BEL PE

Previous Year Paper
(Computer Science)

17 Dec, 2023 Shift 1

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Test Date	17/12/2023
Test Time	8:30 AM - 10:30 AM
Subject	Probationary Engineer Computer Science

Section : **General Aptitude**

Q.1 **Which of the following is a key component of India's infrastructure development?**

Ans
✗ 1. Space exploration
✗ 2. Deep-sea fishing
✗ 3. Mountaineering facilities
✓ 4. High-speed railways

Question ID : **630680515491**
Option 1 ID : **6306802014369**
Option 2 ID : **6306802014371**
Option 3 ID : **6306802014372**
Option 4 ID : **6306802014370**
Status : **Answered**
Chosen Option : **4**

Q.2 **What is the primary goal of sustainable development?**

Ans
✗ 1. Exploitation of natural resources to meet current needs
✗ 2. Rapid economic growth at any cost
✓ 3. Preservation of natural resources for future generations
✗ 4. Immediate improvement of living standards without considering environmental impact

Question ID : **630680515485**
Option 1 ID : **6306802014348**
Option 2 ID : **6306802014345**
Option 3 ID : **6306802014346**
Option 4 ID : **6306802014347**
Status : **Answered**
Chosen Option : **3**

Q.3 Which article of the Indian Constitution deals with Fundamental Duties?

Ans
✗ 1. Article 31B
✗ 2. Article 48A
✗ 3. Article 39C
✓ 4. Article 51A

Question ID : **630680515492**
Option 1 ID : **6306802014373**
Option 2 ID : **6306802014376**
Option 3 ID : **6306802014375**
Option 4 ID : **6306802014374**
Status : **Answered**
Chosen Option : **4**

Q.4 Which of the following is a characteristic feature of the Animal Kingdom?

Ans
✗ 1. Cell walls made of cellulose
✗ 2. Autotrophic nutrition
✓ 3. Heterotrophic mode of nutrition
✗ 4. Presence of chloroplasts

Question ID : **630680515494**
Option 1 ID : **6306802014381**
Option 2 ID : **6306802014382**
Option 3 ID : **6306802014384**
Option 4 ID : **6306802014383**
Status : **Answered**
Chosen Option : **1**

Q.5 Which socio-religious reform movement in modern history aimed at eradicating social evils such as untouchability, caste discrimination, and promoting education and women's rights?

Ans
✗ 1. The Aligarh Movement
✗ 2. The Deoband Movement
✓ 3. The Brahmo Samaj
✗ 4. The Arya Samaj

Question ID : **630680515486**
Option 1 ID : **6306802014352**
Option 2 ID : **6306802014350**
Option 3 ID : **6306802014349**
Option 4 ID : **6306802014351**
Status : **Answered**
Chosen Option : **3**

Q.6 **Which of the following is a Constitutional Body in India?**

Ans
✔ 1. Election Commission of India (ECI)
✘ 2. Planning Commission
✘ 3. National Investigation Agency (NIA)
✘ 4. Reserve Bank of India (RBI)

Question ID : **630680515493**
Option 1 ID : **6306802014378**
Option 2 ID : **6306802014379**
Option 3 ID : **6306802014380**
Option 4 ID : **6306802014377**
Status : **Answered**
Chosen Option : **2**

Q.7 **What is the purpose of pasteurization in food processing?**

Ans
✘ 1. To increase the nutritional content of food.
✘ 2. To enhance the colour of the food.
✘ 3. To add flavour to the food.
✔ 4. To destroy pathogenic microorganisms present in the food

Question ID : **630680515495**
Option 1 ID : **6306802014387**
Option 2 ID : **6306802014388**
Option 3 ID : **6306802014385**
Option 4 ID : **6306802014386**
Status : **Answered**
Chosen Option : **4**

Q.8 **Which language is recognized as a Classical Language by the Government of India?**

Ans
✔ 1. Sanskrit
✘ 2. Bengali
✘ 3. Hindi
✘ 4. English

Question ID : **630680515488**
Option 1 ID : **6306802014359**
Option 2 ID : **6306802014360**
Option 3 ID : **6306802014357**
Option 4 ID : **6306802014358**
Status : **Answered**
Chosen Option : **1**

Q.9 Which sports award is considered the highest sporting honour in India?

