UPPCL AE CS

Previous Year Paper

1 April 2022

UTTAR PRADESH POWER CORPORATION LTD.

Participant ID	
Participant Name	
Test Center Name	
Test Date	01/04/2022
Test Time	2:30 PM - 5:30 PM
Subject	AE CSE and IT

Section : **Domain Knowledge**

Q.1 **Which of the following sequences of operations is followed in the instruction cycle?**

Ans

✗ A.
00 : Fetch Cycle
01 : Execute Cycle
10 : Interrupt Cycle
11 : Indirect Cycle

✗ B.
00 : Fetch Cycle
01 : Interrupt Cycle
10 : Indirect Cycle
11 : Execute Cycle

✗ C.
00 : Fetch Cycle
01 : Execute Cycle
10 : Indirect Cycle
11 : Interrupt Cycle

✓ D.
00 : Fetch Cycle
01 : Indirect Cycle
10 : Execute Cycle
11 : Interrupt Cycle

Question ID : **63068063684**
Status : **Answered**
Chosen Option : **D**

Q.2 Consider the Grammar G $(V = \{S, A, B, C\}, T = \{a, b\}, S, P)$ where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rules given as follows.

$S \rightarrow ASA, \quad S \rightarrow B, \quad B \rightarrow aCb, \quad B \rightarrow bCb, \quad C \rightarrow ACA, \quad C \rightarrow A,$
$A \rightarrow a, \quad A \rightarrow b$

Which of the following strings is in L(G)?

Ans

✗ A. aaa

✓ B. ababbab

✗ C. Λ(null string)

✗ D. bbb

Question ID : **63068065002**
Status : **Answered**
Chosen Option : **D**

Q.3 **Let F(x,y) denote the predicate ' y is a friend of x'. Which of the following correctly describes' It is impossible that someone does not have any friends'?**

Ans

✗ A. For all y there exists x (F(x, y))

✗ B. There exists y for all x (F(x, y))

✗ C. There exists x for all y (F(x, y))

✓ D. For all x there exists y (F(x, y))

Question ID : **63068063456**
Status : **Answered**
Chosen Option : **D**

Q.4 **2 doctors and 10 nurses attend a small conference. All 12 names are put in a hat and 4 names are randomly picked without replacement.The probability that 1 doctor and 3 nurses are picked is:**

Ans

✗ A. $\frac{13}{17}$

✗ B. $\frac{17}{33}$

✓ C. $\frac{16}{33}$

✗ D. $\frac{12}{17}$

Question ID : **63068065277**
Status : **Answered**
Chosen Option : **C**

Q.5 **In a _____ graph, vertices can be partitioned into two subsets V1 and V2 such that no edge has both endpoints in the same subset, and every possible edge that could connect vertices in different subsets is part of the graph.**

Ans

✓ A. complete bipartite

✗ B. clique

✗ C. complete

✗ D. bipartite

Question ID : **63068061829**
Status : **Answered**
Chosen Option : **A**

Q.6 Let Grammar $G(V = \{S\}, T = \{a, b\}, S, P)$ where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol, λ is a null string and P is a set of production rules. If $n_a(w), n_b(w)$ represents the number of a's and b's in string w, then the language derived from set of production rules $P = \{S \rightarrow aSb,\ S \rightarrow SS, S \rightarrow \lambda\}$ is:

Ans

✔ A. $L = \{w \in \{a, b\}^* : n_a(w) = n_b(w)\}$

✘ B. $L = \{w \in \{a, b\}^* : n_a(w) \neq n_b(w)\}$

✘ C. $L = \{w \in \{a, b\}^* : n_a(w) < n_b(w)\}$

✘ D. $L = \{w \in \{a, b\}^* : n_a(w) > n_b(w)\}$

Question ID : **63068064989**
Status : **Answered**
Chosen Option : **A**

Q.7 Literals can also be called:

Ans

✔ A. constants

✘ B. keywords

✘ C. identifiers

✘ D. special characters

Question ID : **63068063137**
Status : **Answered**
Chosen Option : **A**

Q.8 Simplify the logic expression $F = a'bc + a'bc' + ac$.

Ans

✗ A. $b + ca' = 1$

✗ B. $ab + b'c = 1$

✗ C. $a + b' c$

✓ D. $a'b + ac$

Question ID : **63068063398**
Status : **Answered**
Chosen Option : **D**

Q.9 Consider the following schema:

staff(*name*, *street*, *city*)

serves(*name*, *c_name*, *salary*)

company (*c_name*, *city*)

manages (*name*, *manager-name*)

Find the names and cities of the residence of all the staffs who work for Shankar traders.

Ans

✗ A.

$$\pi_{name,city}((\sigma_{c\_name="shankar\ traders"}(serves) \bowtie Staff)$$

✗ B.

$$\sigma_{name,city}(Staff \bowtie (\pi_{c\_name="shankar\ traders"}(serves))$$

✗ C.

$$\sigma_{name,city}(Staff \bowtie (\sigma_{c\_name="shankar\ traders"}(serves))$$

✓ D.

$$\pi_{name,city}(Staff \bowtie (\sigma_{c\_name="shankar\ traders"}(serves))$$

Question ID : **63068063094**
Status : **Answered**
Chosen Option : **A**

Q.10 Which of the following is the application of stack data structure?

Ans

✗ A. data transfer

✗ B. resource scheduling

✗ C. disk scheduling

✓ D. evaluation of expressions

Question ID : **63068065195**
Status : **Answered**
Chosen Option : **D**

Q.11 Which of the following principles is used by divide and conquer technique?

Ans

✗ A. Recursively define the values of optimal solutions

✓ B. Divide the problem into a number of subproblems

✗ C. An equation or inequality describes a function in terms of its values on smaller inputs

✗ D. Construct an optimal solution from computed information

Question ID : **63068061893**
Status : **Answered**
Chosen Option : **B**

Q.12 The number of elements in the adjacency matrix of a graph having 6 vertices is _____.

Ans

✓ A. 36

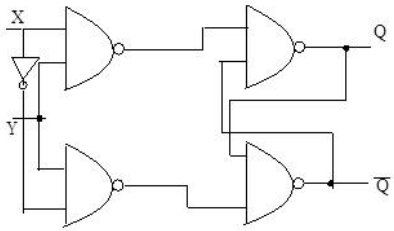
✗ B. 12

✗ C. 216

✗ D. 24

Question ID : **63068061831**
Status : **Answered**
Chosen Option : **A**

Q.13 Find the combination of the inputs (X and Y) for which the Q output is set to 1 for the latch as shown.



Ans

✗ A. 1, 0

✓ B. 1, 1

✗ C. 0, 1

✗ D. 0, 0

Question ID : **63068063423**
Status : **Answered**
Chosen Option : **B**

Q.14 Which of the following is a partition of the set S = {2,4,6,8,10}?

Ans

✗ A. {2, 4}, {2, 6, 8}, {10}

✗ B. {4, 6}, {4, 8, 10}

✓ C. {2, 8}, {4}, {6, 10}

✗ D. {2, 10}, {4}, (6}

Question ID : **63068063483**
Status : **Answered**
Chosen Option : **C**

Q.15 For which of the following functions is Rolle's theorem applicable?

Ans

✗ A. $f(x) = x^3 \text{ in } [1,2]$

✓ B. $f(x) = x^2 \text{ in } [-1,1]$

✗ C. $f(x) = \tan x \text{ in } [0, \pi]$

✗ D. $f(x) = x^{1/3} \text{ in } [-1,1]$

Question ID : **63068064894**
Status : **Answered**
Chosen Option : **B**

Q.16 _____specifies the address in memory for a read or write operation.

Ans

✗ A. Memory Buffer Register (MBR)

✗ B. Address register

✓ C. Memory Address Register (MAR)

✗ D. Program Counter (PC)

Question ID : **63068063683**
Status : **Answered**
Chosen Option : **C**

Q.17 In which of the following gates, the output is 0 if and only if at least one input is 0?

Ans

✗ A. NOR

✗ B. OR

✗ C. XOR

✓ D. AND

Question ID : **63068063707**
Status : **Answered**
Chosen Option : **D**

Q.18 Which of the following is NOT a property of context free language that can be generated from context free grammar G ?

Ans

✔ A.

There are no productions of the form A → BC where A and B are variables.

✘ B.

Each variable and each terminal of G appears in the derivation of some word in L.

✘ C.

There are no productions of the form A → B where A and B are variables.

✘ D.

If ε is not in L, there needs be no productions of the form A → ε.

Question ID : **63068065007**
Status : **Answered**
Chosen Option : **A**

Q.19 In dynamic programming, the technique of storing the previously calculated values is called:

Ans

✘ A. storing value property

✘ B. mapping dynamic programming paradigm

✘ C. saving value property

✔ D. Memorization

Question ID : **63068061892**
Status : **Answered**
Chosen Option : **D**

Q.20 For all sets A, B, C, which of the following does NOT hold?

Ans

✗ A. $(B \cap C) \cup A = (B \cup A) \cap (C \cup A)$

✗ B. $A \cap B = B \cap A$

✗ C. $A \cup (B \cup C) = (A \cup B) \cup C$

✓ D. $A \cap (B \cap C) = (A \cap B) \cup C$

Question ID : **63068063482**
Status : **Answered**
Chosen Option : **D**

Q.21 _____are very versatile and are a basic component of inter process and intersystem communication. They also provide point-to-point, two-way communication between two processes.

Ans

✗ A. Monitors

✗ B. Shared memories

✓ C. Sockets

✗ D. Semaphores

Question ID : **63068061811**
Status : **Marked For Review**
Chosen Option : **B**

Q.22 The number 101010101010 is a 12-bit binary number in 2's complement form. If it is stored in a 16-bit register, with what would you fill bit 12 to bit 15 (4-bits), so that the value of the number is unchanged?

Ans

✗ A. 0101

✗ B. 0000

✓ C. 1111

✗ D. 1010

Question ID : **63068063395**
Status : **Answered**
Chosen Option : **C**

Q.23 The given table describes the rate of economic growth (x) and the rate of return on the S & P 500(y) of a sample. The covariance between these two is:

Economic growth % (x)	2.1	2.5	4.0	3.6
S&P 500 returns % (y)	8	12	14	10

Ans

✗ A. 1.36

✓ B. 1.53

✗ C. 1.47

✗ D. 1.27

Question ID : **63068065272**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.24 Which is the next step that comes after the intermediate code generator in the phases of a compiler?

