quarters duplex 4. all of the above
_____ is the responsible for carrying out the instructions and procedures necessary for performing software configuration management tasks are documented in the software configuration management plan.	1.Project manager 2.Project leader 3.Programmer 4.None from the list
_____ is the process of using a function for more than one purpose. It allows the use of different internal structures of the object by keeping the same external interface.	1. Inheritance 2. Polymorphism 3. Abstraction 4. Encapsulation
_____ is the process of using a function for more than one purpose. It allows the use of different internal structures of the object by keeping the same external interface.	1. Inheritance 2. Polymorphism 3. Abstraction 4. Encapsulation
_____ is the minimum number of steps that can execute for the given parameters	1. Average case 2. Worst case 3. Time complexity 4. Best case

_____ is the average number of steps that can be executed for the given parameters	1. Average case 2. Worst case1 3. Time complexity 4. Best case

_____ in the code are signs of bad code designs and should be avoided.	1. Repetitions 2. Modularity 3. Functions 4. Documentation
_____ cable consists of inner copper core and a second conducting outer sheath	1. Coaxial cable 2. Twisted Pair 3. Optical fibre cable 4. shielded Twisted Pair
_____ begins at the root and follows a path down to the specified file.	1. Relative path name 2. Absolute path name 3. Standalone name 4. All of the above

_____ utilization is the use of available bandwidth to achieve specific goals.	1. Amplitude 2. Frequency 3. Bandwidth 4. None of the above
_____ memory management scheme will produce least fragment	1. Best Fit 2. Worst Fit 3. First Fit 4. None of the given choices
_____ is the maximum number of steps that can execute for the given parameters	1. Average case 2. Worst case 3. Time complexity 4. Best case
_____ is not the operation that can be performed on queue.	1. Insertion 2. Deletion 3. Retrieval 4. Traversal

_____ are used for cellular phone, satellite, and wireless LAN communications.	1. Radio waves 2. Infrared waves 3. Microwaves 4. None of the above
_____ affect schedule or resources	1.Project risks 2.Project people 3.Task dependencies 4.None in the list
_____ cable consists of two insulated copper wires twisted together.	1. Coaxial 2. Fiber-optic 3. Twisted-pair 4. none of the above

_____ are used for short-range communications such as those between a PC and a peripheral device.	1. Radio waves 2. Infrared waves 3. Microwaves 4. none of the above
_____ is the singleness of purpose that makes possible the creation of one plan of action to guide managers in resource allocations.	1. Unity of direction 2. Unity of command 3. Unity of resources 4. Unity of authority

_____ is designed to be used in wireless applications in which stations must be able to share the medium without interception by an eavesdropper and without being subject to jamming from a malicious intruder.	1. Multiplexing 2. Spread spectrum 3. Modulation 4. None of the above.
_____ diagrams are important part of object modeling methodology	1. application 2. data 3. **class** 4. level
_____ can be applied when the bandwidth of a link (in hertz) is greater than the combined bandwidths of the signals to be transmitted.	1. TDM 2. FDM 3. Both TDM or FDM 4. Neither TDM or FDM
_____ cables are composed of a glass or plastic inner core surrounded by cladding,all encased in an outside jacket.	1. Coaxial 2. Fiber-optic 3. Twisted-pair 4. none of the above

_____ is the concept in which a process is copied into main memory from the secondary memory according to the requirement.	1. Paging 2. Demand paging 3. Segmentation 4. Swapping
____ provide member functions for repositioning the file-position pointer.	1. istream 2. ostream 3. istream and ostream 4. None
____ is designed to use the high bandwidth capability of fiber-optic cable.	1. WDM 2. FDM 3. TDM 4. None of the above
____ function can create versions of the add function for adding the int, float or double type values.	1. Sum() 2. Add() 3. Total() 4. all

____ data type represents the file stream generally, and has the capabilities of both ofstream and ifstream which means it can create files, write information to files, and read information from files.	1. Fstream 2. stream 3. filestream 4. None
Which of the following statements is false?	1. The halting problem for Turing machine is undecidable. 2. Determining whether a context-free grammar is ambiguous is undecidable. 3. Given two arbitrary context-free grammars, G_1 and G_2 , it is undecidable with $L(G_1) = L(G_2)$ 4. Given two regular grammars G_1 and G_2 , it is undecidable whether $L(G_1) = L(G_2)$

Which one of the following is decidable?	1. Given a string M, a string s, and an integer k, M accepts s with k steps 2. Equivalence of two given Turing machines 3. Language accepted by a given DFA is nonempty 4. Language generated by a CFG is nonempty
The language $\{ 0^n 2\, 1^n \mid n \geq 0 \}$ over the alphabet { 0, 1, 2} is	1. Not recursive 2. is recursive and is a deterministic CFL 3. is a regular language 4. is not a deterministic CFL but a CFL.

It is undecidable, whether	1. an arbitrary TM has 15 states 2. an arbitrary TM halts after 10 steps 3. an arbitrary TM ever prints a specific letter 4. an arbitrary TM accepts a string w in 5 steps
1) Which of these statements is TRUE about a LAN?	1. a. A LAN connects computers in a small area such as an office 2. a. A modem is needed to connect a computer to a LAN 3. a. A LAN consists of only one computer 4. a. Internet is a LAN
Which one of the following protocols is used for the noisy channel?	1. Simplest protocol 2. Half duplex 3. Selective repeat ARQ 4. Hybrid

Which of the following is not a primitive root of 17?	1. 7 2. 10 3. 14 4. 4
Which error detection method uses one's complement arithmetic?	1. Simple parity check 2. Checksum 3. Two-dimensional parity check 4. CRC
Which error detection method involves polynomials?	1. CRC 2. Simple parity check 3. Two-dimensional parity check 4. Checksum

What is the minimum hamming distance of this coding scheme d (01101,10011)?	1. 1 2. 2 3. 3 4. 4
What is the efficiency of the Go back N ARQ protocol?	1. N = N / (2a + 2a) 2. N = N / (1 + 2a) 3. N = N * (2a + 2a) 4. N = N * (1 + 2a)
The term that refers to a set of procedures used to restrict the amount of data that the sender can send before waiting for acknowledgment is	1. Error control 2. Flow control 3. Delay 4.

	Byte stuffing
The hamming distance between the words 101101101 and 110110010 is	1. 4 2. 5 3. 6 4. 7
The _____ method provides a one-time session key for two parties.	1. Diffie-Hellman 2. RSA 3. DES 4. AES
Protocols in which the sender waits for a positive acknowledgment before advancing to the next data item are often called	1. ARQ 2. PPR 3. ARS 4. PRS

Parity bits are used for which of the following purposes?	1. Encryption of data 2. To transmit faster 3. To detect errors 4. To identify the user
In the _____Protocol, if no acknowledgment for a frame has arrived, we resend all outstanding frames.	1. Stop-and-Wait 2. Simplest 3. Go-Back-N ARQ 4. Selective-Repeat ARQ

In the _____ Protocol, the sender sends one frame, stops until it receives confirmation from the receiver, and then sends the next frame.	1. Stop-and-Wait 2. Simplest 3. Go-Back-N ARQ 4. Selective-Repeat ARQ
In the _____ Protocol, the sender sends its frames one after another with no regard to the receiver.	1. Stop-and-Wait 2. Simplest 3. Go-Back-N ARQ 4. Selective-Repeat ARQ

In the _____ protocol we avoid unnecessary transmission by sending only frames that are corrupted.	1. Stop-and-Wait ARQ 2. Go-Back-N ARQ 3. Selective-Repeat ARQ

	4. None of the above
In stop and wait flow control, for n data packets sent, how many acknowledgments are needed?	1. n-1 2. n 3. 2n 4. n+1
In stop and wait automatic repeat request, acknowledgment number is announced in the sequence of	1. Next frame 2. Previous frame 3. Zeros 4. Last frame

In Selective Repeat ARQ, if 4 is the number of bits for the sequence number, then the maximum size of the send window must be _____.	1. 15 2. 16 3. 31 4. 8
In Selective Repeat ARQ, if 4 is the number of bits for the sequence number, then the maximum size of the receive window must be _____.	1. 15 2. 16 3. 31 4. 8
In Go-Back-N ARQ, if frames 5, 6, and 7 are received successfully, the receiver may send an ACK _____ to the sender.	1. 5 2. 6 3. 7 4. 8

In Go-Back-N ARQ, if 10 is the number of bits for the sequence number, then the maximum size of the receive window must be _____.	1. 15 2. 16 3. 31 4. 1
In CRC if the data unit is 100110111 and the divisor is 1111 then what is dividend at the receiver?	1. 100111001101 2. 100110111001 3. 100111001 4. 100111001110
If the sender of a statement cannot successfully dispute its authorship, this ability is called _____.	1. Authentication 2. Non-repudiation 3. Confidentiality 4. Integrity

If the information is protected from unauthorized change which of the following holds good.	1. Availability 2. Authenticity 3. Non-repudiation 4. Integrity

Error control in the data link layer is based on	1. Automatic repeat request 2. Manually repeat request 3. Situation based 4. Terminated request

CRC stands for	1. Cyclic Redundancy Check 2. Code Repeat Check 3. Code Redundancy Check 4. Cyclic Repeat Check
Caesar Cipher is also referred to as _____	1. Shift Cipher 2. Row transpositio n cipher 3. One – pad 4. None of the choices
Bob receives a message digitally signed by Alice. Bob wants to verify the signature, he requires?	1. Alice's Public key 2. Bob's Public Key 3.

	Alice's Private Key 4. Bob's Private Key
An error detecting code is which code is the remainder resulting from dividing the bits to be checked by a predetermined binary number, is known as	1. Cyclic redundancy check 2. Checksum 3. Error detecting code 4. Hamming code
_____ attacks involve modification of the contents of the message.	1. Passive 2. Active 3. Both Passive and Active 4. None of the given choices

_____ is a technique of decoding messages from a non-readable form back to readable format without knowing how they were initially converted from readable format to non-readable format.	1. Cryptography 2. Encryption 3. Decryption 4. Cryptanalysis
_____ is referred to the process of analysing information systems using mathematical formulas to understand the hidden aspects of the system.	1. Cryptography 2. Cryptanalysis 3. Cryptology 4. None of the choices
_____ is the relationship between the message and signature in case of Digital Signature.	1. Many to One 2. One to Many 3. Many to Many 4. One to One

The term that is used to set standards to enable intercommunication among equipment from a variety of manufactures is called	1. a. project 802 2. a. project 8802 3. a. project 208 4. a. project 2088

IEEE standard was adopted by	1. ISO 2. ANSI 3. OSI 4. IEEE
Which of the following symmetric block cipher supports multiple key sizes?	1. DES 2. AES 3. Double DES 4. Triple DES
Which of the following ensures that data received was sent by the specified sender?	1. Confidentiality 2. Authenticity 3. Non-repudiation 4.

	None of the choices
Which of the following encryption has the capability for computing over encrypted data without access to the secret key?	1. Homomorphic Encryption 2. RSA 3. Elliptic Curve cryptography 4. None of the choices
To construct cipher text, _____ technique reorders plaintext characters.	1. Substitution 2. Transposition 3. neither (a) nor (b) 4. both (a) and (b)
The science and art of converting messages to make them secure and resistant to attacks is known as _____.	1. Cryptography 2. Cryptanalysis 3. Cryptology 4. None of the choices

DES will fall under the category of _____	1. Electronic Cipher Book 2. Electronic Code Book 3. Complex block cipher 4. None of the choices
A _____ is used to verify the integrity of a message.	1. Message digest 2. Decryption algorithm 3. Digital envelope 4. None of the above
In IDEA, the key size is _____	1. 128 bytes 2. 128 bits 3. 256 bytes 4. 256 bits

Which of these is a disadvantage of a Bus network?	1. Expensive 2. Needs extra hardware 3. Slow 4. To connect devices to each other

_____ is a communications protocol standard for transmitting small amounts of digital information using conventional FM Sound Broadcast techniques	1. Radio System 2. Radio Data System 3. Radio Broadcast Data System 4. Broadcast Data System
Which of the following statement/statements is/are TRUE, with respect to vectored interrupts?	1. In vectored interrupt, device identifies itself to the processor by sending the starting address of the service routine. 2. Code sent by the vectored interrupt are upto 32 bits 3. In vectored interrupt starting address sent by the device to identify itself is referred as “service location” 4. All the mentioned options

Which of the following statement/statements is/are FALSE with respect to Centralized BUS arbitration?	1. In centralized BUS arbitration, the processor takes into account the various parameters and assigns the BUS to that device 2. Centralized Bus arbitration involves both Processor and DMA controller for its processing. 3. Centralized Bus arbitration is similar to Priority interrupt circuit. 4. None of the mentioned options.
Which of the following statement is CORRECT, when the process request for DMA operation.	1. The process, which has requested for DMA is temporarily suspended. 2. The process, which has requested for DMA continues execution. 3. Another process, gets executed. 4. The process, which has requested for DMA is temporarily suspended and another process start executing.
Which of the following RAID levels gives the striping at the Block level and double distributed parity for address both speed and fault tolerance issue.	1. RAID 10 2. RAID 2 3. RAID 6 4. RAID 5

Which of the following is TRUE, with respect to RAID 5,	1. Distributed Parity 2. Minimum number of Disks required is 3 3. High hardware cost for implementation 4. All the mentioned options
Which of the following is TRUE, w. r. t, “difference between DMA and Interrupt mode of I/ O data transfer”?	1. DMA involves the processor for the I/O transfer 2. The rate of data transfer is moderate in DMA 3. The amount of data transfer is less in DMA 4. None of the mentioned options.
Which of the following is not under the category of Flynn’s classification	1. SISD 2. MIMD 3. SIMD 4. None of the mentioned options
Which of the following has the highest data rate?	1. RAID 1 2. RAID 3 3. RAID 4 4. RAID 5

The significance of I/O mapped I/O with memory mapped I/O is	1. I/O mapped I/O is faster than memory mapped I/O in terms of data transfer. 2. I/O mapped I/O devices have large buffer space. 3. I/O mapped I/O devices need to deal with only fewer address lines at the time of communication. 4. All the mentioned options.

The mechanism in which I/O device is accessed by continuous monitoring its status using status flag is referred as _____	1. Program – controlled I/O 2. Memory mapped I/O 3. I/ O mapped I/O 4. Interrupt driven I/O
The _____ is used to overcome the contention over the BUS possession and usage.	1. Multiple BUS structure 2. Single BUS Structure 3. BUS Optimizers 4. BUS arbitrator
State the number of registers present in DMA controller	1. 1 2. 2 3. 3 4. No registers

Overall speed of transfer in RAID level 4 is	1. Low 2. Very low 3. High 4. None of the mentioned options
Once DMA transfer is completed, it is notified to the CPU through _____ signal	1. Acknowledgement signal 2. Interrupt Signal 3. Program status word 4. None of the mentioned options.
In bus arbitration, the controller which initiates data communication on the BUS at any time is called	1. Bus Arbitrator 2. Bus Master 3. Processor 4. Controller
How interrupt latency can be reduced?	1. Amount of information saved automatically by the processor when an interrupt request should be kept to a minimum. 2. By means of shadow registers 3. Processor with small number of registers, hardware unit is used to save the information automatically, once the processor accepts the interrupt request. 4.