Ans
✗ 1. Dronacharya Award
✗ 2. Arjuna Award
✓ 3. Major Dhyan Chand Khel Ratna
✗ 4. Padma Bhushan

Question ID : **630680515489**
Option 1 ID : **6306802014362**
Option 2 ID : **6306802014361**
Option 3 ID : **6306802014363**
Option 4 ID : **6306802014364**
Status : **Answered**
Chosen Option : **3**

Q.10 What is the primary function of the Reserve Bank of India (RBI)?

Ans
✗ 1. Regulating stock markets
✓ 2. Conducting monetary policy
✗ 3. Implementing fiscal policy
✗ 4. Managing foreign relations

Question ID : **630680515484**
Option 1 ID : **6306802014342**
Option 2 ID : **6306802014341**
Option 3 ID : **6306802014344**
Option 4 ID : **6306802014343**
Status : **Answered**
Chosen Option : **3**

Q.11 Which of the following Ruler was responsible for erecting the iron pillar of Delhi?

Ans
✗ 1. Samudragupta
✗ 2. Sri Gupta
✗ 3. Kumara Gupta
✓ 4. Chandragupta II

Question ID : **630680515487**
Option 1 ID : **6306802014354**
Option 2 ID : **6306802014355**
Option 3 ID : **6306802014356**
Option 4 ID : **6306802014353**
Status : **Answered**
Chosen Option : **3**

Q.12 Which river is known as the "Dakshina Ganga" in India?

Ans
✗ 1. Brahmaputra
✗ 2. Yamuna
✓ 3. Godavari
✗ 4. Krishna

Question ID : **630680515490**
Option 1 ID : **6306802014367**
Option 2 ID : **6306802014365**
Option 3 ID : **6306802014366**
Option 4 ID : **6306802014368**
Status : **Answered**
Chosen Option : **1**

Section : **Reasoning**

Q.1 Which of the following letter will replace the question mark (?) in the given series?
R, U, X, A, D, ?

Ans
✓ 1. G
✗ 2. H
✗ 3. F
✗ 4. I

Question ID : **630680515499**
Option 1 ID : **6306802014401**
Option 2 ID : **6306802014403**
Option 3 ID : **6306802014402**
Option 4 ID : **6306802014404**
Status : **Answered**
Chosen Option : **1**

Q.2 Three Statements are given followed by two conclusions numbered I and II. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statement I: All fruits are vegetables.
Statement II: Some vegetables are green.
Statement III: Some green things are ugly.

Conclusion I: Some vegetables are fruits.
Conclusion II: Some green things are not ugly.

Ans
✗ 1. Both conclusions I and II follow
✓ 2. Only conclusion I follows
✗ 3. Neither conclusion I nor II follows
✗ 4. Only conclusion II follows

Question ID : **630680515498**
Option 1 ID : **6306802014399**
Option 2 ID : **6306802014397**
Option 3 ID : **6306802014400**
Option 4 ID : **6306802014398**
Status : **Answered**
Chosen Option : **1**

Q.3 Select the option that is related to the third number in the same way as the second number is related to the first number.
57 : 228 :: 79 : ?

Ans
✔ 1. 316
✘ 2. 341
✘ 3. 333
✘ 4. 329

Question ID : **630680515508**
Option 1 ID : **6306802014437**
Option 2 ID : **6306802014440**
Option 3 ID : **6306802014438**
Option 4 ID : **6306802014439**
Status : **Answered**
Chosen Option : **1**

Q.4 If, B denotes 'addition', C denotes 'division', and D denotes 'subtraction', then what will be the value of the following equation?
12 D 4 C 2 B 3 = ?