Ans

✓ A. Machine - independent code optimizer

✗ B. Semantic analyzer

✗ C. Machine - dependent code optimizer

✗ D. Code generator

Question ID : **63068063125**
Status : **Answered**
Chosen Option : **A**

Q.25 Match the following pairs with respect to 10 G Ethernet:

Name	Maximum Segment
I. 10 G Base-SR	A- Up to 300 m
II. 10 G Base-ER	B- 40 km
III. 10 G Base-CX4	C- 15 m
IV. 10 G Base-LR	D- 10 km

Ans
✗ A. I - A, II - B, III - D, IV - C
✗ B. I - A, II - D, III - B, IV - C
✓ C. I - A, II - B, III - C, IV - D
✗ D. I - A, II - C, III - B, IV - D

Question ID : **63068065315**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.26 **The identity elements of OR and AND operations are _____ and _____, respectively.**

Ans
✗ A. zero, zero
✗ B. one, zero
✗ C. one, one
✓ D. zero, one

Question ID : **63068063396**
Status : **Answered**
Chosen Option : **D**

Q.27 The dual of the expression $x + x' = 1$ is:

Ans

✗ A. $x - x' = 1$

✓ B. $x.x' = 0$

✗ C. $x.x' = 1$

✗ D. $x - x' = 0$

Question ID : **63068063397**
Status : **Answered**
Chosen Option : **B**

Q.28 **Which of the following is a scalar matrix? (given k is constant)**

Ans

✗ A. $A=[a_{ij}]_{m \times n}$ where $a_{ij} = \begin{cases} 0, i = j \\ k, i \neq j \end{cases}$

✗ B. $A=[a_{ij}]_{m \times n}$ where $a_{ij} = \begin{cases} k, i \neq j \\ 1, i = j \end{cases}$

✓ C. $A=[a_{ij}]_{m \times n}$ where $a_{ij} = \begin{cases} 0, i \neq j \\ k, i = j \end{cases}$

✗ D. $A=[a_{ij}]_{m \times n}$ where $a_{ij} = \begin{cases} 1, i \neq j \\ k, i = j \end{cases}$

Question ID : **63068065500**
Status : **Answered**
Chosen Option : **A**

Q.29 Which of the following is a decidable problem?

Ans

✗ A. Determine whether a language generated by Turing Machine M is finite.

✗ B. Determine whether a language L generated by Unrestricted Grammar is empty.

✗ C. Determine whether language over ∑ (where ∑ is a set of input alphabet) is not recursively enumerable.

✓ D. Determine whether a context sensitive grammar accepts the input string

Question ID : **63068065033**
Status : **Answered**
Chosen Option : **D**

Q.30 The time complexity of constructing a single-tape Turing Machine and a two-tape Turing Machine for the language $L = \{a^n b^n : n \geq 1\}$, respectively, are:

Ans

✗ A. $O(n^2)$ and $O(n^2)$

✗ B. $O(n^2 \log_2 n)$ and $O(n^2)$

✓ C. $O(n^2)$ and $O(n)$

✗ D. $O(n^2)$ and $O(n \log_2 n)$

Question ID : **63068065035**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.31 Protocols in which the sender sends one frame and then waits for an acknowledgement before proceeding are called _____ protocols.

Ans

✓ A. stop-and-wait

✗ B. Go-back-n

✗ C. store and forward

✗ D. sliding window

Question ID : **63068065230**
Status : **Answered**
Chosen Option : **A**

Q.32 A complete graph G with 5 vertices has _____ spanning trees.

Ans

✔ A. 125

✘ B. 15

✘ C. 3

✘ D. 25

Question ID : **63068061827**
Status : **Answered**
Chosen Option : **A**

Q.33 Consider the Grammar $G(V = \{S, A, B, C, D, E\}, T = \{a, b\}, S, P)$ where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rules given as follows: $S \rightarrow AB,\ A \rightarrow a,\ B \rightarrow C,\ B \rightarrow b,\ C \rightarrow D,\ D \rightarrow E,\ E \rightarrow a$. The equivalent grammar after eliminating the unit productions is:

Ans

✘ A. $S \rightarrow AB, A \rightarrow a, B \rightarrow a, B \rightarrow b, C \rightarrow a, D \rightarrow E, E \rightarrow a$

✔ B. $S \rightarrow AB, A \rightarrow a, B \rightarrow a, B \rightarrow b, C \rightarrow a, D \rightarrow a, E \rightarrow a$

✘ C. $S \rightarrow BC, A \rightarrow a, B \rightarrow a, B \rightarrow b, C \rightarrow a, D \rightarrow E, E \rightarrow a$

✘ D. $S \rightarrow ab, A \rightarrow a, B \rightarrow a, B \rightarrow b, C \rightarrow a, D \rightarrow E, E \rightarrow a$

Question ID : **63068064990**
Status : **Answered**
Chosen Option : **B**

Q.34 Suppose a d-regular graph on n vertices (n is even) is disconnected. Which of the following can be the maximum value of d?

Ans

✗ A. $\frac{n}{2}+1$

✗ B. $\frac{n}{2}$

✓ C. $\frac{n}{2}-1$

✗ D. $\frac{n}{2}+2$

Question ID : **63068063474**
Status : **Marked For Review**
Chosen Option : **D**

Q.35 The type of information stored in computer words _____.

Ans

✗ A. is data only

✓ B. are data and instruction

✗ C. depends on the type of memory

✗ D. is instruction only

Question ID : **63068063695**
Status : **Marked For Review**
Chosen Option : **B**

Q.36 Which of the following is a process that reduces computing time but increases the amount of memory needed?

Ans

✓ A. Lookup tables or recalculation

✗ B. Compressed data

✗ C. Re-rendering

✗ D. Smaller code

Question ID : **63068061897**
Status : **Answered**
Chosen Option : **A**

Q.37 A string of terminals in the context-free grammar is represented by:

Ans

✗ A. a combination of lowercase Greek and uppercase letters

✗ B. uppercase letters

✗ C. lowercase Greek letters

✓ D. lowercase letters

Question ID : **63068063138**
Status : **Marked For Review**
Chosen Option : **C**

Q.38 Find the minimum number of additions and multiplications needed to evaluate a degree 5 polynomial at any point x_0.

Ans

✗ A. 5 additions, 15 multiplications

✓ B. 5 additions, 5 multiplications

✗ C. 5 additions, 4 multiplications

✗ D. 4 additions, 15 multiplications

Question ID : **63068063463**
Status : **Answered**
Chosen Option : **C**

Q.39 Using a dual 8:1 MUX, what are the extra logic gates required to implement a full-adder?

Ans

✗ A. One 2-input XOR

✗ B. One 2-input AND

✗ C. One 2-input OR

✓ D. None

Question ID : **63068063417**
Status : **Answered**
Chosen Option : **D**

Q.40 The linear transformation has a matrix $\begin{pmatrix} 2 & -2 \\ 3 & 3 \end{pmatrix}$. If it transforms all the points of circle with equation $x^2 + y^2 = 4$, then the curve is:

Ans

✔ A. $9x^2 + 4y^2 = 288$

✘ B. $9x^2 + 4y^2 = 24$

✘ C. $x^2 + y^2 = 12$

✘ D. $9x^2 + 4y^2 = 576$

Question ID : **63068065513**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.41 If the sum of the squares of the difference between the ranks of two equal sets of students is 156 for repeated ranks, $\frac{\sum m(m^2-1)}{12} = 3.5$ and the rank correlation coefficient is 0.44, then the number of students in each set is:

Ans

✔ A. 12

✘ B. 11

✘ C. 10

✘ D. 13

Question ID : **63068065247**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.42 **Each field of k bits allows for_____ micro-operations.**

Ans

✗ A. k

✗ B. 2k+1

✗ C. 2k – 1

✓ D. 2k

Question ID : **63068063692**

Status : **Not Attempted and Marked For Review**

Chosen Option : **--**

Q.43 Consider the indirect addressing mode instruction "Load R1, (M)".
The task of the instruction: Load the content of memory location M1 to register R1. There are five control steps (after fetch) that are required to execute the instruction "LOAD R1, (M)", as given below.
1. IRout, MARin, Read
2. WMFC
3. _____
4. WMFC
5. MDRout, R1in
Which of the following fits appropriately in step 3 of the given set of instructions?

Ans

✗ A. IRout, MARin, Read

✗ B. MDRin, MARin

✓ C. MDRout, MARin

✗ D. MDRout, MAROut

Question ID : **63068063702**

Status : **Not Attempted and Marked For Review**

Chosen Option : **--**

Q.44 UNION operator results in which of the following?

Ans

✔ A. Taking distinct data from the relations.

✘ B. Taking data that is not common from the relations.

✘ C. Taking all data from the relations.

✘ D. Taking common data from the relations.

Question ID : **63068063097**
Status : **Answered**
Chosen Option : **C**

Q.45 Which of the following options is true in the case of a two-bus organisation?

Ans

✔ A. In a two-bus organisation, there are two buses. The general-purpose register can read/write from both the buses. In this case, two operands can be fetched at the same time because of the two buses – one bus fetch operand for ALU and another bus fetch for register.

✘ B. In a two-bus organisation, there are two buses. The general-purpose register can only write from both the buses. In this case, two operands can be fetched at the same time because of the two buses – one bus fetch operand for ALU and another bus fetch for register.

✘ C. In a two-bus organisation, there are two buses. The general-purpose register can only read from both the buses. In this case, two operands can be fetched at the same time because of the two buses – one bus fetch operand for ALU and another bus fetch for register.

✘ D. In a two-bus organisation, there are two buses. The general-purpose register can only write from both the buses. In this case, two operands can be fetched at the same time because of the two buses – one bus fetch operand for ALU and another bus fetch for memory.

Question ID : **63068063693**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.46 Consider the Grammar G $(V = \{S, A, B, C\}, T = \{a, b\}, S, P)$ where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rules. If there are two sets of production rules

P_1 ($S \rightarrow AB, A \rightarrow BC, A \rightarrow a, B \rightarrow CC, B \rightarrow b, C \rightarrow a$) and

P_2 ($S \rightarrow AB, A \rightarrow BC, A \rightarrow a, B \rightarrow CC, B \rightarrow b, , C \rightarrow AB,\ C \rightarrow a$) , then which of the following statements is correct?

Ans

✗ A.

Language generated from production P_1 of Grammar is infinite, but the language generated from production P_2 is always finite.

✓ B.

Language generated from production P_1 of Grammar is finite, but the language generated from production P_2 of Grammar is infinite.

✗ C.

Language generated from productions P_1 and P_2 are always infinite.

✗ D.

Language generated from productions P_1 and P_2 are always finite.

Question ID : **63068065003**
Status : **Answered**
Chosen Option : **B**

Q.47 A binary search tree which provides the smallest possible search time for a given sequence of accesses is:

Ans

✓ A. Optimal Binary Search Tree

✗ B. Self-Balancing Binary Search Tree

✗ C. Balanced Binary Tree

✗ D. AVL tree

Question ID : **63068061894**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.48 **ADD R1,R2 instruction is an example of which of the following addressing modes?**

Ans

✗ A. Direct addressing mode

✗ B. Indirect register addressing mode

✓ C. Register addressing mode

✗ D. Immediate addressing mode

Question ID : **63068063680**
Status : **Answered**
Chosen Option : **A**

Q.49 $If\ 2a+3b+6c=0,\ then\ ax^2+bx+c=0\ has\ atleast\ one\ root\ in:$

Ans

✗ A. (1,2)

✓ B. (0,1)

✗ C. (2,3)

✗ D. (–1,0)

Question ID : **63068064893**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.50 What is the space complexity of the following piece of code?

```
for (int i = 0; i < N; i++) V.push_back(i);
```

Ans

✗ A. O(logn)

✓ B. O(n)

✗ C. O(1)

✗ D. O(nlogn)

Question ID : **63068061910**
Status : **Answered**
Chosen Option : **B**

Q.51 In a queue, insertion and deletion takes place at:

Ans

✗ A. at any place

✗ B. at one end

✓ C. rear and front respectively

✗ D. front and rear respectively

Question ID : **63068065203**
Status : **Answered**
Chosen Option : **C**

Q.52 _____ search terminates only when either an answer node is found or the entire state space tree has been generated and searched.