	All the mentioned options.
During DMA transfer, the signals and addresses are issued by the _____ unit	1. DMA controllers 2. Device drivers 3. CPU 4. The program itself
DMA transfer is initiated by _____ of the following	1. Processor 2. The process being executed 3. I/O devices 4. Operating System
Decomposing the instruction execution into sub-tasks, each sub-tasks were executed in exclusive unit, all such units operate concurrently, and the defined technique is referred as _____	1. UMA 2. DMA 3. Pipelining 4. Vector Processing

_____ is the efficient method to implement multiple interrupt handling.	1. Polling Method 2. Vectored interrupts 3. Interrupt nesting 4. None of the mentioned options

Which of the following statement is TRUE, with respect to “difference between subroutines and interrupt-service enabled”?	1. During subroutine execution, the changes in status information and content registers are anticipated 2. During subroutine execution, the changes in status information and content registers are unanticipated 3. During interrupt service enabling, the changes in status information and content registers are anticipated. 4. None of the mentioned options
Which of following statement/statements is /are TRUE, w. r. t DMA Controller?	1. The DMA controller can perform operations on two different disks simultaneous, if the appropriate details are known. 2. The DMA controller is directly connected to the system bus to provide faster access. 3. When the R/W bit of the status register of the DMA controller is set to 1, then Read operation is performed. 4. All the mentioned options.

The control circuit which is responsible for the DMA transfer is known as _____	1. DMA controller 2. DMA interface 3. Data Controller 4. CPU control unit.
MIMD classified computers are known as _____, if the processor has high degree of interactions among themselves.	1. UMA 2. NUMA 3. Dynamic Memory accessing 4. Random Memory Accessing
I/O device is connected to the interconnection network by using a device interface, the interface includes _____registers accessed by the processor.	1. Data 2. Status 3. Control 4. Data, Status and Control
High-speed of I/O data transfer is possible by using _____ mechanism	1. Interrupt driven I/O 2. Program – controlled I/O 3. DMA 4. Memory mapped I/O

Worst-case complexity is mostly used in algorithm designs instead of remaining complexity cases. Because of	1. Worst-case complexity measure is simple and easy. 2. Worst-case complexity has better understanding parameters. 3. Best-case for almost any algorithm is trivial and determination of Average case complexity requires more parameters. 4. None
Which of the following is an undecidable problem?	1. Euler's circuit problem 2. Halting problem 3. Traveling sales man problem 4. Knapsack problem
Which of the following way is best to represent the algorithms	1. English literature step by step 2. Flowchart 3. Pseudocode 4. None

Which of the following statement is the correct reason for analyzing algorithms?	1. To choose the best algorithm for a particular task 2. To study and improve the algorithm performance from existing algorithms 3. Both 4. None
Which of the following statement is correct for Recursion	1. Structure or code representation is complex. 2. Used First in First out principle. 3. Required more memory space to hold intermediate results on the system stacks. 4. Took less time than iterative method.
Which of the following is not NP-Hard problem	1. Hamiltonian Cycle Problem 2. Travelling Salesman Problem 3. Euler's circuit problem 4. All the above
Which of the following is not criteria for algorithms	1. Alertness 2. Definiteness 3. Finiteness 4. Effectiveness

Which of the following is compulsory criteria for algorithms	1. Easiness 2. Simple 3. Activeness 4. Finiteness
What is the primary usage of asymptotic analysis?	1. Measure the efficiency of algorithms that don't depend on machine-specific constants. 2. Used to judge an algorithm whether is it suitable to a particular system or not 3. Used to find the minimum specification of hardware to execute the algorithm 4. None
Use of Omega notation (Ω) notation?	1. To specify the least or minimum amount of resources that needed over all inputs of size 2. To specify Best case complexity 3. To Specify Worst case complexity 4. Both A and B
Undecidable problems mean:	1. Problems that polynomial algorithms can solve 2. Problems that deterministic polynomial algorithms can solve 3. Problems that non-deterministic polynomial algorithms can solve 4.

	Problems that any algorithm cannot solve
The algorithms whose time complexity is $O(n^2)$ belong to	1. NP-Hard 2. NP-Complete 3. P 4. None
Space complexity is measured using the word. Which of the following statement is correct for term word.	1. Word is a collection of bits stored in computer memory. Its size is a 4 to 64 bits 2. Word is a collection variable used in an algorithm, which is a sum of each variable type memory occupied memory. 3. Word is a count of statements used in the algorithm 4. Word is the total algorithm size.

SAT or B-SAT is an example for	1. NP-Hard 2. NP-Complete 3. P 4. None

P class problem means:	1. Problems that can be solvable in polynomial time 2. Tractable problems. 3. whose time complexity is O(N^c) where N is input size and C is constant 4. All
One problem which is known to be NP-Complete and from that problem give Transformation to some other problem in NP, then that NP problem becomes:	1. NP-Hard 2. NP-Complete 3. P 4. None
NP-complete problems mean:	1. Problems in NP 2. Problems in P 3. Problems in NP and NP-Hard 4. Problems in P and NP
NP class of decision problem can be:	1. Solved by non-deterministic polynomial algorithms 2. Solved by deterministic polynomial algorithms 3. Solved by polynomial algorithms 4. None

In recursion, which data structure were used	1. Hash table 2. Stack 3. Queue 4. Dictionary
In Algorithm time complexity analysis which of the following is correct?	1. Only compile time is considered. 2. Only Execution Time is considered. 3. Both Compile execution time is considered. 4. None
In algorithm analysis, Constant time means?	1. Algorithm terminates after a specified time. 2. Algorithm automatically produces output in a specified constant time. 3. Algorithm checks whether it can be completed in a given time or not. 4. Algorithm requires the same fixed number of steps (regardless of) independent of the input size.

If every problem in NP can be polynomial-time reducible to a problem "A," and "A" is not in NP, then "A" is called:	1. NP-Hard 2. NP-Complete 3. P 4. None
If every problem in NP can be polynomial-time reducible to a problem "A," and "A" is also in NP, then "A" is called:	1. NP-Hard 2. NP-Complete 3. P 4. None

Consider two Algorithm's A and B, with time-complexities 100 n + 1 and $n^2 + n + 1$, respectively. Which of the following statements is correct.	1. Algorithm-A takes almost ten times longer than Algorithm-B. 2. Algorithm-A is better than Algorithm-B. 3. For smaller input, Algorithm-B is best, and for bigger input, Algorithm-A is best 4. For smaller input, Algorithm-A is best, and for bigger input, Algorithm-B is best
Class NP problems are:	1. verifiable in polynomial time 2. Solvable in polynomial time 3. Not Solvable in Non polynomial time 4.

	None
Analysis of an Algorithms means	1. Determine the amount of space to store on the hard disk 2. Determine the amount of duration to execute or RUN 3. Determining the amount of electrical power to complete the algorithm task. 4. Determining the required number of instructions and storage memory required for an algorithm.
In a full binary tree if there are L leaves, then total number of nodes N are?	1. a) N = 2*L 2. b) N = L + 1 3. c) N = L – 1 4. d) N = 2*L – 1
Which of the following Recursive Algorithms analysis method is not suitable for all cases.	1. Substitution Method 2. Recurrence Tree Method 3. Master Method 4. None

Which operator connects the structure name to its member name?	1. . 2. -> 3. - 4. *
Which of the following are themselves a collection of different data types?	1. string 2. int 3. structures 4. char
Prior to use a pointer variable	1. It should be declared 2. It should be initialized 3. It should be either declared or initialized 4. It should be declared and initialized
C structure are also called as	1. Primary datatype 2. User-defined datatype 3. Built-in datatype 4. Default datatype

What is the average case time complexity for finding the height of the binary tree?	1. a) h = O(loglogn) 2. b) h = O(nlogn) 3. c) h = O(n) 4. d) h = O(log n)

What is a full binary tree?	1. a) Each node has exactly zero or two children 2. b) Each node has exactly two children 3. c) All the leaves are at the same level 4. d) Each node has exactly one or two children

What is a complete binary tree?	1. a) Each node has exactly zero or two children 2. b) A binary tree, which is completely filled, with the possible exception of the bottom level, which is filled from right to left 3. c) A binary tree, which is completely filled, with the possible exception of the bottom level, which is filled from left to right 4. d) A tree In which all nodes have degree 2
The number of edges from the node to the deepest leaf is called _____ of the tree.	1. a) Height 2. b) Depth 3. c) Length 4. d) Width

Product (productid varchar2(10), productname varchar2(10), product_price number,manufacturing_date date, vendorId varchar2(10)) Vendor (vendorId varchar2(10), vendorname varchar2(10), location varchar2(10)) The sql query to establish not null constraint on the vendorid column in the vendor table is	1. alter table vendor add constraint vendorid not null; 2. alter table vendor modify constraint vendorid not null; 3. alter table vendor modify vendorid varchar2(10) not null; 4. alter table vendor add constraint vendor_nn not null;
Some addresses in the address space of the processor are assigned to I/O locations, which are implemented as a bit storage circuits organized in the form of registers, and this type of arrangement is called _____	1. I/O registers 2. I/O address space 3. Memory mapped I/O 4. I/O mapped I/O
Telnet transfer data in	1. Encrypted format 2. Secure channel 3. Simple plain text 4. Privileged mode

Present-day electronic mail systems are based on	1. Store and forward model 2.Save and retrieve model 3. Forward and retrieve model 4. Save and pop model
Did FTP link to which protocol stack?	1.Network layer 2. TCP/IP layer 3. Presentation layer 4.Application layer
Worldwide Web is a collection of	1. Web ID 2. Web page 3. Web browser 4. Web URLs
Which of the following is an advantage of SNMP?	1. No security risk 2. Detailed messages 3. High bandwidth 4. Support proprietary protocol

Which is false about FTP?	1. Transfer files and folders back and forth 2. Builds and maintains a website 3. Securely transferring files 4. uploads or downloads files
These are the idempotent method in the stateless protocol	1. PUT 2. CONNECT 3. POST 4.EXIT
The patch is a request method used for	1. Check server function 2. Web browser function 3. Partial modification 4. Create a tunnel to a server

Numerous IT organizations collect and gather information in hierarchical structure also manage and monitor files with the help of which protocol?	1. SNMP 2. Telnet 3. FTP 4. SMTP
Multiple web resources create common theme forms	1. Website 2. Webserver 3. Web page 4. Web browser
In the Internet stack, the protocol data unit (PDU) for the application layer is	1. Segment 2. Datagram 3. Message 4. Frame
For the client-server model, it uses a separate connection for controlling the data is	1. File transfer protocol 2.Dynamic host control protocol 3. Secure shell protocol 4. IETF

An alert to a remotely located host from one application through agents of management protocol is	1. Inform 2. Get 3. Trap 4. Set
A web page cannot be viewed on the world wide web if	1. Type URL of the page 2. Select the hyperlink 3. Type HTTP 4. Follow resource link
Which detects user activity on the internet and sends the data to a third party in the background?	1. Malware 2. Adware 3. Spyware 4. Security treat

Integrates business firewall capabilities with an intrusion prevention system (IPS) and application control using a multi-layered approach known as	1.Packet-filtering firewall 2. Stateful Inspection firewall 3. Application-level firewall 4. Next-Generation firewall

Encryption is a form of security. Encryption, on the other hand, offers nothing to keep hackers and other digital pests distant. We'll need? to achieve this objective.	1. Hubs 2. Bridge 3. Routers 4. Firewalls
This theories talk about Freudian approach that discusses the id, superego, and ego.	1. Trait Personality Theories 2. Psychodynamic Personality Theories 3. Humanistic Personality Theories 4. Self efficacy theories
Participative management	1. a) Empower employees 2. a) Collective decision making 3. Both empower employees and collective decision making 4. Neither empower employees nor collective decision making
In his book, *Capitalism and Freedom*, Milton Friedman argues that _____.	1. doing well while doing good is an essential corporate mantra 2. socially responsible behaviour adds to the corporation's bottom line 3. corporations are responsible for the environment, society, and profits

	4. the only social responsibility of business is to increase profits
Ethics training should be part of a _____.	1. reactive strategy 2. contextual strategy 3. defensive strategy 4. proactive strategy
$y^2 = x^3 - 5x + 1$ defined over E_{17}. If P = (3, 9) what is – P?	1. (3, 9) 2. (3, 4) 3. (3, 8) 4. none of the above
Which variant of DES is also called Encrypt-Decrypt-Encrypt mode?	1. Double DES 2. Triple DES with two keys 3. Triple DES with three keys 4. None of the given choices

The plain text “come home tomorrow” will be transformed into which of the following if it uses Rail-fence technique.	1. cmhmtmrooeoeoorw 2. cmtmhmrooreoeowo 3. cmhmtmeoeoroorwo 4. None of the given choices
The Diffie-Hellman key exchange is vulnerable to which of the following attacks?	1. Meet-in-the-middle attack 2. Man-in-the-middle attack 3. Phishing attack 4. Snooping

The term _____ means the redesign of a vertical organization along its horizontal workflows and processes.	1. vertical linkage 2. vertical network grouping 3. innovation 4. reengineering
Terminology that defines the extent to which activities within an organisation are to be subdivided	1. Departmentalisation 2. Divisional structure 3. Work specialisation

	4. Formalisation
In work specialisation, efficiency is generated through_____.	1. a variety of tasks. 2. repetitive tasks. 3. training. 4. guidance of managers.
In an organic structure, formalisation is	1. high. 2. low. 3. moderate. 4. absent.
A(n) _____ is a group that is made up of organizationally or geographically dispersed members who are linked primarily through advanced information and communications technologies.	1. vertical linkage 2. functional department 3. organisational committee 4. virtual team
A small span of control decreases employee autonomy through	1. tight supervision. 2. loose supervision. 3.

	biased supervision. 4. lack of supervision.
_____ means people are organized according to what the organization produces.	1. Functional grouping 2. Divisional grouping 3. Multi-focused grouping 4. Horizontal grouping
“The entire organization should be moving towards a common objective in a common direction” this principle is termed as	1. Unity of command 2. Unity of direction 3. Unity of group 4. Unity of management
“Keyboard Interrupt is an example for …….	1. Synchronous exception 2. Asynchronous exception 3. Both (a) and (b) 4.