Ans
✘ 1. 14
✔ 2. 13
✘ 3. 15
✘ 4. 12

Question ID : **630680515506**
Option 1 ID : **6306802014431**
Option 2 ID : **6306802014430**
Option 3 ID : **6306802014429**
Option 4 ID : **6306802014432**
Status : **Answered**
Chosen Option : **2**

Q.5 Which two signs should be interchanged to make the given equation correct?
16 = 4 × 5 ÷ 2 - 8 + 18

Ans
✘ 1. + and ×
✘ 2. - and =
✘ 3. + and -
✔ 4. = and +

Question ID : **630680515507**
Option 1 ID : **6306802014433**
Option 2 ID : **6306802014435**
Option 3 ID : **6306802014434**
Option 4 ID : **6306802014436**
Status : **Answered**
Chosen Option : **4**

Q.6 Seven friends Alice, Bob, Carol, David, Eve, Frank, and Grace are sitting around a circular table facing the centre. Alice is sitting to the immediate right of Bob. Bob and Carol are neighbours. Frank is sitting exactly between David and Eve. Grace is not sitting next to Carol or Eve. Who is sitting between Alice and David?

Ans
✗ 1. Eve
✗ 2. Bob
✓ 3. Grace
✗ 4. Frank

Question ID : **630680515496**
Option 1 ID : **6306802014392**
Option 2 ID : **6306802014390**
Option 3 ID : **6306802014389**
Option 4 ID : **6306802014391**
Status : **Answered**
Chosen Option : **1**

Q.7 Select the option that is related to the fifth word in the same way as the fourth word is related to the third word, and the second word is related to the first word.
KANGAROO : JOEY :: BEAR : ?

Ans
✗ 1. Calf
✗ 2. Puppy
✗ 3. Chick
✓ 4. Cub

Question ID : **630680515502**
Option 1 ID : **6306802014413**
Option 2 ID : **6306802014416**
Option 3 ID : **6306802014415**
Option 4 ID : **6306802014414**
Status : **Answered**
Chosen Option : **4**

Q.8 Which of the following numbers will replace the question mark (?) in the given series?
14, 13, 15, 12, 16, 11, ?

Ans
✓ 1. 17
✗ 2. 16
✗ 3. 18
✗ 4. 15

Question ID : **630680515505**
Option 1 ID : **6306802014425**
Option 2 ID : **6306802014426**
Option 3 ID : **6306802014428**
Option 4 ID : **6306802014427**
Status : **Answered**
Chosen Option : **1**

Q.9 Rohan says, "Ajay's wife is the sister of my father's only son." How is Ajay related to Rohan?

Ans
1. Husband
2. Brother
3. Sister's husband
4. Mother's father

Question ID : **630680515501**
Option 1 ID : **6306802014412**
Option 2 ID : **6306802014409**
Option 3 ID : **6306802014410**
Option 4 ID : **6306802014411**
Status : **Answered**
Chosen Option : **3**

Q.10 There are 133 boxes kept one above the other. What will be the position of the box from the bottom whose position from the top is 27th?

Ans
1. 139
2. 142
3. 123
4. 107

Question ID : **630680515497**
Option 1 ID : **6306802014393**
Option 2 ID : **6306802014395**
Option 3 ID : **6306802014396**
Option 4 ID : **6306802014394**
Status : **Answered**
Chosen Option : **4**

Q.11 Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the odd letter-cluster.

Ans
1. VWX
2. RSU
3. FGI
4. JKM

Question ID : **630680515503**
Option 1 ID : **6306802014419**
Option 2 ID : **6306802014417**
Option 3 ID : **6306802014420**
Option 4 ID : **6306802014418**
Status : **Answered**
Chosen Option : **1**

Q.12 Which of the following numbers will replace the question mark (?) in the given series?
1076, ?, 688, 494, 300, 106

Ans
✔ 1. 882
✘ 2. 872
✘ 3. 831
✘ 4. 858

Question ID : **630680515504**
Option 1 ID : **6306802014423**
Option 2 ID : **6306802014424**
Option 3 ID : **6306802014421**
Option 4 ID : **6306802014422**
Status : **Answered**
Chosen Option : **1**

Q.13 In a certain code language, if RESCUE is coded as 'EUCRES' and HANDLE is coded as 'ELDHAN', then what will DANGER be coded as?