Ans

✗ A. DFS

✓ B. Least cost

✗ C. FIFO

✗ D. BFS

Question ID : **63068061896**
Status : **Answered**
Chosen Option : **B**

Q.53 Which of the following is/are NOT a design issue(s) in reliability?
a) Error detection
b) Error correction
c) Finding working path through network
d) Evolution of network

Ans

✗ A. (a) and (d)

✗ B. (a) and (b)

✓ C. Only (d)

✗ D. (b) and (c)

Question ID : **63068065298**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.54 **In ISO's OSI model, which layer offers services like dialogue control, token management and synchronisation?**

Ans

✗ A. Transport layer

✓ B. Session layer

✗ C. Presentation layer

✗ D. Network layer

Question ID : **63068065301**
Status : **Answered**
Chosen Option : **B**

Q.55 Let $T(n) = cn^2 \log n$ where c is some constant. Which of the following recurrence relations can have T(n) as a solution?

Ans

✗ A. $T(n) = 4T\left(\frac{n}{2}\right) + n$

✗ B. $T(n) = 4T\left(\frac{n}{2}\right) + n^3$

✓ C. $T(n) = 4T\left(\frac{n}{2}\right) + n^2$

✗ D. $T(n) = 4T\left(\frac{n}{2}\right) + n^4$

Question ID : **63068063466**
Status : **Answered**
Chosen Option : **C**

Q.56 _____ is used for interprocess system call.

Ans

✗ A. fork()

✗ B. fcntl()

✓ C. pipe()

✗ D. exec()

Question ID : **63068061809**
Status : **Marked For Review**
Chosen Option : **C**

Q.57 Which of the following computer architectures consists of a single shared memory for programs and data (i.e., stored program concept) and a single bus for memory access, an arithmetic unit and a program control unit?

Ans

✓ A. Von Neumann architecture

✗ B. FLYNN's architecture

✗ C. Harvard architecture

✗ D. Multiprocessor architecture

Question ID : **63068063671**
Status : **Answered**
Chosen Option : **A**

Q.58 Consider the Grammar G ($V = \{S, A, B, C\}, T = \{a\}, S, P$) where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rulesgiven as follows:

$S \rightarrow A, A \rightarrow B, B \rightarrow C, C \rightarrow a$

The language generated by grammar G is:

Ans

✗ A. $L(G) = \{ a^n : n \geq 2 \}$

✓ B. $L(G) = \{ a \}$

✗ C. $L(G) = \{ a^n : n \geq 1 \}$

✗ D. $L(G) = \{ \emptyset \}$

Question ID : **63068065010**
Status : **Answered**
Chosen Option : **B**

Q.59 What is the space complexity of the following piece of code?

```
#include<stdio.h>
int main()
{
   int a = 5, b = 5, c;
   c = a + b;
printf("%d", c);
}
```

Ans

✗ A. O(n)

✓ B. O(1)

✗ C. O(logn)

✗ D. O(nlogn)

Question ID : **63068061911**
Status : **Answered**
Chosen Option : **B**

Q.60 **The 802.11a method is based on _____.**

Ans

✔ A. OFDM (Orthogonal Frequency Division Multiplexing)

✘ B. Time Division Multiplexing

✘ C. QPSK modulation

✘ D. Complementary Code Keying (CCK)

Question ID : **63068065234**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.61 **Two similar urns A and B contain 5 white and 4 red balls and 4 white and 5 red balls, respectively. If a ball is selected at random from one of the urns and is found to be red, then the probability that it was drawn from urn B is:**

Ans

✔ A. $\frac{5}{9}$

✘ B. $\frac{2}{9}$

✘ C. $\frac{4}{9}$

✘ D. $\frac{7}{9}$

Question ID : **63068065293**
Status : **Answered**
Chosen Option : **A**

Q.62 Consider the Grammar G $(V = \{S, A, B\}, T = \{a, b, c\}, S, P)$ where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rules given as follows:

$S \rightarrow ABa, A \rightarrow Ba, A \rightarrow c, B \rightarrow abc$

The language generated by the grammar G is:

Ans

✔ A. Type-2

✘ B. Type-1

✘ C. Type-0

✘ D. Type-3

Question ID : **63068064994**
Status : **Answered**
Chosen Option : **A**

Q.63 **_____ is the deadlock avoidance algorithm.**

Ans

✘ A. Karn's algorithm

✘ B. Wait for graph algorithm

✘ C. Round-robin algorithm

✔ D. Banker's algorithm

Question ID : **63068061812**
Status : **Answered**
Chosen Option : **D**

Q.64 **Which of the following statements is INCORRECT?**

Ans

✘ A. A language is LR if and only if it can be accepted by Deterministic Pushdown Automata.

✘ B. Regular language is also accepted by Pushdown Automata.

✔ C. A language is Context Free Language if and only if it can be accepted by Non-Deterministic Pushdown Automata.

✘ D. For any Context Free Language L, there exists a Non-Deterministic Pushdown Automata M such that L = L(M).

Question ID : **63068064999**
Status : **Answered**
Chosen Option : **C**

Q.65 In a stack data structure insertion and deletion takes place at:

Ans

✗ A. front

✓ B. at one end

✗ C. rear and front

✗ D. at any place

Question ID : **63068065202**
Status : **Answered**
Chosen Option : **B**

Q.66 A 3-variable K-Map representation has _____ cell(s).

Ans

✗ A. 4

✓ B. 8

✗ C. 2

✗ D. 1

Question ID : **63068063403**
Status : **Answered**
Chosen Option : **B**

Q.67 Consider the following schema:

worker (*name*, *street*, *city*)

serves (*name*, *c_name*, *salary*)

company (*c_name*, *city*)

manages (*name*, *manager-name*)

Find the names of all workers who work for A-one Finance Corporation.

Ans

✔ A. $\pi_{name}(\sigma_{c\_name="A\text{-}one\ Finance\ corporation"}(serves))$

✘ B. $\sigma_{name}(\pi_{c\_name="A\text{-}one\ Finance\ corotation"}(serves))$

✘ C. $\sigma_{name}(\sigma_{c\_name="A\text{-}one\ Finance\ corporation"}(serves))$

✘ D. $\pi_{name}(\pi_{c\_name="A\text{-}one\ Finance\ corporation"}(serves))$

Question ID : **63068063092**
Status : **Answered**
Chosen Option : **A**

Q.68 **_____is the time when a process enters into the ready state and is ready for its execution.**

Ans

✔ A. Arrival time

✘ B. Turnaround time

✘ C. Waiting time

✘ D. Burst time

Question ID : **63068061810**
Status : **Answered**
Chosen Option : **A**

Q.69 **Which of the following statements is INCORRECT?**

Ans

✗ A. MODIFY can be used with ALTER command.

✗ B. UPDATE command is used to change the contents of the relation.

✓ C. ALTER command is used to change the contents of the relation.

✗ D. SET can be used with UPDATE command.

Question ID : **63068063106**
Status : **Answered**
Chosen Option : **C**

Q.70 Convert the function $F = \Sigma m(1,3,5,6,7)$ from the minterm form to equivalent maxterm.

Ans

✗ A. $(A' + B' + C').(A + B' + C'),.(A' + B + C)$

✓ B. $(A + B + C).(A + B' + C).(A' + B + C)$

✗ C. $(A + B + C).(A + B' + C').(A' + B + C)$

✗ D. $(A' + B' + C').(A + B' + C),.(A' + B' + C)$

Question ID : **63068063401**
Status : **Answered**
Chosen Option : **B**

Q.71 **The result of the subtraction (7 – 5) in 1's complement is:**

Ans

✗ A. 111

✗ B. 001

✗ C. 110

✓ D. 010

Question ID : **63068063394**
Status : **Answered**
Chosen Option : **B**

Q.72 To which of the following categories does UPDATE commands belong?

Ans

✗ A. DCL

✗ B. TCL

✗ C. DDL

✓ D. DML

Question ID : **63068063105**
Status : **Answered**
Chosen Option : **D**

Q.73 The other name of a complete bipartite graph is:

Ans

✓ A. biclique

✗ B. clique

✗ C. bipartite

✗ D. cartesian

Question ID : **63068061830**
Status : **Answered**
Chosen Option : **A**

Q.74 IEEE standard _____ format contains a VLAN tag.

Ans

✗ A. 802.11

✓ B. 802.1Q

✗ C. 802.16

✗ D. 802.11/a

Question ID : **63068065241**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.75 **The sizes of address bus = 14 bit and data bus = 3 bits, hence the memory size will be:**

Ans

✗ A. 32K × 8 bits

✓ B. 16K × 8 bits

✗ C. 14K × 8 bits

✗ D. 64K ×8 bits

Question ID : **63068063705**
Status : **Answered**
Chosen Option : **B**

Q.76 If $A=\begin{pmatrix}1 & 2 & 3\\ 1 & 5 & 1\\ 3 & 1 & 1\end{pmatrix}$ then the middle row of $(A^T)^{-1}$ is:

Ans

✓ A. $\frac{-1}{34}(1\ -8\ \ 5)$

✗ B. $\frac{-1}{34}(2\ -8\ \ 8)$

✗ C. $\frac{-1}{34}(-2\ -8\ \ -8)$

✗ D. $\frac{-1}{34}(-1\ -8\ \ -5)$

Question ID : **63068065501**
Status : **Answered**
Chosen Option : **A**

Q.77 Which of the following is correct about handle pruning?

Ans

✔ A. A handle is a substring that matches the body of a production and its reduction represents one step along reverse of the rightmost derivation.

✘ B. A handle is a non-terminal that matches the body of a production and its reduction represents one step along reverse of the leftmost derivation.

✘ C. A handle is a terminal that matches the body of a production and its reduction represents one step along reverse of the leftmost derivation.

✘ D. A handle is a substring that matches the body of a production and its reduction represents one step along reverse of the leftmost derivation.

Question ID : **63068063139**
Status : **Answered**
Chosen Option : **A**

Q.78 Which of the following error-detecting codes includes a positional component, adding the product of the data and its position to the runningsum?

Ans

✔ A. Fletcher's checksum

✘ B. Parity Checking

✘ C. Checksum

✘ D. Cyclic redundancy check

Question ID : **63068065310**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.79 Each bridge operates in the _____, that is, it accepts every frame transmitted by the stations attached to each of its ports.

