Telangana State Council Higher Education

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Paper Name :	Computer Science and Information Technology 30th May 2023 Shift2
Subject Name :	Computer Science and Information technology
Creation Date :	2023-05-30 17:11:58
Duration :	120
Total Marks :	120
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No

Change Theme :	No
Help Button :	No
Show Reports :	No
Show Progress Bar :	No

Computer Science and Information Technology

Group Number :	1
Group Id :	28393666
Group Maximum Duration :	0
Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	120
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Mathematics

Section Id :	283936182
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Enable Mark as Answered Mark for Review and Clear Response :	Yes

Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	283936182
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 1 Question Id : 2839369281 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is false?

Options :

1. ✖ $|kA| = k^n |A|$, where A is a matrix of order n

2. ✖ $|A| = |A^T|$

3. ✖ $|AB| = |A||B|$

4. ✔ $|A+B| = |A| + |B|$

Question Number : 2 Question Id : 2839369282 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The values of a and b for which the system of equations $x+y+z=6$, $x+2y+3z=10$ and $x+2y+az=b$ has infinitely many solutions are

Options :

1. ✔ $a=3, b=10$

2. ✖ $a \neq 3, b = 10$

3. ✖ $a = 3, b \neq 10$

4. ✖ $a = 10, b = 3$

Question Number : 3 Question Id : 2839369283 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $A = \begin{pmatrix} 2 & 4 \\ 3 & 1 \end{pmatrix}$, then the eigenvalues of $10A^{-1}$ are

Options :

1. ✖ $-2, 5$

2. ✔ $2, -5$

3. ✖ $-\frac{1}{2}, \frac{1}{5}$

4. ✖ $\frac{1}{2}, -\frac{1}{5}$

Question Number : 4 Question Id : 2839369284 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the function $f(x)=\begin{cases}\frac{x^2-4}{x-2}, & x\neq 2\\ k, & x=2\end{cases}$ is continuous, then $k=$

Options :

1. ✔ 4

2. ✖ 2

3. ✖ 0

4. ✖ 8

Question Number : 5 Question Id : 2839369285 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\int x\sin\left(x^2\right)dx=$

Options :

1. ✖ $\frac{1}{2}\cos\left(x^2\right)+c$

2. ✖ $-x\cos\left(x^2\right)+c$

3. ✔ $-\frac{1}{2}\cos\left(x^2\right)+c$

4. ✖ $x\cos\left(x^2\right)+c$

Question Number : 6 Question Id : 2839369286 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The number of stationary points of $f(x) = \sin(x) - x$ is

Options :

1. ✔ infinite

2. ✖ 1

3. ✖ 2

4. ✖ 4

Question Number : 7 Question Id : 2839369287 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A random variable X has the following probability distribution:

X	-2	-1	0	1	2	3
$P(X)$	0.1	k	0.2	$2k$	0.3	k

The value of k is

Options :

1. ✖ 0.01

2. ✔ 0.1

3. ✖ 0.4

4. ✖ 0.2

Question Number : 8 Question Id : 2839369288 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If X is uniformly distributed over $(-3, 3)$, then the value of a so that $P(X > a) = \frac{1}{3}$ is

Options :

1. ✖ 2

2. ✖ $\frac{1}{2}$

3. ✔ 1

4. ✖ 3

Question Number : 9 Question Id : 2839369289 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let X be a Poisson variate such that $6P(X = 4) = P(X = 2) + 2P(X = 0)$.

The mean of X is

Options :

1. ✔ 2

2. ✖ -1

3. ✖ 3

4. ✖ 4

Question Number : 10 Question Id : 2839369290 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let A and B be two events such that $P(A)=0.6, P(B)=0.5$ and $P(A\cap B)=0.3$.

Then $P(A\,|\,\overline{B})=$

Options :

1. ✖ 0.5

2. ✖ 0.06

3. ✔ 0.6

4. ✖ 0.4

Computer Science and Information Technology

Section Id :	283936183
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions :	110
Number of Questions to be attempted :	110
Section Marks :	110
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	283936183
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 11 Question Id : 2839369291 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the law of the algebra of propositions for the equivalence: $\neg\neg p \equiv p$

Options :

1. ✖ De Morgan's law

2. ✖ Identity law

3. ✖ Complement law

4. ✔ Involution law

Question Number : 12 Question Id : 2839369292 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the tautology from the following

Options :

1. ✔ $p \vee \neg(p \wedge q)$

2. ✖ $p \wedge \neg(p \vee q)$

3. ✖ $\neg p \vee \neg q$

4. ✖ $[(p \rightarrow q) \wedge \neg p] \rightarrow \neg q$

Question Number : 13 Question Id : 2839369293 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Suppose a list A contains 30 students in a mathematics class, and a list B contains 35 students in an English class, and suppose there are 20 names on both lists. Find the number of students on exactly one list?