Ans
✔ 1. REGDAN
✘ 2. RGEDAN
✘ 3. REGADN
✘ 4. REGDND

Question ID : **630680515500**
Option 1 ID : **6306802014408**
Option 2 ID : **6306802014407**
Option 3 ID : **6306802014405**
Option 4 ID : **6306802014406**
Status : **Answered**
Chosen Option : **1**

Section : **Question based on Computer Science Engineering**

Q.1 Which of the following statement is CORRECT with reference to syntax-directed Translation Schemes?

I. Synthesized translation defines the value of the translation of the nonterminal on the left side of the production as a function of the translations of the nonterminal on the right side.
II. Translation of a non-terminal on the right side of the production is defined in terms of a translation of the non-terminal on left. Such translation is called inherited translation.

Ans
✔ 1. Both I and II
✘ 2. Only I
✘ 3. Only II
✘ 4. Neither I nor II

Question ID : **630680515556**
Option 1 ID : **6306802014631**
Option 2 ID : **6306802014629**
Option 3 ID : **6306802014630**
Option 4 ID : **6306802014632**
Status : **Answered**
Chosen Option : **2**

Q.2 Which of the following is the single path shortest path algorithm?

Ans
✗ 1. Topological sort
✗ 2. Binary search
✗ 3. Tree search
✓ 4. Dijkstra's algorithm

Question ID : **630680515541**
Option 1 ID : **6306802014569**
Option 2 ID : **6306802014570**
Option 3 ID : **6306802014572**
Option 4 ID : **6306802014571**
Status : **Answered**
Chosen Option : **4**

Q.3 What is the decimal conversion of $(630.4)_8$?

Ans
✗ 1. 640.4
✓ 2. 408.5
✗ 3. 650
✗ 4. 670

Question ID : **630680515510**
Option 1 ID : **6306802014446**
Option 2 ID : **6306802014445**
Option 3 ID : **6306802014447**
Option 4 ID : **6306802014448**
Status : **Answered**
Chosen Option : **1**

Q.4 Identify the category of the multithreading which allow a program to continue running even if part of it is blocked or is performing a lengthy operation.

Ans
✗ 1. Economy
✗ 2. Scalability
✓ 3. Responsiveness
✗ 4. Resource sharing

Question ID : **630680515561**
Option 1 ID : **6306802014651**
Option 2 ID : **6306802014652**
Option 3 ID : **6306802014650**
Option 4 ID : **6306802014649**
Status : **Answered**
Chosen Option : **4**

Q.5 Match the phases of compiler with its function.

	Phases		Function
I	Intermediate code generator	1	Keeps track of the names used by the program
II	Code generation	2	Create a stream of simple instructions
III	Table management	3	Produces the object code

Ans
✗ 1. I – 1; II – 2; III – 3
✗ 2. I – 1; II – 3; III – 2
✓ 3. I – 2; II – 3; III – 1
✗ 4. I – 2; II – 1; III – 3

Question ID : **630680515552**
Option 1 ID : **6306802014614**
Option 2 ID : **6306802014616**
Option 3 ID : **6306802014613**
Option 4 ID : **6306802014615**
Status : **Answered**
Chosen Option : **3**

Q.6 **Which of the following statement is CORRECT regarding Referential Integrity Constants in Relational Database Management System?**

I. Referential Integrity Constants is a rule that maintains consistency among the rows of two tables (relations).
II. Referential Integrity rule States that of there is a foreign key in one relation, either each foreign key value must match a primary key value in the other table or else the foreign key value must be null.

Ans
✗ 1. Only II
✓ 2. Both I and II
✗ 3. Only I
✗ 4. Neither I nor II

Question ID : **630680515573**
Option 1 ID : **6306802014698**
Option 2 ID : **6306802014699**
Option 3 ID : **6306802014697**
Option 4 ID : **6306802014700**
Status : **Answered**
Chosen Option : **3**

Q.7 **A _____ defines an action the database should take when same database-related event occurs that causes a change in the content of a table in a database.**

Ans
✓ 1. Trigger
✗ 2. Hit
✗ 3. Field
✗ 4. Relation

Question ID : **630680515574**
Option 1 ID : **6306802014701**
Option 2 ID : **6306802014704**
Option 3 ID : **6306802014703**
Option 4 ID : **6306802014702**
Status : **Answered**
Chosen Option : **1**

Q.8 In context of computer networks, based on data transmission speed which of the following are the bases categories of communication channels (paths)?