Ans

✘ A. fragment-free mode

✘ B. store and forward mode

✘ C. non-promiscuous mode

✔ D. promiscuous mode

Question ID : **63068065317**
Status : **Answered**
Chosen Option : **B**

Q.80 Consider the given set of 5 processes whose arrival times and burst times are as shown:

Process Id	Arrival time	Burst time
P1	3	1
P2	1	4
P3	4	2
P4	0	6
P5	2	3

For the above given table If the CPU scheduling policy is SJF non-preemptive method then, calculate the average waiting time.

Ans

✗ A. 8.4

✗ B. 8

✗ C. 4

✓ D. 4.8

Question ID : **63068061905**
Status : **Answered**
Chosen Option : **D**

Q.81 **The _____ defines what operations the layer(in OSI/TCP model) is prepared to perform on behalf of its users, but it says nothing at all about how these operations are implemented.**

Ans

✗ A. channel

✗ B. interface

✓ C. service

✗ D. protocol

Question ID : **63068065300**
Status : **Answered**
Chosen Option : **D**

Q.82 **For a string of 60 characters, if the input is 'COVID-19'. At what position '-' will be stored if the gets() function is used to take the input and the first character is at location 9021?**

Ans

✗ A. 9025

✗ B. Error

✓ C. 9026

✗ D. 9031

Question ID : **63068065194**
Status : **Answered**
Chosen Option : **C**

Q.83 Consider the following grammar and determine what will be the next step.

S'→S

S→ PP

P→a P

P→ b

Ans

✔ A.
S'→ .S, $
S→ .PP, $
P→.aP, a/b
P→.b, a/b

✘ B.
S→ PP
P→a P
P→ b

✘ C.
S→ .PP, $
P→.aP, a/b

✘ D.
P→.aP, a/b
P→.b, a/b

Question ID : **63068063144**
Status : **Answered**
Chosen Option : **A**

Q.84 In _____, a special byte called escape character (Esc) is stuffed before every byte in the message with the same pattern as the flag byte.

Ans
- ✗ A. bit stuffing
- ✗ B. flag stuffing
- ✗ C. Esc stuffing
- ✓ D. byte stuffing

Question ID : **63068065304**
Status : **Answered**
Chosen Option : **D**

Q.85 Calculate the number of bits required in the address for a memory having a size of 16 GB. Assume the memory is 4-byte addressable.

Ans
- ✗ A. 8 bits
- ✗ B. 16 bits
- ✗ C. 64 bits
- ✓ D. 32 bits

Question ID : **63068061821**
Status : **Answered**
Chosen Option : **D**

Q.86 In _____, whenever the sender sends the data to the receiver, the receiver then sends the information back to the sender and permits the sender to send more data or informs the sender about how the receiver is doing.

Ans
- ✗ A. rate-based flow control
- ✗ B. asynchronous flow control
- ✓ C. feedback-based control
- ✗ D. synchronous flow control

Question ID : **63068065309**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.87 **Which of the following methods returns the top element on the stack but does NOT remove it from the stack?**

Ans

✗ A. Push()

✗ B. Top()

✗ C. Pop()

✓ D. Peek()

Question ID : **63068065201**
Status : **Answered**
Chosen Option : **B**

Q.88 **In a queue, at which end old elements are deleted?**

Ans

✓ A. Front

✗ B. Rear

✗ C. Top

✗ D. Pivot

Question ID : **63068065199**
Status : **Answered**
Chosen Option : **A**

Q.89 **In Chomsky Hierarchy, the language generated by type-2 grammar is called:**

Ans

✗ A. Context Sensitive Language

✓ B. Context Free Language

✗ C. Recursive Enumerable Language

✗ D. Regular Language

Question ID : **63068064984**
Status : **Answered**
Chosen Option : **B**

Q.90 What is the return value of the following function (assume both x and y are positive integers)?

```
int find(int x, int y)
{
        while ( x ! = y)
    {
        if ( x > y )
                x = x -y;
           else
                y = y -x;
        }
        return x;
}
```

Ans

✗ A. LCM of x and y

✓ B. GCD of x and y

✗ C. Maximum of x and y

✗ D. Minimum of x and y

Question ID : **63068065189**
Status : **Answered**
Chosen Option : **B**

Q.91 **The types of file path names are:**

Ans

✓ A. absolute and relative pathnames

✗ B. relative and global pathnames

✗ C. absolute and local pathnames

✗ D. local and global pathnames

Question ID : **63068061815**
Status : **Answered**
Chosen Option : **D**

Q.92 Consider the given set of 5 processes whose arrival times and burst times are as shown:

Process Id	Arrival time	Burst time
P1	3	1
P2	1	4
P3	4	2
P4	0	6
P5	2	3

For the above given table If the CPU scheduling policy is SJF non-preemptive method then, calculate the average turnaround time.

Ans

✔ A. 8

✘ B. 4

✘ C. 4.8

✘ D. 8.4

Question ID : **63068061906**
Status : **Answered**
Chosen Option : **A**

Q.93 **A system has 10 user processes, each requiring 3 units of resource R. The maximum number of units of R such that deadlock will occur is _____.**

Ans

✔ A. 20

✘ B. 19

✘ C. 25

✘ D. 21

Question ID : **63068061822**
Status : **Answered**
Chosen Option : **A**

Q.94 Find the 9's complement of the decimal number 6789.

Ans

✗ A. 3211

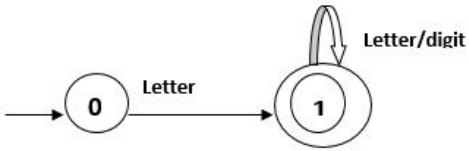
✗ B. 3209

✓ C. 3210

✗ D. 3245

Question ID : **63068063393**
Status : **Answered**
Chosen Option : **C**

Q.95



In the given transition diagram, how can we recognise the tokens in form of an identifier?

Ans

✗ A. id → Digit

✗ B. id → Digit(Letter/digit)*

✗ C. id → (Letter/digit)* Letter

✓ D. id → Letter(Letter/digit)*

Question ID : **63068063134**
Status : **Answered**
Chosen Option : **D**

Q.96 Which automata has memory in the form of stack?

Ans

✗ A. Linear Bounded Automata

✗ B. Finite State Automata

✓ C. Pushdown Automata

✗ D. Turing Machine

Question ID : **63068065000**
Status : **Answered**
Chosen Option : **C**

Q.97 Calculate the size of the memory if its address consists of 22 bits and the memory is 2-byte addressable.

Ans

✓ A. 8 MB

✗ B. 16 KB

✗ C. 16 MB

✗ D. 8 KB

Question ID : **63068061820**
Status : **Answered**
Chosen Option : **A**

Q.98 Which of the following flag bits is set if the sum of two positive numbers yields a negative value?

Ans

✗ A. Parity bit

✗ B. Sign bit

✗ C. Zero bit

✓ D. Overflow bit

Question ID : **63068063698**
Status : **Answered**
Chosen Option : **B**

Q.99 If spammers want to send junk e-mails to many recipients, which type of communication can you suggest?

Ans
✗ A. Peer-to-peer communication
✓ B. Connectionless communication
✗ C. Synchronous communication
✗ D. Connection-oriented communication

Question ID : **63068065299**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.100 The three basic logical operations are AND, OR and NOT gates. Which of the following operations when used repeatedly can simulate these logical operations?

Ans
✗ A. XOR
✗ B. X-NOR
✗ C. AND
✓ D. NAND

Question ID : **63068063454**
Status : **Answered**
Chosen Option : **D**

Q.101 The equivalent of 4-bit binary number 1010 in Gray code is _____.

Ans
✗ A. 1100
✗ B. 0101
✗ C. 0011
✓ D. 1111

Question ID : **63068063415**
Status : **Answered**
Chosen Option : **D**

Q.102 What is the output of the following code?

```
int main()
{
int a=1,b=2,c=3;
   a=--a+b+c++;
   b=++a+(b++)+c--;
   c=++a-b-(c++);
printf("%d %d %d",a,b,c);
      return 0;
}
```

Ans
- ✗ A. -7 12 -8
- ✓ B. 7 12 -8
- ✗ C. 8 12 7
- ✗ D. -8 12 7

Question ID : **63068065191**
Status : **Answered**
Chosen Option : **B**

Q.103 Let S be a set such that |S| = n. Find the total number of reflexive relations from S to S.

Ans
- ✗ A. $2^{\{0.5\ n^2\}}$
- ✓ B. $2^{\{n^2-n\}}$
- ✗ C. $2^{\{n^2\}}$
- ✗ D. $2^{\{n^2+n\}}$

Question ID : **63068063487**
Status : **Answered**
Chosen Option : **B**

Q.104 What is the time complexity of the following piece of code?

```
int i, j, k = 0;
for (i = n / 2; i <= n; i++) {
        for (j = 2; j <= n; j = j * 2) {
                k = k + n / 2;
        }
}
```

Ans
- ✗ A. O(logn)
- ✗ B. O(1)
- ✗ C. O(n)
- ✓ D. O(nlogn)

Question ID : **63068061908**
Status : **Answered**
Chosen Option : **D**

Q.105 What is the total number of input and select lines together in an 8:1 mux?

Ans
- ✗ A. 7
- ✗ B. 5
- ✗ C. 9
- ✓ D. 11

Question ID : **63068063416**
Status : **Answered**
Chosen Option : **D**

Q.106 The number 0 is considered _____.

Ans

✗ A. positive

✓ B. neither positive nor negative

✗ C. odd

✗ D. prime

Question ID : **63068063391**
Status : **Answered**
Chosen Option : **B**

Q.107 ADD 3030 is an example of a _____ instruction.

Ans

✗ A. zero-address

✗ B. three-address

✗ C. two-address

✓ D. one-address

Question ID : **63068063676**
Status : **Answered**
Chosen Option : **D**

Q.108 Consider the pseudo code given here. Identify the name of the binary tree traversal.

Step1: Repeat Steps 2 to 4 while TREE ! = NULL

Step 2: TRAVERSAL(TREE→LEFT)

Step 3: Write TREE→ DATA

Step 4: TRAVERSAL(TREE→RIGHT)

[END OF LOOP]

Step 5: END

Ans
- ✗ A. Post-order binary tree traversal
- ✗ B. Pre-order binary tree traversal
- ✓ C. In-order binary tree traversal
- ✗ D. Level-order binary tree traversal

Question ID : **63068066402**
Status : **Answered**
Chosen Option : **C**

Q.109 What are the functional dependencies that the following relation instance satisfies?

X	Y	Z
x_1	y_1	z_1
x_1	y_1	z_2
x_2	y_1	z_1
x_2	y_1	z_3

Ans

✔ A. Z->Y,X->Y and XZ->Y

✘ B. X->y, X->Z and YZ->X

✘ C. X->Y

✘ D. Z->y

Question ID : **63068063090**
Status : **Answered**
Chosen Option : **A**

Q.110 What is communication protocol?

Ans

✔ A. An agreement between the communicating parties

✘ B. A step-by-step procedure to write a program

✘ C. A guidance to start communication

✘ D. Starting layer-to-layer communication

Question ID : **63068065223**
Status : **Marked For Review**
Chosen Option : **A**

Q.111 _____ is the total time taken by the process for its execution in the CPU.