	Neither (a) nor (b)
“Array Index out of range” is an example for …….	1. Synchronous exception 2. Asynchronous exception 3. Both (a) and (b) 4. Neither (a) nor (b)

Which one of the following is not a step in planning?	1. Establishing objectives 2. Developing premises 3. Determining alternative courses 4. Identifying needs of employees
Which of the following is the fundamental assumption about human behaviour ?	1. Caused behaviour 2. Goal oriented behaviour 3. Motivated behaviour 4. All of the above

Which of the following is not right about the formal organization	1. Deliberately planned & created by management 2. Stable & predictable 3. Violation of rules may lead to penalties 4. Managers are chosen
Which of the following is correct about 'Grapevine' ?	1. It tends to exist when members of formal group know one- another well 2. It is the result of social forces at work place. 3. It is more common in times of high organisational excitement. 4. All the above
Which of the following is an objective of time study?	1. To determine the number of workers to be employed 2. To formulate suitable incentive schemes 3. To calculate the labor costs 4. All of the above
the sequence $\{a_n \mid n \geq 1\}$ satisfies the recurrence relation $\begin{cases} a_n = 2a_{n-1} + 1, & n \geq 1 \\ a_1 = 1. \end{cases}$ Which of the following holds true for the relation?	1. O(2n) 2. θ(2n) 3. Ω(2n) 4. None of these

Which of the following does NOT describe a problem with scientific management?	1. Productivity increases may not be reflected in workers' pay 2. It is better suited to complex jobs. 3. Improvement is not necessarily maintainable. 4. It is better suited to simple jobs.
Virtual functions work because of ……	1. Virtual pointer correctly points to Virtual table 2. Virtual Pointer does not point to virtual table 3. There is no concept of Virtual table and virtual pointer working mechanism. 4. Both (b) and (c)
This stress is positive stress which motivates a person	1. Chronic stress 2. Acute stress 3. Eustress 4. Distress
The theorist who advocated standard methodology for doing a task and suggested that workers were motivated by pay according to output (piecework) is	1. Fayol 2. Taylor 3. Mintzberg 4.

	Mayo

The technique of differential piece rate system was developed by Taylor to	1. Discriminate between efficient and inefficient workers 2. Reward the efficient worker 3. Motivate the inefficient workers to perform better 4. All of the above
The managerial function of organizing is_____	1. to review and adjust the plan in light of changing conditions 2. to establish a program for the accomplishment of objectives 3. to create a structure of function and duties to be performed by a group of people 4. to get things done through and with the help of people
The keyword virtual can be used for…….	1. data members (or) variables 2. Member functions 3. classes 4. Both (b) and (c)

The Hawthorne Studies doesn't include	1. The illumination studies 2. The Relay Assembly Test Room Studies 3. The mass interviewing Program 4. The time and motion study
The behavioral science approaches add which of the following emphases to management?	1. The study of people who satisfy social needs at work and how informal, as well as a formal organization affects behavior 2. The scientific study of human behaviour and developing behavioural techniques 3. Both A and B 4. None of the above
The attributions that emphasize some aspect of the individual, such as ability or skill, to explain behavior is termed as	1. Dispositional Attributions 2. Situational Attributions 3. Event Attributions 4. Skill Attributions
The application of this principle of management leads to higher production and better work for the same effort. Identify the related principle of general management.	1. Discipline 2. Equity 3. Division of work 4. Unity of command

Planning function of management is performed by_____.	1. Top Management 2. Middle Management 3. Lower Management 4. All of the above
MBO is	1. Management By Options 2. Management By Operations 3. Management By Objectives 4. Management By Orders
Management as a discipline refers to _____	1. Group of managers 2. Functions of management 3. Subject of management 4. All of these

In Mintzberg's management roles, the role that communicate to employees the organization's vision and purpose is called	1. Liaison 2. Figurehead 3. Monitor 4. Disseminator

In expectancy theory, value of rewards is termed as	1. Expectancy 2. Instrumentality 3. Valence 4. Values
In expectancy theory, the belief that performance leads to rewards is termed as	1. Expectancy 2. Instrumentality 3. Valence 4. Values
In Big Five Personality dimensions, the degree to which a person is sociable, gregarious, and assertive versus reserved, quiet and timid is called as	1. Conscientiousness 2. Extraversion–Introversion 3. Agreeableness 4. Emotional Stability
In Big Five Personality dimensions, the degree of working well with others by sharing trust, warmth, and cooperativeness is called as	1. Conscientiousness 2. Extraversion–Introversion 3. Agreeableness 4. Emotional Stability

In Big Five Personality dimensions, the ability a person displays in handling stress by remaining calm, focused, and self-confident, as opposed to insecure, anxious, and depressed is known as	1. Conscientiousness 2. Extraversion–Introversion 3. Agreeableness 4. Emotional Stability
In a try-catch block, if exception is not caught in try block, the control must go to ……..	1. catch block 2. same try block again 3. immediate line of code or normal immediate block 4. throw block
Highest level of Maslow's Hierarchy is	1. Security 2. Physiological 3. Esteem 4. Self- Actualization
Group development stages in the order are	1. Forming, Performing, Storming, Norming, Adjourning 2. Forming, Norming, Storming, Performing, Adjourning 3. Forming, Norming, Performing, Storming, Adjourning 4.

	Forming, Storming, Norming, Performing, Adjourning
Find the incorrect statement(s) from the following: (i). A virtual function is allowed to be a static member (ii). Virtual keyword decides the dynamic binding	1. (i) only 2. (ii) only 3. All are incorrect 4. All are correct

Find the correct statement(s) below:	1. There should be one catch block for one try block. 2. There may be multiple catch block for single try block. 3. There may be a catch block without even a single try block. 4. All are correct
Find the correct order in Exception Handling:	1. Hit – Throw - Catch – Handle 2. Hit-catch-Throw-Handle 3. Handle-Throw-Catch-Hit 4. Hit-Catch-Handle-Throw

Fibonnaci sequence complexity can only be identified by?	1. Iterative method 2. Recursive method 3. Master theorem 4. All of them
Exception handling means …….	1. clearing runtime errors 2. managing runtime errors 3. clearing logic errors 4. managing logic errors
Documents that outline how goals are to be accomplished are called	1. Plans 2. Goals 3. Strategies 4. Ideas
By comparing _____ with standards, the manager can know whether the goals are achieved or not.	1. Risk 2. Ideas 3. Actual performance 4. Costs

Attributions that emphasize the environment's effect on behavior is called	1. Dispositional Attributions 2. Situational Attributions 3. Event Attributions 4. Skill Attributions
An example for intangible premises in planning is	1. capital investment 2. Unit of production 3. Cost per unit 4. Goodwill
A persons' knowledge and ability to make effective use of any process or technique constitutes	1. Technical skills 2. Human skills 3. Conceptual skills 4. Employee skills
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A base class that contain pure virtual function is said be	1. virtual child class 2. abstract base class 3. super base class 4. None of the above
PDA can recognise	1. any grammar 2. only CFG 3. only regular grammar 4. any unambiguous grammar

Network congestion occurs.....	1. in case of traffic overloading 2. when a system terminates 3. when connection between two nodes terminates 4. when connection between three nodes terminates
FORTRAN is a	1. regular language 2. context free language 3. context sensitive language 4. None of the above
.....is the protocol suite for the current Internet.	1. TCP/IP 2. NCP 3. UNIX 4. ACM
Which organization has authority over interstate and international commerce in the communications field	1.ITU-T 2. IEEE 3. FCC 4. ISOC

Which of the following ISO standards is typically used as a framework for network communications?	1. IEEE 2. 802.1X 3. Ethernet 4. OSI/RM
Which one of the following model induces administrative overload in a huge environment?	1. Rule based access control 2. Directory based access control 3. Lattice based access control 4. ID based access control
Which one of the following model enables frequent changes to data permissions?	1. Rule-based 2. List-based 3. Role-based 4. Ticket based
Which access control model is defined based on a specific profile for every user?	1. Lattice based access control 2. Directory based access control 3. Rule based access control 4. ID based access control

Tractable problems mean	1. Problems that cannot be solved in polynomial time 2. Problems that can be solved in polynomial time 3. Problems that can be solved in constant time 4. Problems that can be solved in non-polynomial time
Intractable problems means	1. Problems that cannot be solved in polynomial time 2. Problems that can be solved in polynomial time 3. Problems that can be solved in constant time 4. Problems that can be solved in non-polynomial time
Which of the following would lead you to believe that a given system is an SMP-type system?	1. Each processor is assigned a specific task 2. There is a boss–worker relationship between the processors 3. Each processor performs all tasks within the operating system 4. None of the above

Which of the following statements is false?	1. Mobile devices must be concerned with power consumption. 2. Mobile devices can provide features that are unavailable on desktop or laptop computers. 3. The difference in storage capacity between a mobile device and a laptop is shrinking. 4. Mobile devices usually have fewer processing cores than a standard desktop computer.
Which of the following statements concerning open-source operating systems is true?	1. Solaris is open source 2. Source code is freely available 3. They are always more secure than commercial, closed systems 4. All open-source operating systems share the same set of goals
Which of the following operating systems is not open source?	1. Windows 2. BSD UNIX 3. Linux 4. PCLinuxOS

Which of the following is a property of peer-to-peer systems?	1. Clients and servers are not distinguished from one another 2. Separate machines act as either the client or the server but not both. 3. They do not offer any advantages over traditional client-server systems 4. They suffer from the server acting as the bottleneck in performance
Which of the following file systems is supported by the windows OS?	1. NTFS 2. FAT32 3. exFAT 4. All of the these
What statement concerning privileged instructions is considered false?	1. They may cause harm to the system 2. They can only be executed in kernel mode. 3. They cannot be attempted from user mode. 4. They are used to manage interrupts
What is Scheduling?	1. Allowing a job to use the processor 2. Making proper use of Processor 3. None of the mentioned 4. All of the mentioned

What are some other terms for kernel-mode?	1. Supervisor mode 2. System mode 3. Privileged mode 4. All of the above
Two important design issues for cache memory are ____.	1. Speed and volatility 2. Size and replacement policy 3. Power consumption and reusability 4. Size and access privileges
The two separate modes of operating in a system are	1. Supervisor mode and system mode 2. Kernel mode and privileged mode 3. Physical mode and logical mode 4. User mode and kernel mode
The portion of the process scheduler in an operating system that dispatches processes is concerned with	1. Assigning ready processes to CPU 2. Assigning ready processes to the waiting queue 3. Assigning running processes to blocked queue 4. All of the mentioned

The most common secondary storage device is ____.	1. Random-access memory 2. Solid-state disks 3. Tape drives 4. Magnetic disk
In what way is an operating system like a government?	1. It seldom functions correctly 2. It creates an environment within which other programs can do useful work. 3. It performs the most useful functions by itself. 4. It is always concerned primarily with the individual's needs
Embedded computers typically run on a ____ operating system	1. Real-time 2. Windows XP 3. Network 4. Clustered
Bluetooth and 802.11 devices use wireless technology to communicate over several feet, in essence creating a ____.	1. Local-area network 2. Wide-area network 3. Small-area network 4. Metropolitan-area network

A(n) _____ is the unit of work in a system.	1. Process 2. Operating System 3. Timer 4. Mode bit
A _____ provides a file-system interface that allows clients to create and modify files	1. Compute-server system 2. File-server system 3. Wireless network 4. Network computer

A ____ is a custom build of the Linux operating system	1. LiveCD 2. Installation 3. Distribution 4. VMWare Player
A ____ can be used to prevent a user program from never returning control to the operating system	1. Portal 2. Program Counter 3. Firewall 2 4. Timer

_____ is a set of software frameworks that provide additional services to application developers.	1. System programs 2. Virtualization 3. Cloud computing 4. Middleware
____ operating systems are designed primarily to maximize resource utilization.	1. PC 2. Handheld computer 3. Mainframe 4. Network
In length instruction some programs wants a complex instruction set containing more instruction, more addressing modes and greater address rang, as in case of	1. RISC 2. CISC 3. Both 4. None
----------is not a good practice in order to enhance the security offered by password authentication?	1. Enabling account lockout controls 2. Enforcing a reasonable password policy 3. Using password verification tools and password cracking tools against your own password database file 4. Allowing users to reuse the same password

Match the items of List-II with the items of List-I and indicate the code of correct matching. List-I (Model of Organisational Behaviour) List-II (Employee Orientation) (a) Autocratic — (i) Responsible behaviour (b) Custodial — (ii) Security and benefits (b) Custodial — (iii) Job performance (d) Collegial — (iv) Obedience Answer of (a) (b) (c) (d) in List-ll	1. (iv) (ii) (iii) (i) 2. (iv) (iii) (i) (ii) 3. (i) (iv) (iii) (ii) 4. (iv) (i) (ii) (iii)
1. To control access by an active entity such as individual or process to an object encompasses designing:	1. Access Rules 2. Access Matrix 3. Identification controls 4. Access terminal
1. Rule-Based Access Control access is defined based on rules. Such rules would fit within what type of access control?	1. Discretionary Access Control (DAC) 2. Mandatory Access control (MAC) 3. Non-Discretionary Access Control (NDAC) 4. Lattice-based Access control

1. In which of the following access control model, a central authority will determine what objects the subjects have access to and the access control is based on role or on the organizational security policy?	1. Mandatory Access Control 2. Discretionary Access Control 3. Non-Discretionary Access Control 4. Rule-based Access control

In which access control model, there are sets of elements which have greatest lower bound of values and the least upper bound of values?	1. Mandatory model 2. Discretionary model 3. Lattice model 4. Rule model
1. If a user admitting an identity to a system regularly in the form of a log-on ID, then what type of act it is?	1. Authentication 2. Identification 3. Authorization 4. Confidentiality
1. ---------- is the type of discretionary access control (DAC) model which is based on an individual's identity.	1. Identity-based Access control 2. Rule-based Access control 3. Non-Discretionary Access Control 4. Lattice-based Access control

Which of the following security services provided by Kerberos?	1. Availability and nonrepudiation 2. Confidentiality and authentication 3. Confidentiality and integrity 4. Availability and authorization
Which of the following is considered as foremost parameter to decide the quality of a biometric device?	1. Accuracy 2. Acceptability 3. Enrollment time 4. Invasiveness
Stronger security can be provided by means of incorporating one of the following. What it is?	1. Password and a PIN 2. One-time password 3. Pass phrase and a smart card 4. Fingerprint
One of the following cannot be considered as an example of a deterrent access control?	1. Encryption 2. Auditing 3. Awareness training 4. Antivirus software

Mention True or false. In role-based access control, every user takes one or more roles, and based on the roles, each user is allowed to access the system resources.	1. True 2. False 3. 4.
Mention True or false. Authorization deals with deciding who the user is, and the authentication deals with restricting what operations or data the user can access.	1. True 2. False 3. 4.
---------- form of biometric device is least accepted for authentication purpose.	1. Iris scan 2. Retina scan 3. Fingerprint 4. Facial geometry

Initially what step has to be carried out to define access control?	1. Accountability logging 2. ACL verification 3. Subject authorization 4. Subject identification

15. An authentication factor which is physiological or behavioural characteristic unique to a subject is called?	1. Account ID 2. Biometric factor 3. Token 4. IQ
Let us assume that an organization is using discretionary access control model for security. Then it is vulnerable to one of the following attack. What it is?	1. SYN flood 2. Impersonation 3. Denial of service 4. Birthday attack
15. Which one of the following access controls defined based on the use of labels?	1. Discretionary 2. Mandatory 3. Role-based 4. Nondiscretionary
1. In order to authenticate the users requesting to access the resources, One of the following technologies meant which can be used for fingerprint scanning, iris scanning and retina scanning	1. Micrometrics 2. Macrometrics 3. Biometrics 4. MicroBiometrics