I. Narrow band
II. Voice band
III. Broad band

Ans
✗ 1. Only I and II
✓ 2. I, II and III
✗ 3. Only II and III
✗ 4. Only I and III

Question ID : **630680515577**
Option 1 ID : **6306802014713**
Option 2 ID : **6306802014716**
Option 3 ID : **6306802014714**
Option 4 ID : **6306802014715**
Status : **Answered**
Chosen Option : **4**

Q.9 As per ISO 25010 quality model which of the following is not the characteristics which describe quality in use model?

Ans
✗ 1. Efficiency
✗ 2. Effectiveness
✓ 3. Compatibility
✗ 4. Satisfaction

Question ID : **630680515591**
Option 1 ID : **6306802014770**
Option 2 ID : **6306802014769**
Option 3 ID : **6306802014771**
Option 4 ID : **6306802014772**
Status : **Answered**
Chosen Option : **3**

Q.10 In context of computer Database, _____ language includes command to enable users to enter and manipulate data in a database.

Ans
✗ 1. Data Definition
✗ 2. Data Security
✓ 3. Data Manipulation
✗ 4. Data Integrity

Question ID : **630680515569**
Option 1 ID : **6306802014681**
Option 2 ID : **6306802014683**
Option 3 ID : **6306802014682**
Option 4 ID : **6306802014684**
Status : **Answered**
Chosen Option : **3**

Q.11 In context of OSI model of computer networks _____ layer provides means of establishing, maintaining and transmitting a dialogue between two end users.

Ans
✗ 1. Presentation
✗ 2. Transport
✓ 3. Session
✗ 4. Application

Question ID : **630680515583**
Option 1 ID : **6306802014739**
Option 2 ID : **6306802014737**
Option 3 ID : **6306802014738**
Option 4 ID : **6306802014740**
Status : **Answered**
Chosen Option : **4**

Q.12 Which of the following pair is CORRECT?

I. Half adder - A combinational circuit that performs the addition of two bits
II. Full adder - A combinational circuit that performs the addition of three bits

Ans
✗ 1. Neither I nor II
✗ 2. Only II
✗ 3. Only I
✓ 4. Both I and II

Question ID : **630680515514**
Option 1 ID : **6306802014464**
Option 2 ID : **6306802014462**
Option 3 ID : **6306802014461**
Option 4 ID : **6306802014463**
Status : **Answered**
Chosen Option : **3**

Q.13 Convert $(1111)_2$ into decimal equivalents.

Ans
✗ 1. 16
✗ 2. 11
✗ 3. 20
✓ 4. 15

Question ID : **630680515525**
Option 1 ID : **6306802014507**
Option 2 ID : **6306802014505**
Option 3 ID : **6306802014508**
Option 4 ID : **6306802014506**
Status : **Answered**
Chosen Option : **3**

Q.14 In context of OSI model of computer networks _____ layer provides services that directly support end users of networks and is a collection of miscellaneous protocols for various commonly used applications such as electronic mail, file transfer etc.

Ans
✗ 1. Transport
✓ 2. Application
✗ 3. Presentation
✗ 4. Session

Question ID : **630680515580**
Option 1 ID : **6306802014728**
Option 2 ID : **6306802014726**
Option 3 ID : **6306802014725**
Option 4 ID : **6306802014727**
Status : **Answered**
Chosen Option : **2**

Q.15 Which of the following algorithms is an example of the divide and conquer approach?

Ans
✗ 1. Matrix-chain multiplication
✓ 2. Quick sort
✗ 3. Prim's algorithm
✗ 4. Longest common subsequence

Question ID : **630680515534**
Option 1 ID : **6306802014543**
Option 2 ID : **6306802014541**
Option 3 ID : **6306802014542**
Option 4 ID : **6306802014544**
Status : **Answered**
Chosen Option : **4**

Q.16 In context of OSI model of computer networks, which of the following is a Transport Layer Protocol?