Ans

✗ A. Arrival time

✗ B. Waiting time

✗ C. Turnaround time

✓ D. Burst time

Question ID : **63068061901**
Status : **Answered**
Chosen Option : **C**

Q.112 Which of the following CANNOT be created by 'CREATE' command?

Ans

✗ A. Procedure

✗ B. Relation

✓ C. Super key

✗ D. Trigger

Question ID : **63068063101**
Status : **Answered**
Chosen Option : **A**

Q.113 Consider the Grammar $G\ (V = \{S, A, B, C, D, E\}, T = \{a\}, S, P)$where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rules given as follows:
$S \rightarrow ACaB, Ca \rightarrow aaC, CB \rightarrow DB, CB \rightarrow E, aD \rightarrow Da, AD \rightarrow AC, aE \rightarrow Ea,\ AE \rightarrow \epsilon$
The set of production represents:

Ans

✗ A. Regular Grammar

✗ B. Context Sensitive Grammar

✓ C. Unrestricted Grammar

✗ D. Context Free Grammar

Question ID : **63068065024**
Status : **Answered**
Chosen Option : **C**

Q.114 Find the solution to the given recurrence relation: T(1) = 0 , T(n) = 1 + T(floor(n/3)).

Ans

✗ A. $T(n) = c\,n^2 \text{ for some constant } c$

✓ B. $T(n) = \log_3 n$

✗ C. $T(n) = c\,n^3 \text{ for some constant } c$

✗ D. $T(n) = cn \text{ for some constant } c$

Question ID : **63068063465**
Status : **Answered**
Chosen Option : **B**

Q.115 If the length of a parse string is n , then the Running time of CYK membership algorithm is:

Ans

✗ A. $O(n^2)$

✗ B. $O(n^2 \log_2 n)$

✗ C. $O(n \log_2 n)$

✓ D. $O(n^3)$

Question ID : **63068065005**
Status : **Answered**
Chosen Option : **D**

Q.116 The 802.11 standard defines following three different classes of frames in the air: _____.

Ans

✗ A. data, control and security

✓ B. data, control and management

✗ C. data, control and modulation

✗ D. data, control and association

Question ID : **63068065235**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.117 What is the condition for applying union on relations?

Ans

✗ A. Relations should have at least 1 common row.

✗ B. Relations should have at least 1 common attribute.

✗ C. Relations should have same number of rows.

✓ D. Relations should have all common attributes.

Question ID : **63068063096**
Status : **Answered**
Chosen Option : **D**

Q.118 _____ is NOT an input for the banker's algorithm.

Ans

✗ A. Maximum resources needed by each process

✗ B. Maximum free available resources in the system

✗ C. Currently allocated resources by each process

✓ D. Number of processes in execution

Question ID : **63068061813**
Status : **Answered**
Chosen Option : **D**

Q.119 Consider the Grammar $G\ (V = \{S, A, B, C, D, E\}, T = \{a\}, S, P)$ where V is a non-empty set of variables or non-terminals, T is a set of terminals, S is a start symbol and P is a set of production rules. Which of the following production sets represents a context sensitive grammar?

Ans

✗ A.

$$S \to ACaB, C \to aaC,\ B \to DB, CB \to E, aD \to Da, AD \to AC, aE \to Ea,\ AE \to \epsilon$$

✓ B. $S \to ACaB, Ca \to aaC, CB \to DB, aD \to Da, aE \to Ea,$

✗ C.

$$S \to ACaB, Ca \to aaC, CB \to DB, CB \to E, aD \to Da, AD \to AC, aE \to Ea,$$

✗ D.

$$S \to ABaC, Ca \to aaC,\ CB \to E, aD \to Da, AD \to AC, aE \to Ea,$$

Question ID : **63068065016**
Status : **Answered**
Chosen Option : **B**

Q.120 The _____ defines which primitive operations and services the lower layer makes available to the upper one.

Ans

✗ A. algorithm

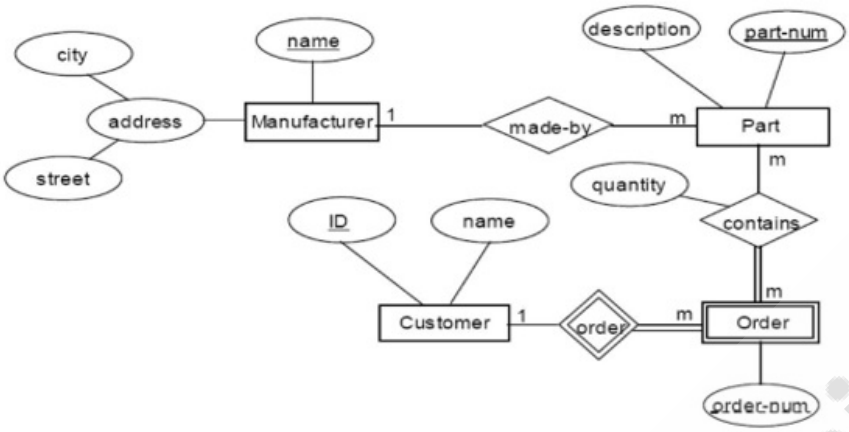
✓ B. interface

✗ C. channel

✗ D. protocol

Question ID : **63068065224**
Status : **Answered**
Chosen Option : **D**

Q.121 Which of the following is an identifying relationship set for a weak entity set in the given figure?



Ans

✗ A. contains

✗ B. made-by

✗ C. address

✓ D. order

Question ID : **63068063085**
Status : **Answered**
Chosen Option : **D**

Q.122 Which of the following is a disadvantage of dynamic partitioning?

Ans

✗ A. Degree of multiprogramming is dynamic

✗ B. No limitation on the size of the process

✗ C. No internal fragmentation

✓ D. External fragmentation

Question ID : **63068061814**
Status : **Answered**
Chosen Option : **D**

Q.123 The relation between minor M_{ij} and cofactor C_{ij} of an element in a matrix $A=[a_{ij}]$ is:

Ans

✗ A. $C_{ij} = (1)^{i+j} M_{ij}$

✗ B. $M_{ij} = (1)^{ij} C_{ij}$

✗ C. $M_{ij} = (-1)^{ij} C_{ij}$

✓ D. $C_{ij} = (-1)^{i+j} M_{ij}$

Question ID : **63068065502**
Status : **Answered**
Chosen Option : **D**

Q.124 Which number will come in place of the question mark in the given sequence?

2, 4, ?, 48, 240

Ans

✗ A. 48

✓ B. 12

✗ C. 36

✗ D. 24

Question ID : **63068063461**
Status : **Answered**
Chosen Option : **B**

Q.125 Which part of the compiler sends the stream of tokens to the parser?

Ans

✗ A. Code generator

✗ B. Intermediate code generator

✗ C. Parser generator

✓ D. Lexical analyzer

Question ID : **63068063131**
Status : **Answered**
Chosen Option : **D**

Q.126 _____ operate in the data link layer, so they examine the data link layer addresses to forward frames.

Ans
- ✗ A. Repeaters
- ✗ B. Gateways
- ✗ C. Routers
- ✓ D. Bridges

Question ID : **63068065239**
Status : **Answered**
Chosen Option : **D**

Q.127 Which of the following is a DDL command?

Ans
- ✓ A. CREATE
- ✗ B. INSERT
- ✗ C. DELETE
- ✗ D. UPDATE

Question ID : **63068063100**
Status : **Answered**
Chosen Option : **A**

Q.128 Consider a scenario in which 5 people deposit their bags at a security zone when entering a shop and then come back and collect their bags. However, due to some error in the token system, the bags returned are random. Which of the following events has a probability of 1/120?

Ans
- ✗ A. Exactly four of the five people get back their own bag.
- ✗ B. Exactly three of the five people get back their own bag.
- ✗ C. No one gets back their own bag.
- ✓ D. At least four of the five people get back their own bag.

Question ID : **63068063500**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.129 Consider relations R1(A,B,C) and R2(B,E).

R1		
A	B	C
4	fgh	60
5	nbl	54

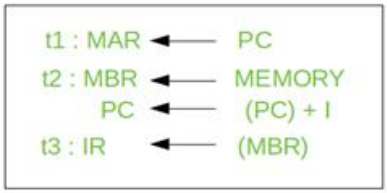
R2	
B	E
fgh	56
dfg	23

If we perform R1 × R2, what is the total number of columns in the resulting relation?

Ans
- ✗ A. 2
- ✓ B. 5
- ✗ C. 4
- ✗ D. 3

Question ID : **63068063095**
Status : **Answered**
Chosen Option : **C**

Q.130 The given set of micro-operations are followed in which of the following cycles?



Ans

✗ A. Indirect cycle

✗ B. Interrupt cycle

✗ C. Execute cycle

✓ D. Fetch cycle

Question ID : **63068063685**
Status : **Answered**
Chosen Option : **B**

Q.131 Suppose $a_n = 2\,a_{\{n-1\}} - 2^n$ for $n \geq 2$ and $a_1 = 3$. Solve for a_n.

Ans

✓ A. $a_n = 5\left(2^{\{n-1\}}\right) - n2^n$

✗ B. $a_n = 5\left(2^{\{n-1\}}\right) - 2n$

✗ C. $a_n = 5\left(2^{\{n-1\}}\right) - 2$

✗ D. $a_n = 5\left(2^{\{n-1\}}\right) - 2^n$

Question ID : **63068063469**
Status : **Answered**
Chosen Option : **C**

Q.132 Which of the following data structures uses LIFO method of accessing elements?

Ans

✗ A. Linked list

✗ B. Queue

✓ C. Stack

✗ D. Tree

Question ID : **63068065198**
Status : **Answered**
Chosen Option : **C**

Q.133 Which model does NOT distinguish between the physical and data link layers?

Ans

✓ A. TCP/IP model

✗ B. Random network model

✗ C. Scale-free network model

✗ D. ISO's OSI model

Question ID : **63068065226**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.134 Given two relations, R1 and R2, where R1 contains N1 tuples, R2 contains N2 tuples and N2>N1>0,what is the minimum and maximum possible sizes (in tuples) for the relation R1-R2?

Ans

✗ A. N1-N2,N1-N2

✓ B. 0,N1

✗ C. N1-N2,N1

✗ D. N2,N1

Question ID : **63068063098**
Status : **Answered**
Chosen Option : **B**

Q.135 In the paging technique, partitions in the main memory are called_____.

Ans

✔ A. frames

✘ B. pages

✘ C. partitions

✘ D. segments

Question ID : **63068061817**
Status : **Answered**
Chosen Option : **A**

Q.136 Source code can read character by character or line by line through input buffering in which way?