Which return type cannot return any value to the calling function?	1. int 2. float 3. void 4. double
Which operator cannot be used with floating point numbers?	1. + 2. - 3. % 4. *
Which of the following is the conversion character associated with short integer?	1. %c 2. %h 3. %e 4. %f
Which of the following is a valid variable name?	1. Initial.Name 2. A+B 3. $amt 4. Floats

What will be output for printf("%c", 65);	1. 65 2. A 3. 10 4. a

To find a raised to power of b , the function we would use is	1. a^b 2. a**c 3. pow(b,A. 4. pow(a,B.
To check the equality of two variables a and b , in C language	1. if (a=b) 2. if (a equalto(b)) 3. if (a==b) 4. if((a,b)=0)

The declaration unsigned u indicates:	1. u is a character 2. u is an unsigned integer 3. u is unsigned character 4. u is unsigned long integer

How many times “Hi” will be printed.
{
int x=0;
printf(“Hi”);
findarea(x);
}
	1. 1
	2. 2
	3. infinite
	4. 0

Given a= 00110010 (50) . Write C statements to determine whether bit 1 in the above pattern is ON/OFF.(least significant bit is bit 0)	1. a & 0x03 2. a|0x03 3. a & 0x02 4. a | 0x02

For using clrscr() function, the standard library file to be included	1. conio.h 2. stdio.h 3. math.h 4. stdstream.h
Which operator retrieves the lvalue of a variable?	1. & 2. * 3. –> 4. #
Which operator produces the one's complement of the given binary value?	1. Logical AND 2. Bitwise AND 3. Logical OR 4. Bitwise NOT

Which operator is used to dereference a pointer?	1. & 2. * 3. –> 4. ~
Which operator has the lowest precedence?	1. Sizeof 2. Unary 3. Assignment 4. Comma

Which of the following is not a character constant?	1. ‘A’ 2. “A” 3. ‘ ’ 4. ‘*’

Which of the following are true statements I. goto can be used in for loop to come out of the loop II. continue takes you to beginning of the loop III. continue can be used in switch statement IV. break can be used in switch statement	1. Only statement (I) is correct 2. Only statement (II) is correct 3. Both statements II & III are' correct 4. only IV is correct
When two strings are equal strcmp(stg1,stg2) returns	1. -1 2. 0 3. 1 4. true
What is ascii value for 0 and 9	1. 30, 39 2. 31, 40 3. 31,39 4. 56, 64 48-57

To read a character and echo the character on to screen , with out the need to press enter key, appropriate function is	1. getchecho() 2. getch() 3. getchar() 4. getcharecho()
The operator which compares two values is	1. Assignment 2. Relational 3. Unary 4. Equality
Ternary operator operates on how many operands?	1. 1 2. 2 3. 3 4. 4
Structure declaration and definition and are placed above void main(). Which one of the following statements are NOT true.	1. its required by all functions 2. Its global declaration 3. Space available 4.

	They are global declaration and available to all
Memory is allocated for a function when the function is	1. declared 2. defined 3. called 4. returned
Identify the erroneous expression.	1. X=y=2, 4; 2. res = ++a * 5; 3. res = /4; 4. res = a++ –b *2

Following code converts c to char c =’A’ c=c+’a’-65	1. to upper case 2. to lower case 3. to a number 4. to character c

Conversion specifier for string in scanf statement are	1. %d 2. %f 3. %c 4.%s %s
ASCII value for a , z are	1. 66 ,91 2. 65,90 3. 97, 122 4. 96, 121
ASCII value for A , Z are	1. 66 ,91 2. 65,90 3. 97 , 122 4. 96 121
*(&num) is equivalent to writing	1. &num 2. *num 3. num 4. 0

Which of the following is the address operator?	1. @ 2. # 3. & 4. %
In the template <class T> declaration, what is T stands for	1. a generic data type 2. an arbitrary class 3. a class defined earlier 4. none of the above
There's a notion of _____ and _____. A subject is allowed to temporarily reduce her level or set of compartments from (L, C) → (L ' , C')	1. Maximum security level, Current security level 2. Current security level, Audit security level 3. Temporary security level , Current security level 4. Audit security level, Maximum security level

The implements Multi–Lateral security by adding compartments	1. Biba's model 2. Integrity Policies 3. Bell–LaPadula model 4. Low Water Mark
The model does not give users power to alter access control in the system manifested in a principle called tranquility	1. Bell–LaPadula model 2. Biba model 3. Low Water Mark model 4. Ring model

The Bell–LaPadula model leverages mandatory _____	1. Access control 2. Kernel control 3. System control 4. Privacy control
The _____ requires that a subject S can read an object O only if S dom O and any DAC permits it ("read down")	1.Simple Security Condition 2. Complex security condition 3. *-Property 4. Multi lateral security

Lipners model combines _____ and _____ models	1. Biba model , Bell–LaPadula model 2. Low Water Mark model , Biba Model 3. Low Water Mark model, Ring Policy model 4. Ring Policy model, Bell–LaPadula model
In MAC Tuples ,Process can write object when: Object MAC range (lr, hr); process MAC label pl	1. pl ⨋ (lr, hr) 2. pl U (lr, hr) 3. pl ∈ (lr, hr) 4. pl dom hr
In clark Wilson model IVPs must ensure that all the _____ are in valid state when the IVP is run	1.Unconstrained data items 2. Constrained data items 3. Transforamtion data items 4. Integrity verification data items
In clark Wilson model a proper_____ log files to be maintained	1. Active 2. Data 3. Audit 4. Internal

In Biba Model A subjects can only read an object o if	1. Is > Io 2. LO > LS 3. Is ≤ Io 4. LO > LS
In _____ , each subject S and object O is assigned an integrity level in I	1. Biba's model 2. Bell–LaPadula 3. Low Water Mark 4. Integrity Policies
If there is an information path from $O_1 \in O$ to $O_{n+1} \in O$, then enforcement of the low-water-mark policy requires that _____ for all i>n	1. $i(O_n) > i(O)$ 2. $i(O_{n-1}) \neq i(O_1)$ 3. $i(O_{n-1}) \geq (O_1)$ 4. $i(O_{n+1}) \leq i(O_1)$
If (s,o,a) ∈ b and access is in alter mode, then fC(s) ≤ fO(o) ; also, if subject s has access to object o in alter mode, then fO(o') ≤ fO(o) for all objects o' accessed by s in observe mode	1. Simple Security (ss)-Property 2. Discretionary Simple (ds)-Property 3. *-Property (star property) 4. Discretionary Security (ds)-Property

Access permissions defined through an access _____ and _____.	1. Control matrix, Security levels 2. Control level, Access level 3. Control matrix, Access level 4. Security , Permission
Access must be permitted by the access control matrix: if (s,o,a) ∈ b, then a ∈ Mso	1. Simple Security (ss)-Property 2. Discretionary Security (ds)-Property 3. Security Property (sp) 4. Discretionary Simple (ds)-Property
A system has _____ when subjects or objects levels and compartments do not change in a way that violates a given security policy.	1. Weak Tranquility 2. Tranquility 3. Normal Operation 4. Unclassified level

_____means that when a system is in use, subjects and objects levels and compartments do not change	1. Weak Tranquility 2. Tranquility 3. Normal Operation 4. Unclassified Level
_____ means ensuring timely and reliable access to and the use of information.	1. Integrity 2. Availability 3. Confidentiality 4. Threat intelligence
_____ includes activities to protect the usability, reliability, integrity and safety of the network	1. Disaster security 2. Information security 3. Network security 4. Application security
_____ includes activities to protect the usability, reliability, integrity and safety of the network	1. Disaster security 2. Information security 3. Network security 4. Application security

Which operator is used to insert the data into file?	1. >> 2. << 3. < 4. none
Use of Big **oh notation (O) notation?**	1. To Specify Worst case complexity 2. To specify Best case complexity 3. To specify average case complexity 4. None
Which of the following are parts of any organisation given by Mintzberg?	1. Operating core 2. Strategic apex 3. Middle line 4. All of the above

_____ is a set of autonomous units, each typically machine bureaucracies, coordinated by a central headquarters.	1. Divisional structure 2. Professional bureaucracy 3. Adhocracy 4. None of the above.

Which of the following is **not true** of the span of control?	1. The average span of control affects the number of managers. 2. Geographical separation of staff influences the span that can be coped with. 3. High spans of control are found in supervision of line production. 4. The technical content of jobs has little effect on the required span of control of supervisors.
Which one of the following statements most accurately describes the nature of an ethical issue in business?	1. Ethical issues can be resolved if you do what you think is right. 2. Ethical issues can be resolved by following the guidance of religious beliefs. 3. Ethical issues are difficult because all the choices may do some harm. 4. Ethical issues are difficult because the results of a decision are hard to predict.
Which of the following statements is **false** about the behavioural theories of leadership?	1. Consideration is people-oriented 2. Production-orientation has little concern for people 3. High initiating structure leaders do not set deadlines .

	4. Employee-centred leader behaviour focuses on people.
There are several practical steps that managers can take to improve the level of socially responsible behaviour in their company. Which of the following is **the least** likely to work?	1. Publishing a statement of ethical policy in a booklet for staff. 2. Creating a system of ethical reporting which is widely accessible on their website. 3. Leading by example. 4. Creating ethical structures.
The number of persons which can be effectively supervised by a single executive or departmental head should be limited to _____ in an average firm.	1. six 2. ten 3. fourteen 4. twenty
The managerial grid used the behavioural dimensions "concern for people" and _____	1. "Concern for integrity" 2. "Concern for profit" 3. "Concern for environment" 4. "Concern for production"
The following phrase is used to describe a leader:	1. relies on control strategies 2. challenges the status quo 3. uses traditional influence 4.

	acts with established culture
The following is not a principle of organisation.	1. Principle of exception 2. Principle of balance 3. Principle of complexity 4. Principle of co-ordination
Responsibility always flows from	1. Superior to subordinate 2. Subordinate to superior 3. Both from the superior to the subordinate, and from the subordinate to the superior 4. None of the answers is correct

Leadership which enlists the help of subordinates as a group to solve problems is:	1. Situational 2. Laissez-faire 3. participative 4. employee-oriented
In a line organisation, the business activities are divided into following three types.	1.Accounts, Production, Sales 2. Production, Quality, Sales 3. Production, Quality, Maintenance 4. Production, Maintenance, Sales

_____ builds trust among individuals and in business relationships, which validates and promotes confidence in business relationships.	1. Ethical conduct 2. Social responsibility 3. Ethical responsibility 4. Business ethics
____ dependent on template parameter?	1. base class 2. abstract class 3. method 4. None of the mentioned

What is the output of this program?
 	
#include < iostream >
 	
#include < string >
 	
using namespace std;
 	
template < typename T >
 	
void print_mydata(T output)
 	
{
 	
cout << output << endl;
 	
}
 	
int main()
 	
{
 	
double d = 5.5;
 	
string s("Hello World");
 	
print_mydata(d);
 	
print_mydata(s);
 	
return 0;
 	
}
	1.
	5.5Â Hello World
	
	2.
	5.5
	
	3.
	Hello World
	
	4.
	none of the mentioned

Non-type template allows how many legal parameters?	1. 1 2. 2 3. 3 4. 4

Is overloading of the function templates allowed in C++?	1. Yes 2. No 3. May Be 4. Can't Say
The query to add a unique constraint using alter table command on name column in the proctor table is proctor(id number,name varchar2(10),numberofstudents number, address varchar2(10));	1. alter table proctor constraint proctor_name_uk unique(name); 2. alter table proctor add constraint proctor_name_uk unique; 3. alter table proctor add constraint proctor_name_uk unique(name); 4. alter table proctor add proctor_name_uk unique(name);

The query to add a check constraint using alter table command on numberofstudents column in the proctor table such that the number of students is between 1 and 20 is proctor(id number,name varchar2(10),numberofstudents number, address varchar2(10));	1. alter table proctor add proctor_numberofstudents_ck check(numberofstudents>=1 and numberofstudents<=20); 2. alter table proctor add constraint proctor_numberofstudents_ck check(numberofstudents>=1 and numberofstudents<=20); 3. alter table proctor add proctor_numberofstudents_ck check(numberofstudents>1 and numberofstudents<20); 4. alter proctor add constraint proctor_numberofstudents_ck check(numberofstudents>=1 and numberofstudents<=20);
Select transitive dependency from the following	1. x-->y then wy-->z 2. X--> YZ then X-->Y , X--> Z 3. X-->Y , Y-->Z then X-->Z 4. X-->Y then XZ--> YZ

Select the query to add not null constraint on the numberofstudents column in the proctor table proctor(id number,name varchar2(10),numberofstudents number, address varchar2(10));	1. alter table add constraint proctor_numberofstudent_nn not null; 2. alter table proctor add constraint proctor_numberofstudent_nn not null; 3. alter table proctor modify numberofstudents number constraint proctor_numberofstudents_nn not null; 4. alter table proctor modify numberofstudents constraint proctor_numberofstudents_nn not null;
Select the query that establishes the foreign key constraint between the given two tables . Here proctor id is a foreign key in the student table student(regno number, name varchar2(10), address varchar2(10), proctorid number); proctor(proctorid number, proctorname varchar2(10))	1. alter table student add constraint foreign key references proctor(proctorid); 2. alter table student add constraint student_proctorid_fr foreign key references proctor(proctorid); 3. alter table student add constraint student_proctorid_fr foreign key(proctorid) references student(proctorid); 4.

	alter table student add constraint student_proctorid_fr foreign key(proctorid) references proctor(proctorid);
Identify the normal for the given relational schema employee (id, name, projectid, projectname, projectlocation) . An employee can work on multiple projects.	1. employee relation is in first normal form 2. employee relation is in third normal form 3. employee relation is in second normal form 4. None of the options are true
Foreign keys can be established	1. only at the column level 2. only at the table level 3. Either at the table level or at the column level 4. All the given options are wrong

For any relation R(pqrs) the set of FD's are F= {pq-->r, q-->s}. If pq is the key for the relation then	1. R is in third normal form 2. R is in second normal form 3. R is in Boyce Codd normal form 4. none of the options are true
For a relation R(ABC) with functional dependencies f={A-->B, B-->C,C-->A) is in	1. second normal form 2. third normal form 3. Boyce Codd normal form 4. All the options are correct
F+ for the set of functional dependencies F = {A-->B,B-->C} is	1. {A-->A,B-->B,C-->C,A-->B, B-->C,A-->C } 2. {A-->B, B-->C,AB-->C } 3. {A-->A,B-->B,C-->C B-->C,A-->C } 4. {A-->A,B-->B,C-->C}