I. Transport Control Protocol
II. User Datagram Protocol

Ans
✗ 1. Only I
✗ 2. Neither I nor II
✓ 3. Both I and II
✗ 4. Only II

Question ID : **630680515579**
Option 1 ID : **6306802014721**
Option 2 ID : **6306802014724**
Option 3 ID : **6306802014723**
Option 4 ID : **6306802014722**
Status : **Answered**
Chosen Option : **4**

Q.17 A merchant allows a discount of 10 percent on marked price. If he wants to earn a profit of 10 percent, then marked price will be how much percentage more than the cost price?

Ans
✗ 1. 50.66 percent
✗ 2. 30 percent
✓ 3. 22.22 percent
✗ 4. 33.33 percent

Question ID : **630680515601**
Option 1 ID : **6306802014812**
Option 2 ID : **6306802014811**
Option 3 ID : **6306802014809**
Option 4 ID : **6306802014810**
Status : **Answered**
Chosen Option : **3**

Q.18 A _____ is a combinational circuit that selects binary information from one of many input lines and directs it to a single output line.

Ans
✗ 1. half adder
✓ 2. digital multiplexer
✗ 3. full adder
✗ 4. half subtractor

Question ID : **630680515516**
Option 1 ID : **6306802014469**
Option 2 ID : **6306802014470**
Option 3 ID : **6306802014472**
Option 4 ID : **6306802014471**
Status : **Answered**
Chosen Option : **2**

Q.19 In First-Come-First-Served CPU scheduling algorithm when all the other processes wait for one big process to get off the CPU is known as _____.

Ans
✗ 1. Belady's Anomaly
✗ 2. Aging
✓ 3. Convoy effect
✗ 4. Starvation

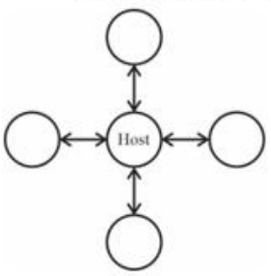
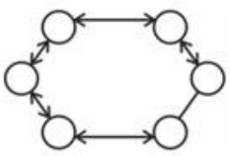
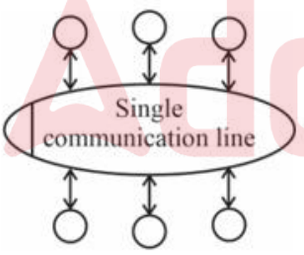
Question ID : **630680515563**
Option 1 ID : **6306802014660**
Option 2 ID : **6306802014659**
Option 3 ID : **6306802014657**
Option 4 ID : **6306802014658**
Status : **Answered**
Chosen Option : **4**

Q.20 Parser is categorized into which type of context-free grammar?

Ans
✗ 1. Three
✓ 2. Two
✗ 3. Four
✗ 4. One

Question ID : **630680515553**
Option 1 ID : **6306802014619**
Option 2 ID : **6306802014618**
Option 3 ID : **6306802014620**
Option 4 ID : **6306802014617**
Status : **Answered**
Chosen Option : **1**

Q.21 Match the following network diagram with the correct topology.

	Network diagram		Topology
I		1	Ring network
II		2	Bus network
III		3	Star network

Ans
✓ 1. I – 3; II – 1; III – 2
✗ 2. I – 1; II – 2; III – 3
✗ 3. I – 3; II – 2; III – 1
✗ 4. I – 1; II – 3; III – 2

Question ID : **630680515578**
Option 1 ID : **6306802014718**
Option 2 ID : **6306802014717**
Option 3 ID : **6306802014720**
Option 4 ID : **6306802014719**
Status : **Answered**
Chosen Option : **1**

Q.22 **Which of the following is the type of parallel processor system as per Flynn's taxonomy?**

I. Single instruction, single data (SISD) stream
II. Single instruction, multiple data (SIMD) stream

Ans
✗ 1. Neither I nor II
✓ 2. Both I and II
✗ 3. Only II
✗ 4. Only I

Question ID : **630680515518**
Option 1 ID : **6306802014480**
Option 2 ID : **6306802014479**
Option 3 ID : **6306802014478**
Option 4 ID : **6306802014477**
Status : **Not Answered**
Chosen Option : **--**

Q.23 How many steps are required to construct a string abbbb from the grammar given by using right most derivation?