Options :

1. ✖ 65

2. ✔ 25

3. ✖ 20

4. ✖ 15

Question Number : 14 Question Id : 2839369294 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : Non

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the relation $R = \{(1, 1), (1, 3), (2, 4), (3, 1), (3, 3), (4, 3)\}$ on the set $A = \{1, 2, 3, 4\}$ then symmetric (R) is

Options :

1. ✖ $R \cup \{(2,2), (4,4)\}$

2. ✖ $R \cup \{(2,3), (4,1)\}$

3. ✔ $R \cup \{(4, 2), (3, 4)\}$

4. ✖ Cannot be defined

Question Number : 15 Question Id : 2839369295 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Find the number of relations from $A = \{a, b, c\}$ to $B = \{1, 2\}$.

Options :

1. ✖ 6

2. ✖ 16

3. ✖ 32

4. ✔ 64

Question Number : 16 Question Id : 2839369296 Question Type : MCQ Option

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the cardinal number of the set $\{x \mid x^2 = 9,\ 2x = 8\}$?

Options :

1. ✖ Two

2. ✖ Three

3. ✖ One

4. ✔ Zero

Question Number : 17 Question Id : 2839369297 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Find the number of permutations of six objects taken three at a time without repetition?

Options :

1. ✖ 18

2. ✖ 30

3. ✔ 120

4. ✖ 256

Question Number : 18 Question Id : 2839369298 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A box contains 8 blue socks and 6 red socks. Find the number of ways two socks of the same color can be drawn from the box?

Options :

1. ✖ 91

2. ✔ 43

3. ✖ 15

4. ✖ 3

Question Number : 19 Question Id : 2839369299 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If Capital letters are pictured as graphs, choose the correct set of isomorphic graphs

Options :

1. ✔ A and R, S and Z, T and F

2. ✖ A and B, D and B, X and Y

3. ✖ X and K, S and Z, P and Q

4. ✖ A and Z, B and Y, C and X

Question Number : 20 Question Id : 2839369300 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the chromatic number of a cycle graph having odd number of vertices?

Options :

1. ✖ Two

2. ✔ Three

3. ✖ Four

4. ✖ number of vertices

Question Number : 21 Question Id : 2839369301 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Compute the decimal equivalent of hexadecimal number BAD_{16}

Options :

1. ✖ 43981

2. ✔ 2989

3. ✖ 2781

4.

✖ 2765

Question Number : 22 Question Id : 2839369302 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the minimum number of NAND gates required to construct a full adder circuit?

Options :

1. ✖ Seven

2. ✔ Nine

3. ✖ Eleven

4. ✖ Ten

Question Number : 23 Question Id : 2839369303 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is a device that selects between several analog or digital input signals and forwards the selected input to a single output line?

Options :

1. ✖ Encoder

2. ✖ Decoder

3. ✔ Multiplexer

4. ✖ Buffer bus

Question Number : 24 Question Id : 2839369304 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which flip-flop is a single input version of JK flip-flop?

Options :

1. ✖ D flip-flop

2. ✖ SR Latch

3. ✖ RS flip-flop

4. ✔ T flip-flop

Question Number : 25 Question Id : 2839369305 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the size of the mantissa for a floating point number as per double precision IEEE 754 standard?

Options :

1. ✖ 23 bits

2. ✖ 31 bits

3. ✔ 52 bits

4. ✖ 62 bits

Question Number : 26 Question Id : 2839369306 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which addressing mode provides operand in the instruction itself?

Options :

1. ✖ Implied

2. ✔ Immediate

3. ✖ Register

4. ✖ Direct

Question Number : 27 Question Id : 2839369307 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the zero address instruction from the following:

Options :

1. ✖ LDA

2.

✔ POP

3. ✖ BUN

4. ✖ BSA

Question Number : 28 Question Id : 2839369308 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct description for BSA instruction.