Consider the following schemas
Product
(productid varchar2(10), productname varchar2(10), product_price number,manufacturing_date date, vendorId varchar2(10))
Vendor
(vendorId varchar2(10), vendorname varchar2(10), location varchar2(10))
The SQL query to establish check constraint on the location column on location column in the vendor table such that location accepts only US or UK is
	1.
	alter table vendor add constraint vendor_location_ck
	check(location in ('US','UK'));
	2.
	alter table vendor add constraint vendor_location_ck
	check(location = 'US' or location ='UK');
	3.
	Both the given SQL queries are correct
	4.
	Only one of the given SQL query is correct

Consider the following schemas Product (productid varchar2(10), productname varchar2(10), product_price number,manufacturing_date date, vendorId varchar2(10)) Vendor (vendorId varchar2(10) ,vendorname varchar2(10) ,location varchar2(10)) The SQL query to establish vendorid as the foreign key in the product table is	1. alter table product add constraint foreign key(vendorId) references vendor(vendorId); 2. alter table product add constraint product_vendorid_fr foreign key references vendor(vendorId); 3. alter table vendor add constraint product_vendorid_fr

	foreign key(vendorId) references vendor(vendorId); 4. alter table product add constraint product_vendorid_fr foreign key(vendorId) references vendor(vendorId);
Consider the following schemas Product (productid varchar2(10) ,productname varchar2(10), product_price number,manufacturing_date date, vendorId varchar2(10)) Vendor (vendorId varchar2(10) ,vendorname varchar2(10) ,location varchar2(10)) The SQL query to establish default price as 100 in the product_price column in the product table is	1. alter table product add constraint price default 100; 2. alter table product modify product_price number default 100; 3. alter table vendor add price default 100; 4. alter table product add constraint price default 100;

A-->A according to rule of	1. Reflexivity 2. Transitivity 3. Union 4. Decomposition

A table is in second normal form if	1. It is in first normal form and has no partial key dependencies 2. It is not having multivalued attributes 3. It's partial composite key functionally determines an attribute 4. None of the given options are true
A relation R(ABC) has all attributes to be prime attributes. The highest normal form satisfied by R is	1. BCNF 2. Third Normal Form 3. Fourth Normal Form 4. None of the given options are true
A relation R which is having a non-prime attribute transitively dependent on the key is not in	1. Boyce Codd normal form 2. Third normal Form 3. Fourth Normal Form 4. Any of the given Normal Forms

Which of the following problem is undecidable?	1. Membership problem for CFL 2. Membership problem for regular sets 3. Membership problem for CSL 4. Membership problem for type 0 languages
Recursive languages are	1. A proper super set of CFL 2. Always recognized by PDA 3. Are also called type 0 languages 4. Always recognized by FSA
Recursive enumerable languages are not closed under	1. Union 2. Homomorphism 3. Complementation 4. Concatenation

The statement “ A Turing machine cannot solve halting problem” is	1. True 2. False 3. Still an open problem 4. Cannot say
Every non-deterministic TM can be simulated by a deterministic TM	1. True 2. False 3. Some times 4. None of the choices.
Context-sensitive languages can be recognized by	1. Deterministic PDA 2. Non-deterministic PDA 3. Linear bounded automaton 4. Finite state automaton

A multi-head TM can be simulated by a single head TM	1. True 2. False 3. Some times 4.

	None of the choices.
To determine whether the stream object is currently associated with a file ___ member function is used	1. is_open 2. Buf 3. String 4. None of the above

void main()
{
struct books{
float st1;
char st2[6];
}*ptr;
printf("%d",sizeof(ptr));
}
	1.
	5
	2.
	6
	3.
	8
	4.
	10

which of the following is the correct way of declaring a float pointer variable:	1. float ptr; 2. float **ptr; 3. *float ptr; 4. float *ptr;
What is the size of a C structure?	1. C structure is always 128 bytes. 2. Size of C structure is the total bytes of all elements of structure. 3. Size of C structure is the size of largest element. 4.

	Size of C structure is the size of smallest element.
What is actually passed if you pass a structure variable to a function?	1. Copy of structure variable 2. Reference of structure variable 3. Starting address of structure variable 4. Ending address of structure variable

void main()
{
printf("%d %d", sizeof(int *), sizeof(int **));
}
	1. 2 0
	2. 0 2
	3. 2 2(if 16 bit)
	4. 2 4
	—none match since–
	5. Compiler gives = 8,8(64 bit)

void main()
{
int i=3, *f, **g;
f=&I;
g=&f;
printf("%d %d %d", *f, **g, *(*g));
}
	1. 4 4 4
	2. 0 0 0
	3. 3 3 3
	4. 4 3 3

void main()
{
int a[]={1, 2, 3,4}, *p;
p=a;
++*p;
printf(“%d”, *p);
}
	1.
	2
	2.
	1
	3.
	3
	4.
	4

void main()
{
int *pt, q=20;
pt=&q;
*pt+=1;
printf(“%d,%d”,*pt,q)
}
	1.
	20, 20
	2.
	20, 21
	3.
	21, 20
	4.
	21, 21

void main()
{
char st1=”qwty”;
char st2[]=”qwty”;
 	
printf(“%d %d %d”, sizeof(st1),sizeof(s2t),sizeof(“qwty”))
}
	1.
	2 5 5
	2.
	2 4 4
	3.
	8 5 5 (if it is char* st1)
	4.
	2 4 5

void main()
{
char fast, *faster, *fastest;
printf(“%d..%d”, sizeof(faster),sizeof(fastest))
}
	1.
	4..2
	2.
	2..2
	3.
	4..4
	4.
	2..4

void main()
{
char *pt=NULL;
char *p=0;
 	
if(pt)
printf(“PT”);
else
 	
printf(“Nullvlauept”);
if(p)
printf(“P”);
else
 	
printf(“Nullvlauep”);
}
	1.
	PT P
	2.
	Nullvlauept P
	3.
	PT Nullvlauep
	4.
	Nullvlauept Nullvlauep

void main()
{
char *pt;
pt=”World”;
printf(“%cn”, *&*pt);
}
	1.
	World
	2.
	Some address will be printed
	3.
	Wn
	4.
	W

void main()
{
char *f=”Hello”;
printf(f)
}
	1.
	Hello
	2.
	H
	3.
	Hello followed by garbage value
	4.
	Garbage value

void main()
{
char *f;
printf(“%d %d”, sizeof(*f),sizeof(f))
}
	1.
	1 1
	2.
	1 2
	3.
	2 1
	4.
	2 2

void main()
{
struct books{
int pages;
char str[4];
}b;
printf("%d",sizeof(b));
}
	1.
	5
	2.
	6
	3.
	7
	4.
	8

void main()
{
struct paint{
int type;
int color;
}p1, p2;
p1.type=1;
p1.color=5;
if(sizeof(p1)==sizeof(p2))
{
printf("SAME");
}
else
{
printf("DIFFERENT");
}
return 0;
}
	1.
	Garbage value
	2.
	DIFFERENT
	3.
	Compiler error
	4.
	SAME

```
void main()
{
        struct laptop
        {
        int cost;
        char brand[10];
        };
        struct laptop L1={5000,"ACER"};
        struct laptop L2={6000,"IBM"};
        printf("Name=%s",strcat(L1.brand,L2.brand));
}
```

1.
ACERIBM
2.
IBM ACER
3.
ACER IBM
4.
IBMACER

```
void main()
        {
        sturct tree
        {
                int q,w;
        };
struct tree t1={10};
printf("%d", t1.w);
        printf("%d", t1.q);
}
```

1.
0 0
2.
10 0
3.
0 10
4.
10 10

```
void main()
        {
        sturct ship
        {
                char paint[10];
        }b1,b2;
        strcpy(b1.paint,"RED");
printf("%s", b1.paint);
        b2=b1;

strcpy(b2.paint,"YELLOW");
printf("%s", b1.paint);
}
```

1.
YELLOW RED
2.
RED YELLOW
3.
YELLOW YELLOW
4.
RED RED

void main()
{
sturct bus
{
int sz;
char type[10];
}b1,b2;
b1.sz=20;
b2=b1;
printf("b2=%d", b2.sz);
}
	1.
	boat2=0
	2.
	boat2=-1
	3.
	boat2=20
	4.
	boat2=some garbage value

The address operator & cannot act on	1. R-values and Arithmetic expressions 2. Local variables 3. Global variables 4. Member of a structure
The statement int **a;	1. is illegal 2. is legal but meaningless 3. pointer to pointer variable 4. pointer variable
Select the valid statement about C structure.	1. Structure elements are stored on random free memory locations 2. Structure elements are stored in register memory locations 3. Structure elements are stored in contiguous memory locations 4.

	Structure elements are stored in detached memory locations

function(){
int i=1, s=1;
while(S<=n)
{ i++;
s=s+i;
printf(“hello”)
}
}
 	
What is the time complexity of the given function()?
	1.
	O(n)
	2.
	O(n^2)
	3.
	O(√n)
	4.
	O(nlogn)

Function(){
int I,j,k;
for(i=n/2;i<=n;i++)
for(j=1;j<=n;j=2*j)
for(k=1;k<=n;k=k*2)
printf(“Hello”);
}
What is the time complexity of the given function()?
	1.
	$O(n^* (Log_2 n)_2)$
	2.
	$O(n^* (Log_2 n))$
	3.
	$O(n_2^* (Log_2 n))$
	4.
	$O(n_3)$

Comment on the following pointer declaration. int *ptr, p;	1. ptr and p, both are pointers to integer. 2. ptr is a pointer to integer, p is not. 3. ptr is pointer to integer, p may or may not be. 4. ptr and p both are not pointers to integer.
Choose the correct statement about C structure.	1. Structure members cannot be initialized at the time of declaration 2. Structure elements can be initialized at the time of declaration. 3. Only integer members of structure can be initialized at the time of declaration 4.

	Only float members of structure can be initialized at the time of declaration

struct node
{
int i;
float j;
};
struct node *s[10];
	1.
	An array, each element of which is a pointer to a structure of type node
	2.
	A structure of 2 fields, each field being a pointer to an array of 10
	3.
	A structure of 3 fields: an integer, a float, and an array of 10 elements
	4.
	An array, each element of which is a structure of type node

You have a class A network address 10.0.0.0 with 40 subnets, but are required to add 60 new subnets very soon. You would like to still allow for the largest possible number of host IDs per subnet. Which subnet mask should you assign?	1. 255.240.0.0 2. 255.248.0.0 3. 255.252.0.0 4. 255.254.0.0
Which of the transport layer protocols is connectionless?	1. UDP 2. TCP 3. FTP 4. Nvt
Which of the following uses network address translation?	1. Routers 2. Network adapter drivers 3. Hubs 4. Windows 95

Which of the following pieces of information can be found in the IP header?	1. Source address of the IP packet 2. Destination address for the IP packet 3. Sequence number of the IP packet 4. Both Source address of the IP packet and Destination address for the IP packet only –more proper ans– IP version, source IP address, destination IP address, time-to-live
Which layer of the OSI reference model has service point addressing Select one:	1. session layer 2. physical layer 3. transport layer 4. data link layer
WHICH LAYER LINKS THE NETWORK SUPPORT LAYERS AND USER SUPPORT LAYERS?	1. SESSION LAYER 2. DATA LINK LAYER 3. TRANSPORT LAYER 4. NETWORK LAYER
WHICH ADDRESS IDENTIFIES A PROCESS ON A HOST?	1. PHYSICAL ADDRESS 2. LOGICAL ADDRESS 3. PORT ADDRESS 4. SPECIFIC ADDRESS

What is the default subnet mask for a class C network?	1. 127.0.0.1 2. 255.0.0.0 3. 255.255.0.0 4. 255.255.255.0
We also don't want our undeliverable packets to hop around forever. What feature/flag limits the life of an IP packet on the network?	1. Time to Live counter 2. Subnet Mask 3. Header Checksum 4. Wackamole field
The standard suit of protocols used by the Internet, Intranets, extranets and some other networks.	1. Protocol 2. TCP/IP 3. Open system 4. Internet work processor

THE 4 BYTE IP ADDRESS CONSISTS OF....	1. NETWORK ADDRESS 2. HOST ADDRESS 3. BOTH NETWORK ADDRESS and HOST ADDRESS 4. MAC ADDRESS

TCP/IP ..... layer corresponds to the OSI models to three layers.	1. Application 2. Presentation 3. Session 4. Transport
State the following statement is true or false. (i) In class B addresses a total of more than 1 billion addresses can be formed. (ii)Class E addresses are reserved for future or experimental use.	1. True, False 2. True, True 3. False, True 4. False, False
Propagation time of data packets is calculated using Select one:	1. transmission time + delay 2. queuing time + processing delay 3. distance/propagation speed 4. message size/bandwidth
Leaky bucket algorithm works in	1. Transport layer 2. Network layer 3. Data link layer 4. Physical layer
If there are N routers from source to destination, total end to end delay in sending packet P (L->number of bits in the packet R-> transmission rate)	1. N 2. (N*L)/R 3. (2N*L)/R 4. L/R

ICMP IS PRIMARILY USED FOR.....	1. ERROR AND DIAGNOSTIC FUNCTIONS 2. ADDRESSING 3. FORWARDING 4. REVERSING
How many bits internet address is assigned to each host on a TCP/IP internet which is used in all information exchange with the host?	1. 16 bits 2. 32 bits 3. 48 bits 4. 64 bits
End-to-end connectivity is provided from host-to-host in:	1. Network layer 2. Session layer 3. Transport layer ✓ 4. . Data link layer
A SUBSET OF A NETWORK THAT INCLUDES ALL THE ROUTERS BUT CONTAINS NO LOOPS IS CALLED....	1. SPANNING TREE 2. SPIDER STRUCTURE 3. SPIDER TREE 4. ACYCLIC TREE

..... address use 8 bits for the <network> and 24 bits for the <host> portion of the IP address.	1. Class A 2. Class B 3. Class C 4.