$S \rightarrow aAB$
$A \rightarrow bBb$
$B \rightarrow A/E$

Ans
✗ 1. 4
✗ 2. 7
✓ 3. 5
✗ 4. 6

Question ID : **630680515548**
Option 1 ID : **6306802014597**
Option 2 ID : **6306802014600**
Option 3 ID : **6306802014598**
Option 4 ID : **6306802014599**
Status : **Answered**
Chosen Option : **1**

Q.24 **According to memory hierarchy as one goes down the hierarchy what will NOT occur?**

Ans
✗ 1. Increasing capacity
✗ 2. Decreasing cost per bit
✗ 3. Increasing access time
✓ 4. Increasing frequency of access of the memory by the processor

Question ID : **630680515524**
Option 1 ID : **6306802014502**
Option 2 ID : **6306802014501**
Option 3 ID : **6306802014503**
Option 4 ID : **6306802014504**
Status : **Answered**
Chosen Option : **4**

Q.25 Which of the given option is CORRECT?

Ans
✗ 1. $(2/5) < (11/13) < (90/110)$
✗ 2. $(16/19) < (3/7) < (40/90)$
✓ 3. $(17/27) < (15/22) < (13/17)$
✗ 4. $(4/9) < (3/8) < (2/7)$

Question ID : **630680515608**
Option 1 ID : **6306802014838**
Option 2 ID : **6306802014837**
Option 3 ID : **6306802014839**
Option 4 ID : **6306802014840**
Status : **Answered**
Chosen Option : **1**

Q.26 Which of the following is NOT the problems of synchronization?

Ans
✗ 1. The Bounded-Buffer problem
✗ 2. The Readers-Writer problem
✓ 3. The Knapsack problem
✗ 4. The Dining-Philosophers problem

Question ID : **630680515564**
Option 1 ID : **6306802014661**
Option 2 ID : **6306802014663**
Option 3 ID : **6306802014662**
Option 4 ID : **6306802014664**
Status : **Answered**
Chosen Option : **2**

Q.27 Which of the following is NOT an input device?

Ans
✗ 1. Keyboard
✓ 2. Voice response system
✗ 3. Speech recognition devices
✗ 4. Point and draw devices

Question ID : **630680515521**
Option 1 ID : **6306802014489**
Option 2 ID : **6306802014492**
Option 3 ID : **6306802014491**
Option 4 ID : **6306802014490**
Status : **Answered**
Chosen Option : **4**

Q.28 Given an array X = (22, 33, 55, 88, 96) and key = 88

How many iterations are required to find the key using binary search?

Ans
1. 3
2. 2
3. 1
4. 4

Question ID : **630680515535**
Option 1 ID : **6306802014547**
Option 2 ID : **6306802014546**
Option 3 ID : **6306802014545**
Option 4 ID : **6306802014548**
Status : **Answered**
Chosen Option : **3**

Q.29 Consider a hash table with 10 slots. What is the sequence of the following elements in a hash table if hash function is k mode 10 and the collision is resolved using liner probing?

44, 26, 12, 93, 80, 57, 56, 23, 46, 36

Ans
1. 80, 46, 12, 93, 44, 23, 26, 57, 56, 36
2. 80, 36, 12, 93, 44, 23, 26, 57, 56, 46
3. 80, 36, 12, 93, 44, 23, 26, 56, 46, 57
4. 12, 23, 26, 36, 44, 46, 56, 57, 80, 93

Question ID : **630680515538**
Option 1 ID : **6306802014559**
Option 2 ID : **6306802014558**
Option 3 ID : **6306802014560**
Option 4 ID : **6306802014557**
Status : **Answered**
Chosen Option : **1**

Q.30 Which of the following machine learning algorithm does NOT use clustering?