Options :

1. ✔ Save return address in m and branch to m + 1

2. ✖ Branch based on the sign of accumulator

3. ✖ Branch skip accumulator increment

4. ✖ Branch if accumulator is positive

Question Number : 29 Question Id : 2839369309 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is a data transfer instruction?

Options :

1. ✔ GETPSW

2. ✖ SUBCR

3. ✖ GTLPC

4. ✖ CALLINT

Question Number : 30 Question Id : 2839369310 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Assume a pipeline with 4 stages, process time of each sub operation is 20ns. How much time does the pipeline take to execute 100 instructions in sequence?

Options :

1. ✖ 8000 ns

2. ✖ 2000 ns

3. ✔ 2060 ns

4. ✖ 200 ns

Question Number : 31 Question Id : 2839369311 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which register value changing may result in branch difficulties in a pipeline?

Options :

1. ✖ Instruction register

2. ✖ Decode register

3. ✖ Memory address register

4. ✔ Program Counter

Question Number : 32 Question Id : 2839369312 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct option
S1: The data transfer rate of peripherals is usually slower than the transfer rate of the CPU.
S2: Data codes and formats in peripherals differ from the word format in the CPU and memory.

Options :

1. ✖ S1 is true, S2 is false

2. ✖ S1 is false, S2 is true

3. ✔ Both S1 and S2 are true

4. ✖ Both S1 and S2 are false

Question Number : 33 Question Id : 2839369313 Question Type : MCQ Option

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following commands is used to test various status conditions in the input-output interface and the peripheral?

Options :

1. ✔ Status command

2. ✖ PSW command

3. ✖ CHMOD command

4. ✖ IO check command

Question Number : 34 Question Id : 2839369314 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct set of three registers in direct memory access controller

Options :

1. ✔ Address, Word count, control

2. ✖ Address, data, control

3. ✖ Data, buffer, memory

4. ✖ Data, control, program counter

Question Number : 35 Question Id : 2839369315 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Devices that provide backup storage are called___ memory.

Options :

1. ✗ Secondary

2. ✓ Auxillary

3. ✗ Virtual

4. ✗ Tertiary

Question Number : 36 Question Id : 2839369316 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which data structure is essential in implementation of recursive functions?

Options :

1. ✓ Stack

2. ✗ Queue

3. ✗ Tree

4. ✗ Graph

Question Number : 37 Question Id : 2839369317 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Find the post order traversal of a binary tree whose in-order and preorder traversals are as follows respectively.
In-order: F D B E A I G C J H L K
Preorder :A B D F E C G I H J K L

Options :

1. ✔ F D E B I G J L K H C A

2. ✖ F D B E I G H L J K C A

3. ✖ F D E B I G L J K H C A

4. ✖ F D E B I L J K G H C A

Question Number : 38 Question Id : 2839369318 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which of the following tree, parent node has a key value greater than or equal to the key value of both of its children.

Options :

1. ✖ binary search tree

2. ✔ max-heap

3. ✖ min-heap

4. ✖ B+ tree

Question Number : 39 Question Id : 2839369319 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The data structure required for breadth first traversal is ____

Options :

1. ✖ Tree

2. ✖ Binary tree

3. ✖ Stack

4. ✔ Queue

Question Number : 40 Question Id : 2839369320 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the maximum height of the binary tree having 'n' nodes, where each node has exactly either zero to two children?

Options :

1. ✖ $\frac{n}{2}$

2. ✖ $\frac{n}{2}$ -1

3. ✔ $\frac{(n-1)}{2}$

4. ✖ $\frac{(n+1)}{2}$

Question Number : 41 Question Id : 2839369321 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which of the following C statements 'break' keyword cannot be used?

Options :

1. ✔ if-else

2. ✖ switch

3. ✖ while

4. ✖ for

Question Number : 42 Question Id : 2839369322 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following determines the size of a union?

Options :

1. ✖ sum of all members' sizes

2. ✖ size of the first member

3. ✖ size of the smallest member

4. ✔ size of the largest member

Question Number : 43 Question Id : 2839369323 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which is the default storage class for a C variable?

Options :

1. ✖ Register

2. ✔ Auto

3. ✖ Static

4. ✖ Extern

Question Number : 44 Question Id : 2839369324 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the output of the following C code?

```
#include<stdio.h>
void main()
{    int p = 1, q = 2, r = 3, s = 4, x=5;
     x *= r * s / q + p;
     printf("%d , %d", x, s);     }
```

Options :

1. ✖ 7, 4

2. ✔ 35, 4

3. ✖ 25, 4

4. ✖ 25, 12

Question Number : 45 Question Id : 2839369325 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What does the following C code represent?

```
int (*ptr)[5];
```

Options :

1. ✖ A ragged array

2. ✖ An array “ptr” of pointers

3. ✔ A pointer “ptr” to an array

4. ✖ Syntax error

Question Number : 46 Question Id : 2839369326 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which algorithm is used to find minimum spanning tree in a graph?