	Class D
..... addresses are reserved for multicasting.	1. Class B 2. Class C 3. Class D 4. Class E
Which of the following algorithm shows better best-case complexity?	1. Quick sort 2. Insertion sort 3. Merge sort 4. Selection sort
What is the minimum complexity to perform sorting on an array of n elements?	1. O(n logn) 2. O(n) 3. O(n+logn) 4. O(logn)

Which of the following is not a limitation of the binary search algorithms?	1. must use a sorted array 2. requirement of the sorted array is expensive when a lot of insertion and deletions are needed 3. there must be a mechanism to access the middle element directly 4. the binary search algorithm is not efficient when the data elements are more than 1500
The condition signals the binary search is unsuccessful is,	1. END<BEG+2 2. END>BEG 3. END<BEG 4. END=BEG
Assume that the available memory space is very less. Which of the following sorting algorithm is not suitable for performing the sorting of a large amount of data elements.	1. Bubble sort 2. Insertion sort 3. Merge sort 4. Selection sort

Selection sort is suitable when,	1. If even number of elements are there in the list 2. If odd number of elements are there in the list 3. If number of elements in the list is small 4. If nymber of elements in the list is large
The algorithm which works based on the intervals between the elements of the array is,	1. Bubble sort 2. Insertion sort 3. Shell sort 4. Selection sort
1. A minimum state DFA accepting the language L={w/w belongs {0,1}*} number of 0s and 1s in w are divisible by 3 and 5, respectively} has	1. 15 2. 9 3. 7 4. 8

The clark Wilson model addressess _____ requirments for commercial applications	1.Data Integrity 2.Data Privacy 3. Confidentiality 4.Threat Intelligence

Which of the following attacks would compromise the integrity of system information?	1. Denial-of-service 2. Smurf 3. SQL Injection 4. Fraggle
In clark Wilson model CDIs can only be manipulated by_____	1. Integrity procedure 2. Transforamtion procedure 3. Unconstrained data procedure 4. Integrity verfication procedure
Consider the following schemas Product (productid varchar2(10), productname varchar2(10), product_price number, manufacturing_date date, vendorId varchar2(10)) Vendor (vendorId varchar2(10), vendorname varchar2(10), location varchar2(10)) The SQL query to establish vendorid as the primary key in the vendor table is	1. a. alter table vendor add constraint vendor_vendorid_pr primary key (vendorid); 2. a. alter table vendor add constraint primary key (vendorid); 3. a. alter table vendor add constraint vendor_vendorid_pr primary key ; 4. a. alter table vendor constraint vendor_vendorid_pr primary key (vendorid);

The clause to set the foreign key field to null in the child table on deletion of the corresponding parent key in the parent table is	1. On Delete Cascade 2. On Delete Restrict 3. On Delete Update 4. On Delete Set Null
The clause to automatically delete the entire rows in the child table on deletion of the Parent key in the parent table is	1. On Delete Set Null 2. On Delete Cascade 3. On Delete Update 4. All the given options are wrong
F = {AB-->C,C-->A} , A closure is	1. CA 2. C 3. A 4. ABC
Which if the functional dependencies is not true in a real world scenario	1. registrationnumber --> name 2. pincode --> district 3. personname-->city 4. country-->capital

The relational schema in fourth normal form should not have	1. Multi Valued Dependencies 2. Transitive Dependencies 3. Partial Key Dependencies 4. Should not have any of the given dependencies
A Foreign Key	1. should always be a primary key in the Parent Table 2. should always be a unique key in the Parent Table 3. can be either a primary key or a unique key in the Parent Table 4. All the given options are wrong

_____ mode of addressing is a form of implied addressing:	1.Stack 2. Array 3. Queue 4. Binary

Definition of a language L with alphabet {a} is given as following. L= { a^nk | k > 0, and n is a positive integer constant} What is the minimum number of states needed in a DFA to recognize L?	1. k+1 2. n+1 3. 2^n+1 4. 2^k+1
Which of the following relations is correct, when comparing the worst-case complexity?	1. insertion=quick <selection 2. quick =insertion=selec tion 3.insertion<selec tion<quick 4. none of the above
Which is more suitable (DFS or BFS) if the solution is far from the starting node?	1. DFS 2. BFS 3. 4.
Which is more suitable (DFS or BFS) if the solution is closer to the starting node?	1. DFS 2. BFS 3. 4.

What is the status of the array after the first iteration of quick sort for the given array of elements:5,7,10,12,2,8	1. 5,7,10,12,2,8 2. 2,5,10,12,7,8 3. 2,7,10,12,5,8 4. 5,7,10,2,8,12
What is the status of an array after the first iteration of bubble sort for the given array of elements:5,7,10,12,2,8	1. 5,7,10,12,2,8 2. 2,5,10,12,7,8 3. 2,7,10,12,5,8 4. 5,7,10,2,8,12
Quick sort algorithms are not following the divide and conquer type of algorithm strategy?	1. True 2. False 3. 4.
Merge sort algorithms are following the divide and conquer type of algorithm strategy?	1. True 2. False 3. 4.

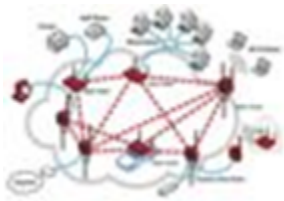
What is the status of the array after the first iteration of insertion sort for the given array of elements:5,7,10,12,2,8	1. 5,7,10,12,2,8 2. 2,5,10,12,7,8 3. 2,7,10,12,5,8 4. 5,7,10,2,8,12

Insertion sort algorithms are following the divide and conquer type of algorithm strategy?	1. True 2. False 3. 4.
Finite automata recognizes --------grammars	1. Type-1 2. Type-2 3. Type-3 4. Type-0
1. The lexical analysis for a modern language such as Java needs The power of which one of the following machine models in a necessary and sufficient sense?	1. A. Finite state automata 2. B. Deterministic pushdown automata 3. C. Non-deterministic pushdown automata

	4. D. Turing machine
When FA M is given which recognizes language L and reverse of L is found by using M then there can be _____Final states	1. 2 2. 3 3. only one 4. any number
The number of states in minimum DFA corresponding to the language (00+10)*100 is	1. 4 2. 3 3. 6 4. 5
Minimal dfa where number of 0's are divisible by 2 and number of 1's divisible by 3	1. 5 2. 6 3. 8 4. 10
Consider the regular language L = (111 + 11111)*. The minimum number of states in any DFA accepting the language is	1. 3 2. 5 3. 8 4. 9

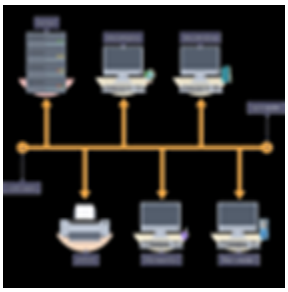
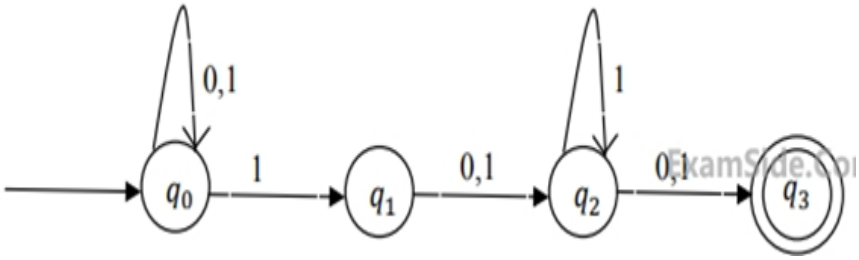
When there are infinite distinguishable strings then there cannot be a ----------	1. automata 2. finite automata 3. regular expression 4. both finite automata and regular expression
_____ means preserving the authorized restriction on the access and disclosure, including means for protecting personal privacy and proprietary information.	1. Availability 2. Integrity 3. Confidentiality 4. Threat intelligence
You fail to back up your files and then drop your laptop breaking it into many small pieces. You have just failed to address which aspect of the CIA Triad?	1. Confidentiality 2. Integrity 3. Availability 4. Authentication

Assume that you are having account in xyz bank with the e-banking facility. During your online transaction, you have tried to carry out multiple transactions where the bank web server denies your request to carry out the transaction. Identify the missing element of the Information security provided to the system	1. Confidentiality 2. Authenticity 3. Availability 4. integrity
Which of the following policy includes both end-users and management on how should they respond to security	1. Technical security policies 2. Administrative security policies 3. Control policies 4. None of the mentioned
Which of the following policy that an organization has to check how the availability of data is made online 24/7?	1. Contingency Planning Policy 2.Backup Policy 3. Retention Policy 4. Data Classification Policy
One of my workstations has gone down and my entire network has gone down. Which topology am I using?	1. Bus maybe bus 2. Star 3. Ring 4. Mesh

1) Which of the following networks is LEAST likely to be a WAN?	1. The Internet 2. A school network 3. A network of bank cash dispensers 4. Intranet
1) Which of the following is NOT a network protocol?	1. UDP 2. TCP 3. LAN 4. SMTP
1) Which type of network needs 'terminators' to function correctly?	1. Bus 2. Star 3. Ring 4. Tree
1) What type of network is this? 	1. Ring 2. Bus 3. star 4. mesh
1) What is the fastest type of network connection?	1. Ethernet 2. Mobile data 3.Fiber optics 4. WiFi

1) What is Metropolitan Area Network?	1. Interconnection of several local area networks by bridging with a backbone line 2. Interconnection of several local area networks without bridging with a backbone line 3. Interconnection of several wireless local area networks by bridging with a backbone line 4. Interconnection of several wireless local area networks by bridging with a coaxial cable

What is an advantage of a LAN?	1. a. You can save money by sharing peripherals like printers. 2. It is limited to a small area. 3. a. Can cover near infinite geographical distance. 4. a. Expensive to set up.

1) What type of network is this? 	1. Ring 2. Bus 3. Star 4. Mesh
1. Which of the following is not a member of the class?	1. Static function 2. Friend function 3. Const function 4. Virtual function
1. Consider the finite automation in the following figure. What is the set of reachable states for the input string 0011? 	1. {q_0, q_1, q_2} 2. {q_0, q_1} 3. {q_0, q_1, q_2, q_3} 4. {q_3}

The statement " computable functions can be identified with a class of partial recursive functions" is from	1. Rice theorem 2. Church-Turing thesis 3. Parikh mapping theorem 4. Pumping lemma
Post systems is equivalent to	1. Turing machine 2. Lambda calculus 3. Godel incompleteness theorem 4. All the choices

1. Medium term schedulers reduce the degree of multiprogramming by _____	1. Interrupt 2. Swapping 3. Terminating 4. Thread
1. Single inheritance, Multiple inheritance, and Aggregation comes under _____	1. Modularity 2. Typing 3. Hierarchy 4. None of the mentioned
1. Which of the following statements is false? A. If a language is regular it can always be accepted by a finite state automaton B. The union of two regular languages is regular C. The intersection of regular languages is regular D. The power of NFA is more than the power of a DFA	1. A 2. B 3. C 4. D
1. Which of the following is the transition function of a NFA?	1. Q x ∑ --> Q 2. Q x ∑ --> 2^Q 3. Q x ∑ --> 2^Q-1 4.

	Q x ∑ U {epsilon}--> 2^Q

What is the minimum number of states in deterministic finite automata (DFA) for string starting with ba2 and ending with ‘a’ over alphabet {a, b}?	1. 10 2. 9 3. 8 4. 6
1. The password to the admins account=”administrator”. The total number of states required to make a password-pass system using DFA would be _____	1. 14 states 2. 13 states 3. 12 states 4. A password pass system cannot be created using DFA
1. The number of states required by a Finite State Machine, to simulate the behaviour of a computer with a memory capable of storing 'm' words, each of length 'n' bits is?	1. 2^(mn) 2. 2^m2^n 3. m+n 4. 2mn

1. The number of states in a minimal deterministic finite automaton corresponding to the language L = {a^n | n=4 } is:	1. 3 2. 4 3. 5 4. 6
1. The language acceptance of a DFA is given as:	1. {w ϵ ∑^* | δ^*(q0,w) ϵ F} 2. {w ϵ ∑ | δ^*(q0,w) ϵ F} 3. {w ϵ ∑^* | δ(q0,w) ϵ F} 4. {w ϵ ∑ | δ(q0,w) ϵ F}
1. The difference between number of states with regular expression (a + b) and (a + b) * is:	1. 1 2. 2 3. 3 4. 0
1. Let w be any string of length n in {a, b}*. Consider 'L' be the set of all strings ending with at least n a's. What is the minimum number of states in non deterministic finite automata that accept 'L'?	1. n+3 2. n+1 3. n 4. 2n

1. Let N be an NFA with n states. Let k be the number of states of a minimal DFA which is equivalent to N. Which one of the following is necessarily true?	1. $K \geq 2^n$ 2. $K \geq n$ 3. $K \leq n^2$ 4. $K \leq 2^n$
1. Given an arbitrary non-deterministic finite automaton (NFA) with N states, the maximum number of states in an equivalent minimized DFA is at least	1. N^2 2. 2^N 3. 2N 4. N!
1. Given an arbitrary non-deterministic finite automaton (NFA) with N states, the maximum number of states in an equivalent minimized DFA is at least.	1. N^2 2. 2^N 3. N! 4. 2N

For a machine to surpass all the letters of alphabet excluding vowels, how many number of states in DFA would be required?	1. 3 2. 2 3. 22 4. 27

1. For a DFA accepting binary numbers whose decimal equivalent is divisible by 4, what are all the possible remainders?	1. 0 2. 0,2 3. 0,2,4 4. 0,1,2,3
1. Finite state machine are not able to recognize Palindromes because:	1. Finite automata cannot deterministically find the midpoint 2. Finite automata cannot remember arbitarily large amount of data 3. Even if the mid point is known, it cannot find whether the second half matches the first 4. All of the mentioned
1. Definition of a language L with alphabet {a} is given as following. L= {a^(nk) | k > 0, and n is a positive integer constant} What is the minimum number of states needed in a DFA to recognize L?	1. k+1 2. n+1 3. 2^(n+1) 4. 2^(k+1)

1. Consider the language L given by the regular expression (a + b) *b(a +b) over the alphabet {a, b}. The smallest number of states needed in a deterministic finite-state automaton (DFA) accepting L is _____:	1. 3 2. 4 3. 5 4. 6
1. Consider the following moves: δ(A,1) = B, δ(A,0) = A δ(B,(0,1))= C δ(C,0) = A (Initial state =A) Applying the string= 011001, the automata will be in which of the states?	1. A 2. C 3. B 4. Invalid String
1. Basic limitation of FSM is that it	1. A. cannot remember arbitrary large amount of information 2. B. sometimes fails to recognize grammars that are regular 3. C. sometimes recognizes grammars are not regular 4. D. None of these

.....means persons authorized have access to receive or use information, documents	1. Confidentiality 2. Integrity 3. Authentication 4. Availability
.....is concerned with the prevention of improper or unauthorized modification of information	1. Confidentiality 2. Integrity 3. Authentication 4. Availability
..... is the machine to recognize the context sensitive languages	1. FA 2. NFA 3. Moore machine 4. LBA

.... used to ensures the security of telecommunications confidentiality and integrity	1. AppSec 2. ComSec 3. IdAM 4. VPN
... virus is unable to scan but the anti-virus	1. Cavity Virus 2. Prepending Virus 3. Appending Virus 4.