Ans

✘ A. From right to left

✘ B. From right to mid centre

✘ C. From mid centre to right

✔ D. From left to right

Question ID : **63068063132**
Status : **Answered**
Chosen Option : **D**

Q.137 The time complexity of the following piece of code is (assuming that n = 2m):

```
for( i = n; i > 0; i-- ) {
for( j = 1; j < n; j *= 2 ) {
for( k = 0; k < j; k++ ) {
sum = sum+i+j*k;
}
}
}
```

Ans

✔ A. n^2

✘ B. n

✘ C. n^3

✘ D. nlogn

Question ID : **63068061825**
Status : **Answered**
Chosen Option : **D**

Q.138 The context free language is NOT closed under:

Ans

✔ A. Complementation

✘ B. Kleene Closure

✘ C. Concatenation

✘ D. Inverse Homomorphism

Question ID : **63068065004**
Status : **Answered**
Chosen Option : **A**

Q.139 Which of the following methods is used in pop() when stack is implemented using arrays?

Ans

✗ A. Isfull()

✓ B. Isempty()

✗ C. Nextitem()

✗ D. Peek()

Question ID : **63068065200**
Status : **Answered**
Chosen Option : **B**

Q.140 Which of the following proof techniques will be most useful for proving that the square root of 11 is irrational?

Ans

✗ A. Proof by mathematical induction

✗ B. Vacuous proof

✓ C. Proof by contradiction

✗ D. Direct proof

Question ID : **63068063460**
Status : **Answered**
Chosen Option : **A**

Q.141 Suppose $a_n = 2\,a_{\{n-1\}} - a_{\{n-2\}} + 2$ for $n \geq 3$ with $a_1 = 1$ and $a_2 = 5$. Solve for a_n.

Ans

✗ A. $a_n = 3^n - 2^n$

✓ B. $a_n = n^2 + n - 1$

✗ C. $a_n = 2^n + (-1)^n$

✗ D. $a_n = 2\,n^2 - 2n + 1$

Question ID : **63068063470**
Status : **Answered**
Chosen Option : **C**

Q.142 If we have a procedure to determine whether a given element belongs to set X or not, then this set is called:

Ans

✗ A. recursive

✓ B. recursive enumerable

✗ C. context free

✗ D. complete

Question ID : **63068065031**
Status : **Answered**
Chosen Option : **C**

Q.143 SQL for database queries is considered to be which generation language?

Ans

✓ A. Fourth generation language

✗ B. First generation language

✗ C. Third generation language

✗ D. Second generation language

Question ID : **63068063127**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.144 What will be the result after executing the given steps?

Push 2
Push 8
Add
Push 6
Sub
Push 3
Mul

Ans
✗ A. 7
✗ B. 20
✓ C. 12
✗ D. 10

Question ID : **63068063670**
Status : **Answered**
Chosen Option : **C**

Q.145 Let G be a graph with n vertices where n is even. Which of the following conditions ensure that G is connected?

Ans
✗ A. At least three vertices have degree at least $\frac{n}{3}$
✗ B. At least four vertices have degree at least $\frac{n}{4}$
✗ C. At least two vertices have degree at least $\frac{n}{2}$
✓ D. Every vertex is incident with at least $\frac{n}{2}$ edges

Question ID : **63068063467**
Status : **Answered**
Chosen Option : **C**

Q.146 Using the linked-list representation of disjoint sets and the weighted-union heuristic, a sequence of m MAKE-SET, UNION, and FIND-SET operations, n of which are MAKE-SET operations, takes _____ time.

Ans

✗ A. O(n log m)

✓ B. O(m+n logn)

✗ C. O(m+n)

✗ D. O(n)

Question ID : **63068066401**
Status : **Answered**
Chosen Option : **A**

Q.147 Which of the following flag bits is set if the instruction SUB 1101,1101 is executed?

Ans

✗ A. Parity bit

✗ B. Overflow bit

✗ C. Sign bit

✓ D. Zero bit

Question ID : **63068063699**
Status : **Answered**
Chosen Option : **D**

Q.148 What will be the output of the following code?

```
int main()
{
int a=1234;
printf("%03d",a);
   return 0;
}
```

Ans
- ✗ A. 1230
- ✗ B. 123
- ✓ C. 1234
- ✗ D. 234

Question ID : **63068065190**
Status : **Marked For Review**
Chosen Option : **A**

Q.149 A function in which f(n) is Ω(g(n)), if there exist positive values k and c such that f(n)>=c*g(n), for all n>=k. This notation defines a lower bound for a function f(n):

Ans
- ✗ A. Big Oh O(f)
- ✓ B. Big Omega Ω(f)
- ✗ C. Big Theta θ(f)
- ✗ D. Small oh O(f)

Question ID : **63068065208**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.150 What is the 5th control step involved in completely executing the given set of instructions?

"ADD R1, R2"
1.PCout , MARin, Read, Select=0, Add, Zin
2. Zout , PCin , WMFC
3. MDRout, IRin
4. R2out, Yin
5. _____
6.Zout, R1in

Ans

✗ A. Zout, R1out

✗ B. R1in, Select=1, Add, Zin

✗ C. Zin, R1in

✓ D. R1out, Select=1, Add, Zin

Question ID : **63068063701**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Section : **General Knowledge and Awareness**

Q.1 What is the total number of reserve players in a kabaddi team?

Ans

✗ A. Three

✗ B. Four

✗ C. Two

✓ D. Five

Question ID : **63068051085**
Status : **Answered**
Chosen Option : **D**

Q.2 **Which of the following is NOT an initiative of the Ministry of Education to bridge digital divide and reach the unreached to bring greater inclusion in education through the use of technology?**

Ans
- ✔ A. Vidyakul
- ✘ B. SWAYAM
- ✘ C. National Educational Technology Forum
- ✘ D. SWAYAM PRABHA

Question ID : **63068053878**
Status : **Not Answered**
Chosen Option : **--**

Q.3 **Which of the following options is arranged in the increasing order of the size of the halogen atoms?**

Ans
- ✘ A. Iodine, Bromine, Chlorine, Fluorine
- ✔ B. Fluorine, Chlorine, Bromine, Iodine
- ✘ C. Chlorine, Bromine, Iodine, Fluorine
- ✘ D. Bromine, Iodine, Chlorine, Fluorine

Question ID : **63068052314**
Status : **Answered**
Chosen Option : **B**

Q.4 **Which of the following scientific principles/laws is related to flight in aeroplanes?**

Ans
- ✘ A. Laws of thermodynamics
- ✘ B. Light amplification by stimulated emission of radiation
- ✘ C. Faraday's laws of electromagnetic induction
- ✔ D. Bernoulli's principle in fluid dynamics

Question ID : **63068061707**
Status : **Answered**
Chosen Option : **A**

Q.5 What is the full form of 'NADRS'?

Ans
- ✗ A. National Animal Development Reporting System
- ✗ B. National Abiotic Disease Resource System
- ✗ C. National Abiotic Data Reporting System
- ✓ D. National Animal Disease Reporting System

Question ID : **63068059733**
Status : **Not Answered**
Chosen Option : **--**

Q.6 In which year was the Pradhan Mantri Gram Sadak Yojna launched in India?

Ans
- ✗ A. 2002
- ✗ B. 2003
- ✓ C. 2000
- ✗ D. 2001

Question ID : **63068059738**
Status : **Answered**
Chosen Option : **C**

Q.7 The tenure of First Lok Sabha was from

Ans
- ✗ A. 23 March 1952 to 25 March 1952
- ✗ B. 16 May 1952 to 4 May 1957
- ✗ C. 19 March 1952 to 17 March 1957
- ✓ D. 17 April 1952 to 4 April 1957

Question ID : **63068051524**
Status : **Not Answered**
Chosen Option : **--**

Q.8 In which sport is the term 'libero' used?

Ans
- ✗ A. Basketball
- ✓ B. Volleyball
- ✗ C. Handball
- ✗ D. Football

Question ID : **63068051093**
Status : **Not Answered**
Chosen Option : **--**

Q.9 The Supreme Court was established on 28th January 1950, under _____ of the Constitution of India.

Ans
- ✓ A. Article 124 (1)
- ✗ B. Article 280 (2)
- ✗ C. Article 132 (1)
- ✗ D. Article 243 (2)

Question ID : **63068051517**
Status : **Answered**
Chosen Option : **C**

Q.10 In Tamil Nadu _____ District has reported the highest Literacy rate as per 2011 census?

Ans
- ✗ A. The Nilgiris
- ✗ B. Thoothukudi
- ✓ C. Kanyakumari
- ✗ D. Dharmapuri

Question ID : **63068073289**
Status : **Not Answered**
Chosen Option : **--**

Q.11 Khilji dynasty was founded by JalaluddinKhilji in which of the following years?

Ans
- ✗ A. 1286
- ✓ B. 1290
- ✗ C. 1288
- ✗ D. 1292

Question ID : **63068061993**
Status : **Answered**
Chosen Option : **B**

Q.12 What is the total number of reserve players in a volleyball team?

Ans
- ✗ A. Five
- ✗ B. Seven
- ✓ C. Six
- ✗ D. Eight

Question ID : **63068051084**
Status : **Answered**
Chosen Option : **C**

Q.13 In which of the following states has the Kathak dance originated?

Ans
- ✓ A. Uttar Pradesh
- ✗ B. Tamil Nadu
- ✗ C. Odisha
- ✗ D. Kerala

Question ID : **63068057537**
Status : **Answered**
Chosen Option : **A**

Q.14 Where was the Kalpana Chawla centre for Research in Space and Technology inaugurated?

Ans
- ✔ A. Chandigarh
- ✘ B. Madhya Pradesh
- ✘ C. Punjab
- ✘ D. Delhi

Question ID : **63068073297**
Status : **Answered**
Chosen Option : **A**

Q.15 Which of the following was authored by Minhaj-i Siraj Juzjani?

Ans
- ✘ A. Kitab-ul-Hind
- ✘ B. Khazain-ul-Futuh
- ✘ C. Shahnama
- ✔ D. Tabaqat-i-Nasiri

Question ID : **63068054202**
Status : **Not Answered**
Chosen Option : **--**

Q.16 The slow and fast Khayals are usually followed by a _____.

Ans
- ✘ A. Dhrupad
- ✔ B. Tarana
- ✘ C. Thumri
- ✘ D. Tappa

Question ID : **63068050057**
Status : **Not Answered**
Chosen Option : **--**

Q.17 What is the full form of 'IRDP'?

Ans
✔ A. Integrated Rural Development Programme

✘ B. Integrated Rural Development Plan

✘ C. Integrated Regional Development Programme

✘ D. Integrated Regional Development Plan

Question ID : **63068059749**
Status : **Answered**
Chosen Option : **A**

Q.18 The Carnatic music is mainly associated with _____India.

Ans
✘ A. North

✔ B. South

✘ C. West

✘ D. East

Question ID : **63068050055**
Status : **Not Answered**
Chosen Option : **--**

Q.19 In which year was a sub-committee formed to study issues and concerns in the microfinance sector under the chairmanship of YH Malegam?

Ans
✘ A. 2011

✘ B. 2009

✔ C. 2010

✘ D. 2008

Question ID : **63068053624**
Status : **Not Answered**
Chosen Option : **--**

Q.20 What type of organism is a spirogyra?