Options :

1. ✖ Dijkstra algorithm

2. ✖ Warshall algorithm

3. ✔ Kruskal algorithm

4. ✖ Weiner algorithm

Question Number : 47 Question Id : 2839369327 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which sorting algorithm has same time complexity for all the three cases – best, average and worst?

Options :

1. ✖ Bubble sort

2. ✖ Quick sort

3. ✖ Insertion sort

4. ✔ Selection sort

Question Number : 48 Question Id : 2839369328 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which algorithm design paradigm is used to solve longest common subsequence problem?

Options :

1. ✖ divide and conquer

2. ✖ greedy method

3. ✖ backtracking

4. ✔ dynamic programming

Question Number : 49 Question Id : 2839369329 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the time complexity of Floyd Warshall algorithm to compute all pairs shortest paths in a graph?

Options :

1. ✔ $O(n^3)$

2. ✖ $O(n \log n)$

3. ✖ $O(n^2 \log n)$

4. ✖ $O(n^3 \log n)$

Question Number : 50 Question Id : 2839369330 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In the process of sorting the following numbers: 23 16 45 38 12 89
Which sorting technique generates 16 23 45 38 12 89 after the first pass?

Options :

1. ✖ bucket sort

2. ✔ insertion sort

3. ✖ selection sort

4. ✖ radix sort

Question Number : 51 Question Id : 2839369331 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following sorting uses divide and conquer technique?

Options :

1. ✖ insertion sort

2. ✔ quick sort

3. ✖ bubble sort

4. ✖ radix sort

Question Number : 52 Question Id : 2839369332 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What type of problem is Travelling Salesman problem?

Options :

1. ✖ NP hard

2. ✖ NP class

3. ✔ NP complete

4. ✖ P class

Question Number : 53 Question Id : 2839369333 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What are the main measures of the efficiency of the algorithm?

Options :

1. ✖ speed and throughput

2. ✖ response time and jitter

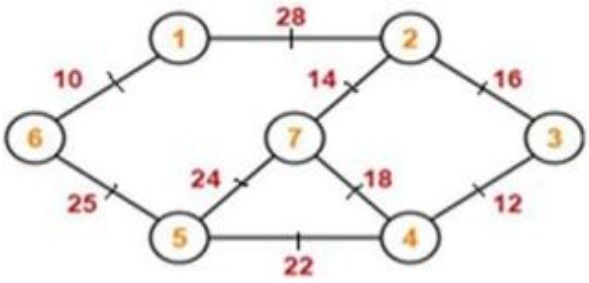
3. ✔ time and space complexity

4. ✖ size and speed

Question Number : 54 Question Id : 2839369334 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the minimum cost of the spanning tree of the following graph as per Prim's algorithm?



Options :

1. ✖ 100

2. ✔ 99

3. ✖ 98

4. ✖ 92

Question Number : 55 Question Id : 2839369335 Question Type : MCQ Option

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many cycles will be present in a graph of n nodes and n edges?

Options :

1. ✖ At least two

2. ✔ At most one

3. ✖ Exactly one

4. ✖ Depends on the graph

Question Number : 56 Question Id : 2839369336 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A language L from a grammar $G = (V_T, \sum, P, S)$ is _____

Options :

1. ✖ set of symbols over V_T

2. ✔ set of symbols over $\sum$

3. ✖ set of symbols over P

4. ✖ set of symbols over S

Question Number : 57 Question Id : 2839369337 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the maximum number of states of a DFA converted from an NFA with 'n' states?

Options :

1. ✖ N

2. ✖ n^2

3. ✔ 2n

4. ✖ $\frac{N(N+1)}{2}$

Question Number : 58 Question Id : 2839369338 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is defined by (Q, X, ∑, δ, q0, B, F)?

Options :

1. ✖ Deterministic finite automata

2. ✖ Nondeterministic finite automata

3. ✖ Pushdown automata

4. ✔ Turing machine

Question Number : 59 Question Id : 2839369339 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct statements about Moore machine.
A. Output depends only upon the current state.
B. less hardware requirement for circuit implementation.
C. Asynchronous output generation.
D. Less number of states is required.