	Stealth Virus
. Which of the following is /are the functions of the operating system? i) Sharing hardware among users. ii) Allowing users to share data among themselves. iii) Recovering from errors. iv) Preventing users from interfering with one another. v) Scheduling resources among users.	1. i, ii, iii and iv only 2. ii, iii, iv and v only 3. i, iii, iv and v only 4. All i, ii, iii, iv and v
. State True or False. i) In spooling high-speed device like a disk is interposed between a running program and low-speed device in Input/output. ii) By using spooling for example instead of writing directly to a printer, outputs are written to the disk.	1. i-True, ii-False 2. i-True, ii-True 3. i-False, ii-True 4. i-False, ii-True
------is a global communications hub that connects data from all across the world.	1. WWW 2. HTTP 3. FTTP 4. HTML

---- a context free grammar to generate expression with balanced parenthesis.	1. S-->(S)| ε 2. S-->(S) 3. S-->S| ε 4. S-->S
(i). Virtual function overloading is not a syntax error. (ii). Virtual function overloading might not achieve polymorphism concept Which of the above statement(s) are true?	1. Only (i) 2. Only (ii) 3. Both (i) and (ii) 4. Neither (i) nor (ii)
(a+b)(cd)*(a+b) denotes the following set	1. {a(cd)^nb|n>=1} 2. {a(cd)^n>=1}U{b(cd)^n|n>=1} 3. {a(cd)^na|n>=0}U{a(cd)^nb|n>=0}U{b(cd)^na|n>=0}U{b(cd)^nb|n>=0} 4. {ac^nd^nb|n>=1}
Which statement is NOT CORRECT?	1. In a database approach, the maintenance of data and metadata is easier 2. In a database approach, applications do not have their own files, but all applications access the same version of the data by interfacing with the DBMS 3. In a database approach, there is typically less storage needed compared to the file approach 4. In a database approach, the data definitions or metadata are stored in the applications accessing the data.

Which of the following is correct about class and structure?	1. A class can have member functions while a structure cannot. 2. class data members are public by default while that of the structure are private. 3. Pointer to structure or classes cannot be declared. 4. class data members are private by default while that of a structure are public by default

Which of the following adopts a top-down approach?	1. Object-Oriented Programming 2. Procedural Programming 3. Pure - Object-Oriented Programming 4. none
What happens if the base and the derived class contain a definition of a function with the same prototype?	1. The compiler reports an error on compilation. 2. The only base class function will get called irrespective of the object 3. Only derived class function will get called irrespective of the object. 4. The base class object will call the base class function and the derived class object will call the derived class function.

What does overriding a method mean? .	1. Changing the number and/or type of parameters of a method 2. Changing the return type of a method. 3. Writing a method in the child class that has the same header as a method in the parent 4. Implementing an abstract method.
In a mechanistic structure, there is_____.	1. high formalisation. 2. low formalisation. 3. no formalisation. 4. cross-functional formalisation.
In _____, we combine signals from different sources to fit into a larger bandwidth.	1. line coding 2. block coding 3. spread spectrum 4. none of the above
If an organisation is getting a new network they will need to think about existing systems to integrate. Which of the below would NOT be a reason for this	1. Less maintenance 2. a. More often networks are not developed from scratch but need to fit in with existing systems 3. It must support any peripherals already in use, e.g. bar code readers, printers, etc 4.

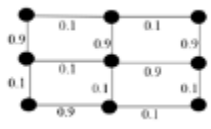
	They will want the system to fit in with existing pcs to save money where possible
If (s,o,a) ∈ b and access is in observe mode, then fS(s) ≥ fO(o).	1. Simple Security (ss)-Property 2. Discretionary Security (ds)-Property 3. Security Property (sp) 4. Discretionary Simple (ds)-Property
How many classes can be defined in a single program	1. Only 1 2. Only 100 3. Only 999 4. As many as you want
Create a rectangle object with a width of 5 and a height of 12.	1. Rectangle r = new Rectangle(5,10) 2. Rectangle r = new Rectangle(5,12) 3. Student r = new Student(5,12) 4. Student r = new Rectangle(5,12)
An _____ is an instance or of a copy of a class.	1. Class 2. Object 3. Attribute 4.

	none

A software object's behavior is exposed through ___.	1. methods 2. encapsulation 3. abstraction 4. inheritance
A Lecturer is an Employee." This statement can best describe which object orientation concept?	1. Polymorphism 2. Inheritance 3. Encapsulation 4. Generalization
A collection of methods with no implementation is called an ___.	1. block code 2. comment 3. interface 4. blueprint
_____ is responsible for gathering and recording the requirements, agreements, and decisions made in every workshop.	1. Executive Sponsor 2. Visionary 3. Scribe 4. Project Manager

_____ solution requires reasoning built on knowledge and experience	1. Algorithmic Solution 2. Heuristic Solution 3. Random Solution 4. None of these
When a class becomes a friend of another class they are additionally getting access	1. to:Private 2. Protected 3. Public 4. None of the above
What does the word **virtual** do when placed in front of a member function in C++?	1. Forces derived classes to define the function to compile. 2. Allows derived classes, not required, to define the function. 3. Do not place the function in the text segment if it is not called. 4. None of the above.
Assume that all the elements of the array, which is to be sorted is not known before. But, the array should always be maintained as sorted array. Which of the following algorithm is suitable in this situation?	1. Insertion 2. Extraction 3. Selection 4. Distribution

RAD Software process model stands for _____ .	1. Rapid Application Development. 2. Relative Application Development 3. Rapid Application Design 4. Recent Application Development.
Which among the following is false, for a member function of a class	1. All member functions must be defined 2. Member functions can be defined inside or outside the class body 3. Member functions need not be declared inside the class definition 4. Member functions can be made friend to another class using the friend keyword

The following undirected graph:  The number of minimum-weight spanning trees of the graph is _____.	1. 3 2. 4 3. 5 4. 2

Where an object of a class gets stored?	1. Heap 2. Stack 3. Disk 4. File
The function of MUA in email is	1. Formats message 2. Listing mails 3. Exchanges message 4. Formats message
The dynamic update occurs when	1. Server boots 2. New browser installed 3. Windows client created 4. DHCP server renews

Determines the protocol which dynamically updating name server records	1. RFC 2136 2. RFC 2316 3. RFC 2613 4. RFC 2163
Which of the following is a root level label in the domain name system?	1. stc 2. museum 3. bizz 4. ong
Active directory is mainly supported by	1. Dynamic DNS 2. DNS 3. DHCP 4. Domain server
A Client Echoes a character but only after a full line in which telnet mode?	1. Server 2. Command 3. Character 4. Default

Hardware Devices like a router, switch, camera and other IoT based devices remotely manage command-line interface communication using	1. File transfer protocol 2. Routing protocol 3. Wired LAN 4. Telnet Protocol
If you face an issue in establishing a web page in any browser and that issue cannot even be resolved by switching over pages then the reason for it is	1. DNS cache not cleared 2. DNS not updated 3. DNS host is slow 4. DNS controllers in trouble

Which one of the following is not the process of Deadlock Recovery?	1. Killing a process 2. Rollback to the previous state 3. Selecting a Victim 4. Delaying the process

To make a process as an orphan, which process needs to delay (sleep()) its execution? The parent process or the child process?	1. parent to sleep for a while, child terminates 2. child to sleep for a while, parent terminates 3. parent and child both normal execution 4. parent and child both to sleep for a while
Ensuring that processes release the resources if they are not able to acquire the resources requested violates _____condition for deadlock	1. Mutual exclusion 2. Hold and Wait 3. Circular Wait 4. No Preemption
A system has two processes and three identical resources. Each process needs a maximum of two resources to complete. Is deadlock inevitable?	1. Yes 2. No 3. 4.
_____ memory management scheme will produce largest fragment	1. Best Fit 2. Worst Fit 3. First Fit 4. None of the given choices

#include<stdio.h>
#include<math.h>
void power(int parameter)
{
printf("%d", parameter*parameter);
}
main(){
int value=4;
printf("%d ", (int)(pow(value,2)));
power(value);
}
	1.
	16 16
	2.
	16
	3.
	2
	4.
	Error

"A Student object has some attributes such as name, ID, telephone number, CGPA, and email address. This information is bound to that particular Student object. Some of this information can be accessed while some might be restricted." This statement refers to which object-oriented concept?	1. Encapsulation 2. Inheritance 3. Polymorphism 4. Specialization
In DFD the symbol used to refer the external entity	1. Rectangle Rectangle 2. Ellipse 3. Diamond 4. Circle
Overview of the software systems is given by	1.Component Diagram 2. Deployment Diagram 3. Package Diagram 4. Class Diagram

DFD stands for	1. d Data Flow Diagram 2. Dependent Flow diagram 3. Decomposition Flow Diagram 4. Decision Flow Diagram

1. **A DFD is normally levelled as**	1. it is a good idea in design 2. it is easier to read and understand a number of smaller DFDs than one large DFD 3. it is recommended by many experts 4.it is easy to do it
The weak entity set can be converted to the strong entity set by	1. Generalisation 2. Aggregation 3. Composition 4. Adding appropriate attributes
Not a Component of DFD	1. Attributes 2. Entities 3. Process 4. Data Flow

The process in DFD is represented as	1. Data Flow 2. Data Store 3. External Entity 4. Bubble Symbol
Name, Age, Date of Birth ,Mail id are examples of	1. Entities 2. Attributes 3. Relationship 4. Descriptors
Ellipse in ER diagram represents	1. Attributes 2. Entities 3. Weak Set 4. Strong Set
How many views of software can a UML diagram be represented	1. 3 2. 4 3. 5 4. 6

ER diagram follows	1. Left-Right Strategy 2. Right-Left Strategy 3. Top Down Approach 4. Bottom up Approach
Context Diagram is also known as	1. Level 2 DFD 2. Level 1 DFD 3. Level 3 DFD 4. Level 0 DFD
the intersection of a CFL and regular language	1. need not be regular 2. need not be context free 3. is always regular 4. is always CFL

Syntax of any high level language is defined with	1. CFG 2. CNF 3. GNF 4. log n

PDA can recognise	1. any grammar 2. only CFG 3. only regular grammar 4. any unambiguous grammar
Left linear grammars are ..... of CFG	1. subset 2. super set 3. power set 4. null
L={$a_n b_n c_n$/n=1,2,3.....}is an example of a language that is	1. Context free 2. not context free 3. not context free but whose complement is CF 4. context free but whose complement is CF
L=0	1. L is regular but not 0 2. L is context free but not regular 3. L is not context free 4. null

if r and s are two regular expressions then expression r+s is also.....	1. Regular expression 2. Regular Laguage 3. Regular set 4. c and b
if G is CFG and w is a string of length l in L(G), how long is a derivation of w in G, if G is Chomsky normal form?	1. 2 l 2. 2l +1 3. 2l-1 4. l
if a grammar has different LMD or RMD, then it is.....	1. ambiguous grammar, un ambiguous grammar 2. un ambiguous grammar, ambiguous grammar 3. ambiguous grammar, ambiguous grammar 4. ambiguous grammar
if a grammar has different LMD or RMD, then it is.....	1. ambiguous grammar, un ambiguous grammar 2. un ambiguous grammar, ambiguous grammar 3. ambiguous grammar, ambiguous grammar

	4. ambiguous grammar
Every language defined by a FA is a .....Language	1. Regular 2. irregular 3. Regular set 4. c and b

Every context free language is context sensitive language	1. True 2. False 3. nothing 4. True and False
Elimination of null productions results in simplified grammar with no unit productions and useless symbol	1. True 2. False 3. nothing 4. True and False

Elimination of null productions results in simplified grammar with no unit productions and useless symbol	1. True 2. False 3. nothing 4. True and False
Context free languages are described by type---------grammars	1. Type 1 2. Type 2 3. Type 3 4. Type 4
CFG's are..... of CSG	1. subset 2. super set 3. power set 4. null
Applying pumping lemma we can show that all languages are not regular	1. True 2. False 3. 0* 4. c and a

All grammars are expressed in ----- form	1. 4 tuple 2. 5 tuple 3. CFG 4. Context free
Aliasing in the context free programming languages refer to	1. Multiple variables having the same memory location 2. Multiple variables having the same memory value 3. Multiple variables having the same memory identifier 4. null
A non terminal is useless if it is	1. Not derive any terminals 2. derive terminal 3. derive Non terminal 4. a and c
A context free grammar is ambiguous if	1. the grammar contains useless non-terminals 2. it produces more than one parse tree for the same sentence 3. some production has two non-terminals side by side on the right-hand side

	4. None of the above

.....languages are used define the lexical structure of the programming language	1. Regular expression 2. Regular Laguage 3. Regular set 4. C and B
.---------- language are the subset of context free languages.	1. regular grammar 2. regular 3. CNF 4. GNF
.---------- language are the subset of context free languages.	1. regular grammar 2. regular 3. CNF 4. GNF
Any string of terminal that can be generated by the following CFG S-->XY, X-->ax/bx/a, Y-->ya/yb/a	1.has atleast one b 2.should end in a 'a' 3.has no 4.context free but whose complement is CF –Correct– Has atleast 2 a’s

MSD stand for	1. Most significant digit 2. Many significant digit 3. Both a and b 4. None of these
In the base–register addressing the register reference may be_____:	1.Implicit 2. Explicit 3. Both 4. None
How many types of unconditional jumps used in program control are follows	1. 1 2. 2 3. 3 4. 4
Which operation is used to shift the content of an operand to one or more bits to provide necessary variation:	1. Logical and bit manipulation 2. Shift manipulation 3. Circular manipulation 4. None of these
20.The final addressing mode that we consider is_____:	1. Immediate addressing 2. Direct addressing 3. Register addressing 4. Stack addressing

Which system was used extensively by early mini computers:	1. Decimal number 2. Octal number 3. Hexadecimal number 4. Binary number

Which part is not physically indicated in the register:	1. Binary 2. Decimal 3. Octal 4. None of these
In the case of a right arithmetic shift the sign bit values are shifted to the___:	1. Left 2. Right 3. Up 4. Down
_____of a number from another can be accomplished by adding the complement of the subtrahend to the minuend:	1. Subtraction 2. Multiply 3. Divide 4. All of these

Which carry is similar to rotate without carry operations:	1. Rotate carry 2. Rotate through carry 3. Both 4. None
Counting in hex, each digit can be increment from___:	1. 0 to F 2. 0 TO H 3. 0 TO G 4. O TO J
How many types of addition in the 2's complement system:	1. 3 2. 4 3. 5 4. 6
Which number are used extensively in microprocessor work:	1. Octal 2. Hexadecimal 3. Both 4. None of these
In which addressing the operand is actually present in instruction:	1. Immediate addressing 2.Direct addressing 3. Register addressing 4. None of the above

Which types of register holds a single vector containing at least two read ports and one write ports:	1. Data system 2. Data base 3. Memory 4. Vector register
In program control the instruction is set for the statement in a:	1. Parallel 2. Sequence 3. Both 4.None

19.In which mode the main memory location holds the EA of the operand:	1. Immediate addressing 2. Direct addressing 3. Register addressing 4. Indirect addressing
A binary number with 4 bits is called a_____	1. Bit 2. Bytes 3.Nibble 4.None of these
In any system, there is an ordered set of symbols also known as :	1. Digital 2. Digit 3. Both 4. None of these

Which algorithm is used to find GCD of two integers:	1. Multiplication algorithm 2. Division algorithm 3. Addition Algorithm 4. Simple algorithm –According to google– Euclidean Algorithm
Which are unconditional jumps used in program control are follows:	1. Short jump 2. Near jump 3. Far jump 4. All of these
Which operation use one operand or unary operations:	1. Arithmetic 2. Logical 3. Both 4. None
Which is used to speed-up the processing:	1. Pipeline 2. Vector processing 3. Both 4. None