Ans

✗ A. Fungi

✓ B. Green algae

✗ C. Angiosperm

✗ D. Gymnosperm

Question ID : **63068054925**
Status : **Answered**
Chosen Option : **A**

Section : **Reasoning and Aptitude**

Q.1 Study the following information carefully to answer the questions which follow.
Eight colleagues, namely A, B, C, D, E, F, G and H are sitting in a circle facing the center, not necessarily in the same order. D is sitting between C and H and E is sitting between H and F. E and G are not sitting opposite to each other. A is third to the left of E and second to the right of C.

Who is sitting in front of G?

Ans

✓ A. D

✗ B. C

✗ C. H

✗ D. E

Question ID : **63068073426**
Status : **Answered**
Chosen Option : **A**

Q.2 P % Q' means 'P is the father of Q'.
'P × Q' means 'P is the brother-in-law of Q'.
'P # Q' means 'P is the husband of Q'.
'P $ Q' means 'P is the daughter of Q'.
'P @ Q' means 'P is the brother of Q'.
'P & Q' means 'P is the mother of Q'.

If 'Y # X & A × Z @ C & B', If A is the only child of his parents, then How is A related to B?

Ans

✗ A. Cousin

✗ B. Brother

✗ C. Uncle

✓ D. Father

Question ID : **63068073389**
Status : **Answered**
Chosen Option : **D**

Q.3 Six hand written notes on different topic in mathematics – Functions, Number theory, Statistics, Geometry, Matrices, and Limits each contains different number of pages. Geometry notes contain fewer pages than only two notes. Functions notes contain more pages than Statistics notes but less than Limits notes. Statistics notes do not contain least pages. Limits notes contains fewer pages than Number theory notes. The notes which contain third lowest pages contain 28 pages.
How many notes contain more pages than Statistics notes?

Ans

✓ A. Four

✗ B. Three

✗ C. Two

✗ D. One

Question ID : **63068073402**
Status : **Answered**
Chosen Option : **A**

Q.4 Which of the following option will replace the question mark (?) in the following letter cluster series?

DC, GA, IY, LW, NU, ?

Ans

✗ A. QR

✗ B. RS

✓ C. QS

✗ D. QR

Question ID : **63068073433**
Status : **Answered**
Chosen Option : **C**

Q.5 **A situation is given followed by two possible reasons for the same. Read all the information carefully and decide which of the given reasons follow(s).**
Note: You have to assume every given situation / possible reason to be true.
Situation:
In 2018, Country A had conducted a study on the effects of tea on a specific intestinal disease and found that those who drink more tea (in addition to the prescribed medicines) are able to treat the intestinal disease faster. However, Country B, with strikingly similar demographics and similar cases of intestinal disease, did not witness any change with the increased intake of tea. Rather, in many cases, the symptoms worsened.

Possible reasons:
(I): Around 30% of the tea used in Country B is imported from Country X where the cases of intestinal diseases are very low compared to Countries A and B.
(II): Unlike Country A, 90% of the people in Country B drink their tea with milk. As per many studies, milk interferes with the efficiency of the medicines for intestinal diseases.

Ans

✗ A. Both (I) and (II) can be possible reasons.

✗ B. Only (I) can be a possible reason.

✓ C. Only (II) can be a possible reason.

✗ D. Neither (I) nor (II) can be a possible reason.

Question ID : **63068048477**
Status : **Answered**
Chosen Option : **D**

Q.6 Four friends P, Q, R and S are sitting on the corners of a square table, not necessarily in the same order. Two of them are facing the center. S is sitting opposite to the one who is facing outside the center. P is sitting between S and Q. S is sitting at the Left of R who is sitting left to Q. Which pair is facing outside the center?

Ans

✔ A. Q and R

✘ B. Q and S

✘ C. R and S

✘ D. P and Q

Question ID : **63068073429**
Status : **Answered**
Chosen Option : **A**

Q.7 Pramod, Dilip, Rohan, Sukumar, Tilak, Vishak, Wasim and Nilam are sitting around a circle facing the centre. Tilak is second to the right of Rohan, who is third to the right of Pramod. Sukumar is second to the left of Pramod and fourth to the right of Dilip. Nilam is third to the right of Vishak, who is not an immediate neighbour of Pramod.
Who is second to the right of Tilak?

Ans

✘ A. Sukumar

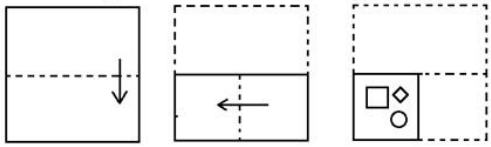
✘ B. Pramod

✘ C. Rohan

✔ D. Nilam

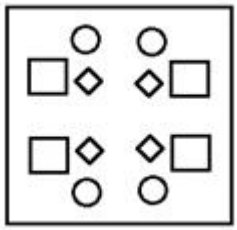
Question ID : **63068073420**
Status : **Answered**
Chosen Option : **D**

Q.8 The sequence of folding a piece of paper and the manner in which the folded paper has been cut is shown below.
Choose a figure which would most closely resemble the unfolded form of the paper.

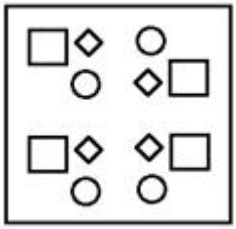


Ans

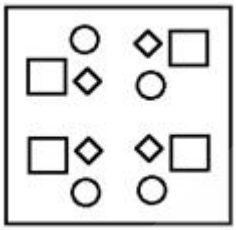
✔ A.



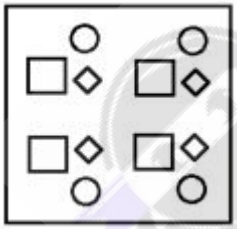
✘ B.



✘ C.



✘ D.



Question ID : **63068073441**
Status : **Answered**
Chosen Option : **A**

Q.9 Which of the following number will replace the question mark and complete the given number series?

168, 178, 190, 206, ?

Ans

✔ A. 230

✘ B. 220

✘ C. 236

✘ D. 238

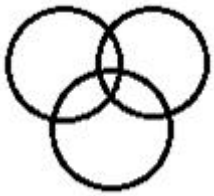
Question ID : **63068073377**
Status : **Answered**
Chosen Option : **A**

Q.10 Select the Venn diagram that best illustrates the relationship between the following classes.

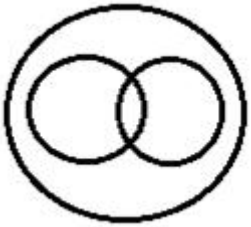
Teachers, Dancers, wives

Ans

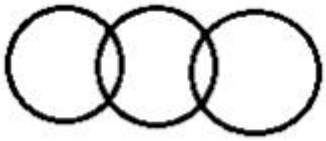
✔ A.



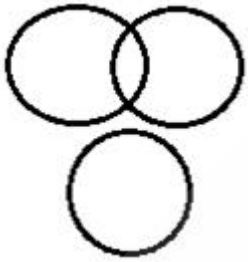
✘ B.



✘ C.



✘ D.



Question ID : **63068073437**
Status : **Answered**
Chosen Option : **C**

Q.11 Three of the following numbers are alike in a certain manner and one is different. Select the number that is different from the rest.
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

Ans

✗ A. 408

✗ B. 204

✓ C. 572

✗ D. 442

Question ID : **63068073378**
Status : **Not Answered**
Chosen Option : **--**

Q.12 In this question, a question is followed by two statements numbered (I) and (II). You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and decide the appropriate answer.
M is the brother of L. How is M related to J?

Statements:

I. J is brother of K
II. K is sister of L.

Ans

✗ A. I alone is sufficient while II alone is not sufficient

✗ B. II alone is sufficient while I alone is not sufficient

✗ C. Neither I nor II is sufficient

✓ D. Both I and II are sufficient

Question ID : **63068073407**
Status : **Answered**
Chosen Option : **D**

Q.13 Select the option that has a different relationship between the numbers of the pair than the rest.

Ans

✗ A. $24 - 36$

✓ B. $12 - 38$

✗ C. $25 - 49$

✗ D. $36 - 81$

Question ID : **63068073386**
Status : **Marked For Review**
Chosen Option : **D**

Q.14 **The given situation is followed by two conclusions. Read all the information carefully and decide which of the given conclusions follow(s).**
Situation:
On the basis of some studies, the management of Acting and Drama College Z had deduced a few years ago that if they advertise their college with a picture of a renowned actor who is also an alumnus of the college, it leads to an increase in admissions by at least 30%. However, this academic year, despite distributing pamphlets with a picture of an ex-student whose movie was recently released, the college had much fewer new admissions than it usually has.

Conclusions:
(I): Advertising using successful alumni is not the only factor that helps in attracting more applicants for admission.
(II): The marketing strategy would have worked better if the college used electronic media and not pamphlets.

Ans

✗ A. Both conclusions (I) and (II) follow.

✓ B. Only conclusion (I) follows.

✗ C. Neither conclusion (I) nor (II) follows.

✗ D. Only conclusion (II) follows.

Question ID : **63068048466**
Status : **Answered**
Chosen Option : **B**

Q.15 Find the wrong number in the following number series?

5, 12, 26, 43, 111, 184, 623,1067

Ans
- ✔ A. 623
- ✘ B. 111
- ✘ C. 1067
- ✘ D. 184

Question ID : **63068073375**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.16 **Select the correct answer regarding the following two statements labelled (A) and (B).**
(A): Sonu deliberately hit his car on a wall to get the insurance claim.
(B): The insurance company refused to pay the claim for the accident of Sonu's car.

Ans
- ✘ A. Both statements (A) and (B) are effects of independent causes.
- ✘ B. Statement (B) is the cause and statement (A) is its effect.
- ✔ C. Statement (A) is the cause and statement (B) is its effect.
- ✘ D. Both statements (A) and (B) are independent causes.

Question ID : **63068050509**
Status : **Answered**
Chosen Option : **D**

Q.17 **Four boys Anand, Barun, Charan, Divedi and four girls, Pallavi, Archana, Richa and Soni are sitting around a circular table, but not necessarily in the same order. Two boys and two girls are not facing the centre. Charan is second to the left of Archana, who is not an immediate neighbour of Barun. Pallavi sits third to the left of Soni and one of them is not facing the centre. Anand is third to the right of Barun, who is facing the centre. Richa and Divedi are facing each other, but both are not immediate neighbours of Barun or Soni. No three girls can sit together. Divedi sits second to the right of Soni. Who among the following sits exactly between Barun and Divedi?**

Ans

✗ A. Richa

✗ B. Pallavi

✓ C. Charan

✗ D. Archana

Question ID : **63068058749**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.18 Deepak's father has appointed six tution teachers - J, K, L, N, O and P for him for following subjects- Physics, Chemistry, Biology, Maths, English, Computer Sciences but not necessarily in the same order. Each teacher teaches one subject only once in a week and there is only one class per day

O teaches Chemistry on Tuesday.
L teaches Biology on Wednesday.
P teaches Maths but his class is not on Friday.
N has class on immediate day after Biology class.
J is English Teacher.
K teaches computer Science on immediate day after J's class.