Options :

1. ✖ A only

2. ✔ A and B only

3. ✖ A, B and C only

4. ✖ A, B, C and D

Question Number : 60 Question Id : 2839369340 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If G = ({S}. {0, 1}. {S → 0S1,S→ Λ}. S). find L(G).

Options :

1. ✖ $\{ 0^n1^n \mid n \leq 0 \}$

2. ✖ $\{ 0^n1^n \mid n \varepsilon R \}$

3. ✔ $\{ 0^n1^n \mid n \geq 0 \}$

4. ✖ $\{ 01 \mid n=0 \}$

Question Number : 61 Question Id : 2839369341 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Find a grammar generating $L = \{ a^nb^nc^i \mid n \geq 1, i \geq 0 \}$

Options :

1. ✔ $S \rightarrow A, A \rightarrow ab, A \rightarrow aAb , S \rightarrow Sc$

2. ✖ $S \rightarrow A, A \rightarrow abc, A \rightarrow aAbc$

3. ✖ $S \rightarrow A, A \rightarrow aSb , S \rightarrow Sc$

4. ✖ $S \rightarrow ABC, A \rightarrow ab, B \rightarrow aAb , C \rightarrow Sc$

Question Number : 62 Question Id : 2839369342 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which type of grammars can be handled only by Turing machine?

Options :

1. ✖ regular grammar

2. ✖ context free grammar

3. ✖ context sensitive grammar

4. ✔ unrestricted grammar

Question Number : 63 Question Id : 2839369343 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the purpose of Arden's theorem?

Options :

1. ✖ converting Mealy machine to Moore machine

2. ✔ converting given finite automata to a regular expression

3. ✖ converting NFA to DFA

4. ✖ converting functional dependency to multi valued dependency

Question Number : 64 Question Id : 2839369344 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is used to prove that certain sets are not regular?

Options :

1. ✖ Arden's theorem

2. ✖ Armstrong's axioms

3. ✔ Pumping Lemma

4. ✖ Amdhal's law

Question Number : 65 Question Id : 2839369345 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct statements about normal forms in automata theory:

S1: For a grammar in Chomsky Normal Form, the derivation tree has the following property: Every node has at most two descendants-either two internal vertices or a single leaf.

S2: Every context-free language L cannot be generated by a context-free grammar G in Greibach normal form.

Options :

1. ✔ S1 true, S2 false

2. ✖ S1 false, S2 true

3. ✖ S1 true, S2 true

4. ✖ S1 false, S2 false

Question Number : 66 Question Id : 2839369346 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : Non

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which phases of a compiler need the information from the symbol table?

Options :

1. ✖ lexical analysis, syntax analysis

2. ✔ semantic analysis, code generation

3. ✖ syntax analysis, semantic analysis

4. ✖ syntax analysis, tokenization

Question Number : 67 Question Id : 2839369347 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many lexemes are identified by lexical analyzer for the following statement?

```
Element = base Address + position * 4
```

Options :

1. ✖ Three

2. ✖ Four

3. ✔ Seven

4. ✖ Two

Question Number : 68 Question Id : 2839369348 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When is an attribute said to be synthesized in syntax analysis?

Options :

1. ✔ if its value at a parse-tree node N is determined from attribute values at the children of N and at N itself.

2. ✖ if its value is generated by symbol table

3. ✖ if its value is updated automatically by a loader

4. ✖ if its value at a parse-tree node N is determined from attribute values of its parents.

Question Number : 69 Question Id : 2839369349 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which parsing technique can handle a large class of grammars and translation scheme?

Options :

1. ✖ Brute force

2. ✖ recursive descent

3. ✖ predictive

4. ✔ LALR

Question Number : 70 Question Id : 2839369350 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which is a sequence of characters in the source program that matches the pattern for a token and is identified by the lexical analyzer as an instance of that token?

Options :

1. ✖ Token- value

2. ✖ Attribute

3. ✔ Lexeme

4. ✖ Pattern

Question Number : 71 Question Id : 2839369351 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct option.
S1: The machine language target program generated by a compiler is usually slower than an interpreter in mapping inputs to outputs.
S2: Compiler gives better error diagnosis than an interpreter.