21.Which is a method of decomposing a sequential process into sub operations:	1. Pipeline 2. CISC 3. RISC 4. Database
decompositions R1(AC),R2(AB) with the function dependency FThe ={C->A,A->B} is	1. Lossless 2. Lossy 3. Neither Lossless or Lossy 4. All the given options are wrong
Non additive join property on a relation R holds if	1. the natural join of all decompositions of R != R 2. the natural join of all decompositions of R = R 3. the decomposition is lossy 4. None of the given options are correct

A prime attribute is an attribute that is part of a	1. A Primary Key 2. A Candidate Key 3. A Composite Key 4. All the give options are correct
A multivalued dependency X multi determines y is trivial if	1. Y is a subset of X 2. X is a subset of Y 3. X Union Y equals R 4. Y is a subset of X and X Union Y equals R
A Foreign Key Column	1. cannot hold null values 2.can hold null or duplicate values 3. cannot hold duplicate values 4. All the given options are wrong

When 2 or more bits in a data unit has been changed during the transmission, the error is called	1. Random error 2. Burst error 3. Inverted error 4. None of the mentioned
What is the minimum hamming distance of this coding scheme d (00000, 10011)?	1. 1 2. 2 3. 3 4. 4
To guarantee the detection of up to S errors in all cases, the minimum hamming distance in a block code must be	1. S 2. S+1 3. S-1 4. 0

To detect or correct errors, we send extra bits with data is known as	1. Redundancy 2. Correction 3. Detection 4. Authentication
The stop and wait protocol uses the link of	1. Modulation 2. Full duplex 3. Half duplex 4. De modulation
In Go-Back-N ARQ, if 4 is the number of bits for the sequence number, then the maximum size of the send window must be _____.	1. 15 2. 16 3. 31 4. 1

In a cyclic code, generator polynomial is actually the	1. Multiplier 2. Divisor 3. Polynomial 4. Quotient

Which of the following is not an advantage of trees?	1. a) Hierarchical structure 2. b) Faster search 3. c) Router algorithms 4. d) Undo/Redo operations in a notepad
The number of edges from the root to the node is called _____ of the tree.	1. Height 2. Depth 3. Length 4. Width

In a full binary tree if number of internal nodes is I, then number of nodes N are?	1. a) N = 2*I 2. b) N = I + 1 3. c) N = I – 1 4. d) N = 2*I + 1
In a full binary tree if number of internal nodes is I, then number of leaves L are?	1. a) L = 2*I 2. b) L = I + 1 3. c) L = I – 1 4. d) L = 2*I – 1
. Which of the following is incorrect with respect to binary trees?	1. a) Let T be a binary tree. For every $k \geq 0$, there are no more than 2k nodes in level k 2. b) Let T be a binary tree with λ levels. Then T has no more than $2^{\lambda - 1}$ nodes 3. c) Let T be a binary tree with N nodes. Then the number of levels is at least ceil(log (N + 1)) 4.

	d) Let T be a binary tree with N nodes. Then the number of levels is at least floor(log (N + 1))
In addressing modes instruction has primarily how many components	1. 1 2. 2 3. 3 4. 4
Select is referred to as a _____ operator	1. Binary 2. Unary 3. Ternary 4. All of the above
_____ combines all rows from two tables, excluding duplicate rows	1. Intersect 2. Difference 3. Union 4. None of the above

Which of the following statements is not correct?	1. Relational algebra is a set of operations on relational databases that allow retrieval of data 2. The data in relational tables are of limited value unless the data can be manipulated to generate useful information 3. Relational algebra defines the theoretical way of manipulating table contents using relational operators 4. Relational algebra is not the basis for implementing and optimizing queries in the query processing and optimization modules
The ___ operator provides a not functionality	1.difference 2. intersection 3. projection 4. none of the above

Which of the following statements is correct?	1. An outer join only returns matched records from the tables that are being joined 2. In an inner join, the matched pairs would be retained, and any unmatched values in the other table would be left null 3. An equijoin, links tables on the basis of a non-equally condition that compares specified columns of each table 4. The operation of eliminating columns in a table is called a project operation
A _____ is a tree data structure that corresponds to a relational algebra expression	1. Entree 2. Query Tree 3. Sub tree 4. None of the above

Which of the following statement is not correct?	1. Relational algebra is a formal declarative query language 2.Relational algebra is procedural in nature. 3.Queries in relational algebra are composed using a collection of operators 4.The relational algebra operations can be of arbitrary complexity
A _____ is a variable that holds a relation.	1.relvar 2.table 3.database 4.none of the above
___ operates on pairs of relations and is, therefore, called binary operations	1. **Rename** 2. **Project** 3. Cartesian Product **Cartesian product** 4. **None of the above**

Which of the following statement is correct?	1. By using intersection, multiple queries can be put together and their output merged 2. Grouping facilitates the combination of values based on a common reference 3. The result of projection is the rows common to the rows produced by the individual queries. 4. Restrict returns rows after combining two tables.
____ takes place at execution time	1. Dynamic Query Optimization Dynamic query optimizatic 2. Non dynamic query optimi 3. Static query optimization 4. All the above

Which of the following statement is not correct?	1. Automatic query optimization means the DBMS finds the most cost-effective access path without user intervention. 2. Manual query optimization requires, that the optimization be selected and scheduled by the end user or programmer. 3. A statistically based query optimization algorithm uses statistical information about the database. 4. A role-based query optimization algorithm is based on a set of user-defined rules to determine the best query access strategy. 5.
A ____ uses sophisticated algorithms based on statistics about the objects being accessed to determine the best approach to execute a query	1. role-based optimizer 2.Cost Based Optimizer cost-based optimizer 3. cast-based optimizer 4. None of the above

Which of the following statement is correct?	1. Query optimization algorithm cannot be evaluated on the basis of its operation mode or the timing of its optimization 2. The optimizer process organises the concurrent execution of SQL requests 3. Query optimization is the central activity during the parsing phase in query processing 4. Most SQL performance optimization techniques are not DBMS-specific and therefore are easily portable

__ consists of selecting a strategy from a list of candidates that is closest to optimal	1. Global Query Optimization **Global Query Optimization** 2. **Query Mapping** 3. **Local Query Optimization** 4. **None of the above**

Which of the following statement is not correct?	1. A drawback of cost-based optimization is the cost of optimization itself 2. Generation of expressions is only part of the query-optimization process since each operation in the expression can be implemented with different algorithms. 3. The commutavity and associativity of join operations are important for join reordering in query optimization 4. Query optimization cannot be performed by treating materialized views just like regular relations
Complex queries may have subexpressions repeated in different parts of the query, which can be similarly exploited to reduce query evaluation cost. Such optimization is known as ____	1. Multiquery Optimization Multiquery optimization 2. Universal Query Optimizatio 3. Subquery optimization 4. None of the above

In _____, a query is optimized without being provided specific values for its parameters.	1. nonparametric query optim nonparametric query optim 2. Parametric Query Optimization. parametric query optimizat 3. heuristic query optimization 4. None of the above
The activity of choosing an efficient execution strategy for processing a query is known as	1. Query processing 2. Localization 3. Procedural access 4. Query Optimization Query optimization

__ is based on constraints specified on the database schema to reduce the search space	1. Heuristic query optimizatior 2. Query decomposition 3. Semantic query optimization Semantic query optimizatic 4. None of the above
___ ensures that the data moves from one consistent state to another; this activity includes the synchronization of local and remote transactions as well as transactions across multiple distributed segments.	1. Concurrency control 2.Transaction Management Transaction management 3. Transformation 4. Query optimization

Which of the following is correct?	1. A database request is not an equivalen program or transaction. 2. a transaction is a logical unit of work that must be either entirely completed or aborted; intermediate states are acceptable. A transaction is a logical unit of work tl aborted; intermediate states are accep 3. A consistent database state is one i satisfied. 4. The transaction processor, which is t computer or device that stores and r
_____ ensures that once transaction changes are done and committed, they cannot be undone or lost, even in the event of a system failure. Ensures that once the changes are commited, they cannot be undone or lost, even in the event of a system failure	1. Durability Durability 2. Consistency 3. Atomicity 4. None of the above

A _____ statement is reached, in which case all changes are aborted and the database must be restored to its previous consistent state. A —-- statement is reached, in which case all changes are aborted and the database must be restored to its previous consistent state.	1. COMMIT 2.Rollback ROLLBACK 3. UPDATE 4. None of the above

Which of the following statement is not correct?	1. Serializability ensures that the schedule for the concurrent execution of the transactions yields consistent results Serializability ensures that the schedule transactions yields inconsistent results. 2. A DBMS uses a transaction log to kee database. 3. Isolation means that the data used dur used by a second transaction until the 4. The size of a data item is ca

Information residing in_____ does not usually survive system crashes.	1. Volatile storage volatile storage 2. non-volatile 3. stable storage 4. None of the above
Which of the following statements is not correct?	1. A transaction is partially committed, after the final statement has been executed. 2.A transaction is committed , after the final statement has been executed A transaction is committed, after the final statement has been executed. 3. A transaction is failed, after the discovery that normal execution can no longer proceed. 4. A transaction is aborted, after the transaction has been rolled back and the database has been restored to its state prior to the start of the transaction.
The DBMS component that ensures atomicity and durability is	1. lock manager 2. file manager 3. Recovery manager recovery manager 4.

	access manager
In a DBMS transaction subsystem, _____ is responsible for the efficient transfer of data between disk storage and main memory	1.buffer manager buffer manager 2. scheduler 3. systems manager 4. none of the above
Which of the following statements is correct?	1. Any non-executable set of transactions is known as a schedule. 2. If we execute the transactions strictly in a sequence, one at a time, then the schedule is called a interleaved schedule 3. If there is an overlap of transactions, then the schedule is called serial schedule. 4. It is the responsibility of both the DBMS and the application developers to ensure consistency. It is the responsibility of both the DBMS and the application developers to ensure consistency.

Context-sensitive languages (CSLs) are closed under **i) Union ii) intersection iii) complementation** **iv) concatenation**	1. (i) and (iii) only 2. (ii) and (iv) only 3. (i), (ii) and (iii) only 4. (i), (ii) , (iii) and (iv)
Let $\overline{L_1}$ be a recursive language and let $\overline{L_2}$ be a recursively enumerable language which is not recursive. Which one of the following is TRUE? **Let L1' be a recursive language and let L2' be a recursively enumerable language which is not recursive. Which one of the following is TRUE?**	1. L_1 is recursive, L_2 is recursively enumerable 2. L_1 is recursively enumerable and L_2 is recursive 3. L_1 is recursive, L_2 is not recursively enumerable 4. L_1 and L_2 are recursively enumerable
The complent of the universal language $\overline{L_u}$ is **The complement of the universal language Lu' is**	1. Recursively enumerable 2. Not recursively enumerable 3. Recursively enumerable but not recursive 4. Recursive

The complent of the diagonal language $\overline{L_d}$ is **The complement of the diagonal language L' is**	1. Recursively enumerable 2. Not recursively enumerable 3. Recursively enumerable but not recursive 4. Recursive

The following grammar G=(N, T, P, S), where N=(S, A, B, C, D, E), T ={a,b,c} P= {S→ABCD, BCD → DE, D→aD, D→a, E→bE} is of	1. Type 3 2. Type 2 but not of type 3 3. Type 1 but not of type 2 4. Type 0 but not of type 1
Let L and L' be a language and its complement. Which one of the following possibilities will not	1. L and L' are recursive 2.L is recursively enumerable but not recursive L' is not recursively enumerable. 3.L and L' are not recursively enumerable 4.L and L' are not recursively enumerable but not recursive.

The encoding of the Turing machine with transitions **δ(q1,0) = (q2, 1, R)** **δ(q2, 0) (q3,0, R)** **δ(q3, B)= (q2,1,L)** **is** **hold?**	1. 11101010010010011001010001010011000100010010010111 2. 11101010010010011001010010100110001000100100101111 3. 11101010010010011001010001010011000100010010101111 4. 11101010010010011001010001010011001001001001011
Let L1 be a regular language and L2 a deterministic CFL, L3 is recursively enumerable but not recursive. Which one of the following statements is FALSE?	1. $L_1 \cap L_2$ is a DCFL 2. $L_3 \cap L_1$ is recursive 3. $L_1 U L_2$ is context-free 4. $L_1 \cap L_2 \cap L_3$ is recursively enumerable
Which one of the following is the strongest correct statement about a finite language L over a finite alphabet Σ?	1. L is undecidable 2. L is recursive 3. L is a CSL 4. L is a regular set

Let Σ be a finite alphabet. For a set A⊆Σ*, define **cycle A = {yx | xy ∈ A},** **permute A = {y | there exists x ∈ A, for every a ∈ Σ, na(x) = na(y)}** **For example, if Σ = {a, b, c} and A = {aaabc), then** **cycle A = {aaabc, aabca, abcaa, bcaaa, caaab},** **permute A = {aaabc, aabca, abcaa, bcaaa, caaab, aabac, abaca, bacaa,acaab, caaba, abaac, bacaa , aacab, acaba, cabaa, abaac, baaca , aacab, acaba, cabaa, baaac, aaacb, aacba, acbaa, cbaaa}.** **Which of the following propositions is true?**	1. For all A ⊂ Σ*, if A *is* regular, then so is **cycle** A. 2. For all A ⊂ Σ *, if A *is* regular, then so is **permute** A. 3. For all A ⊂ Σ *, if A is context-free, then so is **cycle** A. 4. For all A ⊂ Σ *, if A is context-free, then so is **permute** A.
Consider the following statements: **I) Recursive languages are closed under complementation** **II) Recursive enumerable languages are closed under union** **III) Recursive enumerable languages are closed under complementation** **Which of the above statements are TRUE?**	1. I only 2. I and II 3. I and III 4. II and III

Consider a language L for which there exists a Turing machine (TM), T, that accepts every word in L and either rejects or loops for every word that is not in L. The language is	1. NP hard 2. NP complete 3. Recursive 4. Recursively enumerable
Consider the languages **L_1= {a^n.b^m.c^m / n, m≥1} and L_2= {a^n.b^n.c^m / n,m ≥1 } Which one of the following statements is TRUE?**	1. $L_1 \cup L_2$ is a CSL 2. $L_1 \cap L_2$ is a CFL 3. L_1 and L_1 are CSL 4. $L_1 \cap L_2$ is a CSL
A context-free language L = {wwR / w∈{a,c}* can be accepted by	1. DPDA 2. NPDA 3. DFA 4. NFA

Which of the following languages over {a,b,c} is deterministic PDA?	1. $\{ wbw^R / w \in \{a, c\}^* \}$ 2. $\{ ww^R / w \in \{a, b, c\}^* \}$ 3. $\{ a^n b^n c^n / n \geq 1 \}$ 4.

	{ w / w is a palindrome over {a, b, c} }

Which of the following languages over {a,b,c} is deterministic PDA?	1. $\{ wbw^R / w \in \{a, c\}^* \}$ 2. $\{ ww^R / w \in \{a, b, c\}^* \}$ 3. $\{ a^n b^n c^n / n \geq 1 \}$ 4. { w / w is a palindrome over {a, b, c} }