Which of the following statements is False?

Ans

✗ A. The first class of the week is taught by P.

✗ B. N teaches Physics

✓ C. Maths class is on Saturday.

✗ D. English class is on Friday

Question ID : **63068073415**
Status : **Answered**
Chosen Option : **C**

Q.19 Ramani faces towards the north. Turning to her right, she walks 45 metres to reach the bookstall. She then turns to her left and walks 50 metres to reach the supermarket. Next, she walks 45 metres to her right. She then turns to her right again and walks 95metres. Finally, she turns to the right and walks 80 metres to reach her office. In which direction is she now from her starting point?

Ans

✗ A. South

✗ B. North-west

✗ C. South-west

✓ D. South-east

Question ID : **63068073397**
Status : **Answered**
Chosen Option : **D**

Q.20 Consider the given statement and decide which of the given assumptions is/are implicit in the statement.

Statement:

Although entrepreneurship is projected as a glamorous initiative for young, creative and hardworking persons, starting one's own company has a lot of disadvantages.

Assumptions:

I. In order to run one's own company a person has to override a series of hurdles.
II. Being an entrepreneur is not an easy job.
III. Being an owner of a company is an attractive proposition.

Ans

✓ A. All the assumptions I, II and III are implicit

✗ B. Only assumptions II and III are implicit

✗ C. Only assumptions I and III are implicit

✗ D. Only assumptions I and II are implicit

Question ID : **63068073439**
Status : **Answered**
Chosen Option : **B**

Section : **General Hindi**

Q.1 "नीम हकीम खतरे जान" का सही अर्थ क्या है?

Ans
✗ A. जबरदस्ती गले पड़ना।
✓ B. अल्प ज्ञान खतरनाक होता है।
✗ C. दूसरों को उपदेश देना सरल है।
✗ D. ठीक-ठीक न्याय करना।

Question ID : **63068073469**
Status : **Answered**
Chosen Option : **B**

Q.2 "मोहन अच्छा लड़का है।" वाक्य में कौन-सा विशेषण है?

Ans
✗ A. सार्वनामिक विशेषण
✗ B. संख्यावाचक विशेषण
✓ C. गुणवाचक विशेषण
✗ D. परिमाणवाचक विशेषण

Question ID : **63068073451**
Status : **Answered**
Chosen Option : **C**

Q.3 "चोर की दाढ़ी में तिनका होना" का सही अर्थ है?

Ans
✗ A. चोर की दाढ़ी होती है।
✓ B. अपराधी सशंकित रहता है।
✗ C. दोहरा लाभ
✗ D. अपराधी की दाढ़ी में तिनका होता है।

Question ID : **63068073468**
Status : **Answered**
Chosen Option : **B**

Q.4 "हे राम! यह क्या हो रहा है।" वाक्य में कारक है:

Ans
✗ A. करण कारक
✗ B. अपादान कारक
✗ C. संबंध कारक
✓ D. संबोधन कारक

Question ID : **63068073447**
Status : **Answered**
Chosen Option : **D**

Q.5 "मसृण" का विलोम शब्द होगा?

Ans
✗ A. कठोर
✓ B. रुक्ष
✗ C. आद्र
✗ D. सम्मिश्रण

Question ID : **63068073501**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.6 "निन्दा" का विलोम है:

Ans
✗ A. भलाई
✓ B. स्तुति
✗ C. हर्ष
✗ D. परनिन्दा

Question ID : **63068073458**
Status : **Answered**
Chosen Option : **B**

Comprehension:

पुरुषार्थ दार्शनिक विषय है, पर दर्शन का जीवन से घनिष्ठ सम्बन्ध है। वह थोड़े-से विद्यार्थियों का पाठ्य विषय मात्र नहीं है। प्रत्येक समाज को एक दार्शनिक मत स्वीकार करना होता है। उसी के आधार पर उसकी राजनीतिक, सामाजिक और कौटुम्बिक व्यवस्था का व्यूह खड़ा होता है। जो समाज अपने वैयक्तिक और सामूहिक जीवन को केवल प्रतीयमान उपयोगिता के आधार पर चलाना चाहेगा उसको बड़ी कठिनाइयों का सामना करना पड़ेगा। एक विभाग के आदर्श दूसरे विभाग के आदर्श सेट कराएँगे। जो बात एक क्षेत्र में ठीक जंचेगी वहीँ दूसरे क्षेत्र में अनुचित कह लाएगी और मनुष्य के लिए अपना कर्तव्य स्थिर करना कठिन होजाएगा। इस का तमाशा आज दीख पड़ रहा है। चोरी करना बुरा है, पर पराये देश का शोषण करना बुरा नहीं। झूठ बोलना बुरा है, पर राजनैतिक क्षेत्र में सच बोलने पर अड़े रहना मूर्खता है। घर वालों के साथ, देश वासियों के साथ और परदेशियों के साथ बर्ताव करने के लिए अलग-अलग आचार वलियाँ बन गई हैं। इससे विवेकशील मनुष्य को कष्ट होता है।

SubQuestion No : 7

Q.7 समाज के लिए क्या महत्वपूर्ण है?

Ans

✗ A. समाजशास्त्र

✓ B. दर्शन

✗ C. पारिवारिक व्यवस्था

✗ D. राजनीति

Question ID : **63068073512**
Status : **Answered**
Chosen Option : **B**

Comprehension:

पुरुषार्थ दार्शनिक विषय है, पर दर्शन का जीवन से घनिष्ठ सम्बन्ध है। वह थोड़े-से विद्यार्थियों का पाठ्य विषय मात्र नहीं है। प्रत्येक समाज को एक दार्शनिक मत स्वीकार करना होता है। उसी के आधार पर उसकी राजनीतिक, सामाजिक और कौटुम्बिक व्यवस्था का व्यूह खड़ा होता है। जो समाज अपने वैयक्तिक और सामूहिक जीवन को केवल प्रतीयमान उपयोगिता के आधार पर चलाना चाहेगा उसको बड़ी कठिनाइयों का सामना करना पड़ेगा। एक विभाग के आदर्श दूसरे विभाग के आदर्श सेट कराएँगे। जो बात एक क्षेत्र में ठीक जंचेगी वहीँ दूसरे क्षेत्र में अनुचित कह लाएगी और मनुष्य के लिए अपना कर्तव्य स्थिर करना कठिन होजाएगा। इस का तमाशा आज दीख पड़ रहा है। चोरी करना बुरा है, पर पराये देश का शोषण करना बुरा नहीं। झूठ बोलना बुरा है, पर राजनैतिक क्षेत्र में सच बोलने पर अड़े रहना मूर्खता है। घर वालों के साथ, देश वासियों के साथ और परदेशियों के साथ बर्ताव करने के लिए अलग-अलग आचार वलियाँ बन गई हैं। इससे विवेकशील मनुष्य को कष्ट होता है।

SubQuestion No : 8

Q.8 गद्यांश का भाव है?

Ans

✗ A. दर्शन और राजनीति

✗ B. कौटुम्बिक व्यवस्था

✓ C. सामाजिक व्यवस्था में दर्शन का महत्त्व

✗ D. सामाजिक व्यवस्था

Question ID : **63068073514**
Status : **Answered**
Chosen Option : **C**

Comprehension:

पुरुषार्थ दार्शनिक विषय है, पर दर्शन का जीवन से घनिष्ठ सम्बन्ध है। वह थोड़े-से विद्यार्थियों का पाठ्य विषय मात्र नहीं है। प्रत्येक समाज को एक दार्शनिक मत स्वीकार करना होता है। उसी के आधार पर उसकी राजनीतिक, सामाजिक और कौटुम्बिक व्यवस्था का व्यूह खड़ा होता है। जो समाज अपने वैयक्तिक और सामूहिक जीवन को केवल प्रतीयमान उपयोगिता के आधार पर चलाना चाहेगा उसको बड़ी कठिनाइयों का सामना करना पड़ेगा। एक विभाग के आदर्श दूसरे विभाग के आदर्श सेट कराएँगे। जो बात एक क्षेत्र में ठीक जंचेगी वहीँ दूसरे क्षेत्र में अनुचित कह लाएगी और मनुष्य के लिए अपना कर्तव्य स्थिर करना कठिन होजाएगा। इस का तमाशा आज दीख पड़ रहा है। चोरी करना बुरा है, पर पराये देश का शोषण करना बुरा नहीं। झूठ बोलना बुरा है, पर राजनैतिक क्षेत्र में सच बोलने पर अड़े रहना मूर्खता है। घर वालों के साथ, देश वासियों के साथ और परदेशियों के साथ बर्ताव करने के लिए अलग-अलग आचार वलियाँ बन गई हैं। इससे विवेकशील मनुष्य को कष्ट होता है।

SubQuestion No : 9

Q.9 बड़ी कठिनाइयों का सामना किसे करना पड़ता है?

Ans

✗ A. विवेक के आधार पर चलने वाला समाज

✗ B. वैयक्तिकता के आधार पर चलने वाला समाज

✗ C. परोपकार के आधार पर चलने वाला समाज

✓ D. जो समाज उपयोगिता के आधार पर चले

Question ID : **63068073511**
Status : **Answered**
Chosen Option : **A**

Comprehension:

पुरुषार्थ दार्शनिक विषय है, पर दर्शन का जीवन से घनिष्ठ सम्बन्ध है। वह थोड़े-से विद्यार्थियों का पाठ्य विषय मात्र नहीं है। प्रत्येक समाज को एक दार्शनिक मत स्वीकार करना होता है। उसी के आधार पर उसकी राजनीतिक, सामाजिक और कौटुम्बिक व्यवस्था का व्यूह खड़ा होता है। जो समाज अपने वैयक्तिक और सामूहिक जीवन को केवल प्रतीयमान उपयोगिता के आधार पर चलाना चाहेगा उसको बड़ी कठिनाइयों का सामना करना पड़ेगा। एक विभाग के आदर्श दूसरे विभाग के आदर्श सेट कराएँगे। जो बात एक क्षेत्र में ठीक जंचेगी वहीँ दूसरे क्षेत्र में अनुचित कह लाएगी और मनुष्य के लिए अपना कर्तव्य स्थिर करना कठिन होजाएगा। इस का तमाशा आज दीख पड़ रहा है। चोरी करना बुरा है, पर पराये देश का शोषण करना बुरा नहीं। झूठ बोलना बुरा है, पर राजनैतिक क्षेत्र में सच बोलने पर अड़े रहना मूर्खता है। घर वालों के साथ, देश वासियों के साथ और परदेशियों के साथ बर्ताव करने के लिए अलग-अलग आचार वलियाँ बन गई हैं। इससे विवेकशील मनुष्य को कष्ट होता है।

SubQuestion No : 10

Q.10 "कौटुम्बिक" का विलोम शब्द है?

Ans

✗ A. समाज

✗ B. स्व

✗ C. परिवार

✓ D. एकल

Question ID : **63068073513**
Status : **Answered**
Chosen Option : **B**