Options :

1. ✖ S1 true, S2 false

2. ✖ S1 false, S2 true

3. ✗ S1 true, S2 true

4. ✓ S1 false, S2 false

Question Number : 72 Question Id : 2839369352 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following handles type checking in a program execution?

Options :

1. ✗ Syntax analyzer

2. ✗ Lexical analyzer

3. ✓ Semantic analyzer

4. ✗ Type translator

Question Number : 73 Question Id : 2839369353 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which derivation is generated by the bottom-up parser?

Options :

1. ✓ Right-most derivation in reverse

2. ✖ Right-most derivation

3. ✖ Left-most derivation in reverse

4. ✖ Left-most derivation

Question Number : 74 Question Id : 2839369354 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following actually runs on one machine and generates code for multiple machines?

Options :

1. ✖ Just in Time compiler

2. ✔ Cross compiler

3. ✖ Multiprogram compiler

4. ✖ Multi Language Barrier

Question Number : 75 Question Id : 2839369355 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which optimization technique is used to reduce the multiple jumps in a program?

Options :

1. ✖ Pigeon-hole

2. ✖ Ant colony

3. ✔ Peephole

4. ✖ Swarm

Question Number : 76 Question Id : 2839369356 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following shifts a process from ready state to running state?

Options :

1. ✖ Loader

2. ✖ Linker

3. ✔ Scheduler

4. ✖ Interrupt

Question Number : 77 Question Id : 2839369357 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the content of process control block.

Options :

1. ✔ process state, number, counter, registers

2. ✖ process id, parent id, threads number, memory

3. ✖ memory, instructions, registers

4. ✖ process state, interrupts, instructions

Question Number : 78 Question Id : 2839369358 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is a zombie process?

Options :

1. ✖ A process that has terminated, but whose parent has not yet called notify()

2. ✔ A process that has terminated, but whose parent has not yet called wait()

3. ✖ A process whose children are infected and been killed

4. ✖ A process that has terminated, but killing all other processes.

Question Number : 79 Question Id : 2839369359 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If a thread invokes the exec() system call, the program specified in the parameter to exec() will replace _____

Options :

1. ✖ all the running processes

2. ✖ process with that thread

3. ✔ entire process with all threads

4. ✖ all the ready processes with all threads

Question Number : 80 Question Id : 2839369360 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A solution to the critical-section problem must satisfy three requirements. Choose the correct set.

Options :

1. ✔ Mutual exclusion, progress, bounded waiting

2. ✖ Mutual exclusion, semaphore, circular wait

3. ✖ Mutual exclusion, runtime, blocked waiting

4. ✖ Runtime, circular wait, progress

Question Number : 81 Question Id : 2839369361 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : Non

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is a classic software-based solution to the critical-section problem?

Options :

1. ✖ Dining Philosophers

2. ✖ Sleeping barber

3. ✔ Peterson's solution

4. ✖ Mutex solution

Question Number : 82 Question Id : 2839369362 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the following set of processes, with the length of the CPU burst given in milliseconds, compute the average waiting time for shortest remaining job first scheduling.

Process	Arrival Time	Burst Time
P1	0	8
P2	1	4
P3	2	9
P4	3	5

Options :

1. ✖ 5.4 ms

2. ✔ 6.5 ms

3.

✖ 7.76 ms

4. ✖ 7.5 ms

Question Number : 83 Question Id : 2839369363 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct pairs – memory scheme with its problem.
(A) paging – internal fragmentation
(B) segmentation – external fragmentation
(C) multiple partition scheme – internal fragmentation.

Options :

1. ✖ only A

2. ✖ only B

3. ✔ A and B only

4. ✖ A, B and C

Question Number : 84 Question Id : 2839369364 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the reference string
7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1
for a memory with three frames. What are the total number of page faults for FIFO page replacement algorithm?

Options :

1. ✔ 15

2. ✖ 12

3. ✖ 18

4. ✖ No page fault

Question Number : 85 Question Id : 2839369365 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which is the common file types used by ASCII or binary file in a format for printing or viewing?

Options :

1. ✖ xml, tex, pr

2. ✖ mov, avi, obj

3. ✖ exe, com, bin

4. ✔ gif, pdf, jpg

Question Number : 86 Question Id : 2839369366 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which normal form is based on the concept of multi-valued dependency?

Options :

1. ✖ Second normal form

2. ✖ third normal form

3. ✔ fourth normal form

4. ✖ fifth normal form

Question Number : 87 Question Id : 2839369367 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The process of reducing redundancy in relation design is called

Options :

1. ✔ Normalization

2. ✖ Deduplication

3. ✖ Replication

4. ✖ Denormalization

Question Number : 88 Question Id : 2839369368 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the notation for derived attribute in ER diagram?

Options :

1. ✖ Dashed rectangle

2. ✔ Dashed ellipse

3. ✖ Dashed diamond

4. ✖ Double bordered ellipse

Question Number : 89 Question Id : 2839369369 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is a procedural DML?

Options :

1. ✖ SQL

2. ✖ QUEL

3. ✔ Relational Algebra

4. ✖ MySQL

Question Number : 90 Question Id : 2839369370 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which database user uses grant and revoke commands of SQL?

Options :

1. ✖ Naïve Users

2. ✖ Sophisticated Users

3. ✖ Application Programmers

4. ✔ Database administrators

Question Number : 91 Question Id : 2839369371 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is an integrity constraint defined over multiple relations?

Options :

1. ✖ Trigger

2. ✖ View

3. ✔ Assertion

4. ✖ Aggregation

Question Number : 92 Question Id : 2839369372 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : Non

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In ER model, participation of a relationship in another relationship is known as

Options :

1. ✖ class hierarchy

2. ✔ aggregation

3. ✖ assertion

4. ✖ composite relationship

Question Number : 93 Question Id : 2839369373 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is a time-stamp based protocol using less number of timestamps?

Options :

1. ✖ 2PL protocol

2. ✖ Thomas-write rule

3. ✔ Validation-based protocol

4. ✖ multi-version scheme

Question Number : 94 Question Id : 2839369374 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct set of dynamic indexing structures.

Options :

1. ✗ ISAM, B+tree, Linear hashing

2. ✗ Linear probing, Extendible hashing, clustered

3. ✓ B+ tree, linear hashing, extendible hashing

4. ✗ ISAM, B tree, B+ tree

Question Number : 95 Question Id : 2839369375 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which indexing file will have an index record for every distinct value of index attribute?

Options :

1. ✗ Sparse index

2. ✓ Dense index

3. ✗ Clustered index

4. ✗ Primary index

Question Number : 96 Question Id : 2839369376 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is the standard for wireless LANs?

Options :

1. ✖ IEEE 802.5

2. ✔ IEEE 802.11

3. ✖ IEEE 802.16

4. ✖ IEEE 802.3

Question Number : 97 Question Id : 2839369377 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Match the following protocols to the respective OSI layer:

	Protocol		Layer
P.	File transfer protocol	i.	Data link layer
Q.	User datagram protocol	ii.	Network layer
R.	Address Resolution protocol	iii.	Transport layer
S.	Point-to-Point protocol	iv.	Application layer

Options :

1. ✖ P –ii, Q – iii, R- iv, S-i

2. ✖ P –iii, Q – ii, R- iv, S-i

3. ✔ P –iv, Q – iii, R- ii, S-i

4. ✖ P –i, Q – ii, R- iii, S-iv

Question Number : 98 Question Id : 2839369378 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which OSI layer is responsible for congestion control of data packets?

Options :

1. ✖ Data link layer

2. ✖ Session layer

3. ✖ Presentation layer

4. ✔ Transport layer

Question Number : 99 Question Id : 2839369379 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following do not understand frames, packets, or headers?

Options :

1. ✔ Repeaters

2. ✖ Routers

3. ✖ Bridges

4. ✖ Switches

Question Number : 100 Question Id : 2839369380 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which routing technique, each router shares the knowledge of its neighborhood with every other router in the internetwork?

Options :

1. ✖ Shortest path routing

2. ✔ Link-state routing

3. ✖ Flooding

4. ✖ hierarchical routing

Question Number : 101 Question Id : 2839369381 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the range of host addresses for Class C?

Options :

1. ✔ 192.0.0.0 to 223.255.255.255

2. ✖ 128.0.0.0 to 191.255.255.255

3. ✖ 186.0.0.0 to 218.255.255.255

4. ✖ 128.0.0.0 to 223.255.255.255

Question Number : 102 Question Id : 2839369382 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is the original standard SMTP port?

Options :

1. ✖ port 80

2. ✖ port 23

3. ✔ port 25

4. ✖ port 53

Question Number : 103 Question Id : 2839369383 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As per the oldest Caesar cipher, the word 'attack' cipher text is_____

Options :

1. ✖ DWWDEM

2. ✔ DWWDFN

3. ✖ CWWCFN

4. ✖ CWWCEM

Question Number : 104 Question Id : 2839369384 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What are the two fundamental principles of cryptography?

Options :

1. ✖ encryption, decryption

2. ✔ redundancy, freshness

3. ✖ redundancy, safety

4. ✖ digital signature, hashing

Question Number : 105 Question Id : 2839369385 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is mainly handled by digital signature?

Options :

1. ✖ Masquerading

2. ✖ Authorization

3. ✖ denial of service

4. ✔ nonrepudiation

Question Number : 106 Question Id : 2839369386 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct sequence of phases in the unified process.

Options :

1. ✖ inception, construction, elaboration, transition

2. ✔ inception, elaboration, construction, transition

3. ✖ planning, design, development, testing

4. ✖ requirements, design, coding, maintenance

Question Number : 107 Question Id : 2839369387 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which UML diagram is at most necessary to have customer interaction for requirement understanding?

Options :

1. ✖ Deployment diagram

2. ✖ Class diagram

3. ✔ Use case diagram

4. ✖ Component diagram

Question Number : 108 Question Id : 2839369388 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is a white box testing technique?

Options :

1. ✖ Equivalence partitioning

2. ✖ Boundary value analysis

3. ✖ decision tree testing

4. ✔ Branch coverage

Question Number : 109 Question Id : 2839369389 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : Non[illegible] : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct statement(s)
S1: High Cohesion, loose coupling gives best software.
S2: High Cohesion, tight coupling gives best software

Options :

1. ✔ S1 only

2. ✖ S2 only

3. ✖ Both S1 and S2

4. ✖ Neither S1 nor S2

Question Number : 110 Question Id : 2839369390 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which type of maintenance deals with updating documents and taking backups?

Options :

1. ✖ Adaptive maintenance

2. ✖ Corrective maintenance

3. ✖ Perfective maintenance

4. ✔ Preventive maintenance

Question Number : 111 Question Id : 2839369391 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the main advantage of XML?

Options :

1. ✔ Interoperability

2. ✖ multi language support

3. ✖ high throughput

4. ✖ reusability

Question Number : 112 Question Id : 2839369392 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct option.
S1: High-end database systems can store XML documents.
S2: vector images can be represented in XML using SVG format.

Options :

1. ✖ S1 true, S2 false

2. ✖ S1 false, S2 true

3. ✔ S1 true, S2 true

4. ✖ S1 false, S2 false

Question Number : 113 Question Id : 2839369393 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the set of XML parsers available in the market.

Options :

1. ✖ SunXML, DOM, MyXML

2. ✔ Saxon, Xerces, MSXML

3. ✖ Json, Saxon, Xparser

4. ✖ WParse, Xerces, MSXML

Question Number : 114 Question Id : 2839369394 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which XML technology enables you to target specific elements or attributes?

Options :

1. ✖ Document type definition

2. ✖ XML Namespaces

3. ✔ XPath

4. ✖ XML schema

Question Number : 115 Question Id : 2839369395 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is an illegal element in XML?

Options :

1. ✖ <myElement>

2. ✖ </myElement>

3. ✖ <my-Element>

4. ✔ <-myElement/>

Question Number : 116 Question Id : 2839369396 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following attributes are mandatory in <jsp:useBean /> tag?

Options :

1. ✖ id, type

2. ✔ id, class

3. ✖ type, class

4. ✖ type, property

Question Number : 117 Question Id : 2839369397 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

JSP supports nine implicit objects. Which of the following is NOT one among them?

Options :

1. ✖ pageContext

2. ✖ page

3. ✖ out

4. ✔ pageContent

Question Number : 118 Question Id : 2839369398 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which JSP directive provides means for identifying the custom tags in the JSP page?

Options :

1. ✖ page directive

2. ✖ customlib directive

3.

✔ taglib directive

4. ✖ include directive

Question Number : 119 Question Id : 2839369399 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which among the following is the standard for deploying web services on Java EE 1.4?

Options :

1. ✖ SAX-RPC

2. ✔ JAX-RPC

3. ✖ JAX-RMI

4. ✖ JAX-JSON

Question Number : 120 Question Id : 2839369400 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Choose the correct set of components of a Web service architecture.

Options :

1. ✔ WSDL, UDDI, SOAP

2. ✖ WSDL, HTML, SGML

3. ✖ UDDI, SOA, SMTP

4. ✖ POP, UDDI, WS-security