Ans
1. Linear Discriminant Analysis
2. Expectation Maximization
3. K-means
4. K-Medians

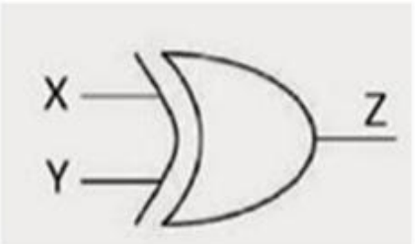
Question ID : **630680515595**
Option 1 ID : **6306802014788**
Option 2 ID : **6306802014787**
Option 3 ID : **6306802014785**
Option 4 ID : **6306802014786**
Status : **Not Answered**
Chosen Option : **--**

Q.31 **Full-Subtractor has _____ inputs and _____ outputs.**

Ans
✗ 1. 2; 2
✗ 2. 2; 3
✓ 3. 3; 2
✗ 4. 3; 4

Question ID : **630680515515**
Option 1 ID : **6306802014468**
Option 2 ID : **6306802014466**
Option 3 ID : **6306802014465**
Option 4 ID : **6306802014467**
Status : **Answered**
Chosen Option : **3**

Q.32 What is the output function of the given XOR gate?



Ans
✗ 1. $Z = X.Y$
✗ 2. $Z = (X + Y)'$
✗ 3. $Z = X + Y$
✓ 4. $Z = XY' + X'Y$

Question ID : **630680515513**
Option 1 ID : **6306802014457**
Option 2 ID : **6306802014459**
Option 3 ID : **6306802014458**
Option 4 ID : **6306802014460**
Status : **Answered**
Chosen Option : **2**

Q.33 **Any address generated by the CPU is commonly referred to as a _____ where an address seen by the memory unit i.e. the one loaded into the memory address register is known as _____.**

Ans
✗ 1. absolute address; physical address
✗ 2. logical address; absolute address
✓ 3. logical address; physical address
✗ 4. physical address; relocatable address

Question ID : **630680515566**
Option 1 ID : **6306802014672**
Option 2 ID : **6306802014669**
Option 3 ID : **6306802014670**
Option 4 ID : **6306802014671**
Status : **Answered**
Chosen Option : **2**

Q.34 Context free grammar is _____ grammar according to the Chomsky hierarchy.

Ans
✔ 1. Type 2
✘ 2. Type 3
✘ 3. Type 0
✘ 4. Type 1

Question ID : **630680515546**
Option 1 ID : **6306802014590**
Option 2 ID : **6306802014589**
Option 3 ID : **6306802014592**
Option 4 ID : **6306802014591**
Status : **Answered**
Chosen Option : **1**

Q.35 Sort the following list using radix sort:
429, 557, 757, 939, 536, 820, 455
What is the output of the algorithm after the first pass?

Ans
✔ 1. 820, 455, 536, 557, 757, 429, 939
✘ 2. 429, 455, 557, 536, 757, 820, 939
✘ 3. 820, 429, 536, 939, 455, 557, 757
✘ 4. 939, 820, 757, 557, 536, 455, 429

Question ID : **630680515537**
Option 1 ID : **6306802014553**
Option 2 ID : **6306802014555**
Option 3 ID : **6306802014554**
Option 4 ID : **6306802014556**
Status : **Answered**
Chosen Option : **3**

Q.36 In context of data normalization in database management system, relation is in Boyce-Codd Normal Form if and only if every determinant is a _____.

Ans
✘ 1. Foreign key
✘ 2. Non-primary key
✘ 3. Alternate key
✔ 4. Candiate key

Question ID : **630680515570**
Option 1 ID : **6306802014685**
Option 2 ID : **6306802014688**
Option 3 ID : **6306802014687**
Option 4 ID : **6306802014686**
Status : **Answered**
Chosen Option : **4**

Q.37 What is the value of $\frac{21}{46} \div \frac{1}{6}$ of $\frac{23}{42} + \frac{96}{576} \times \frac{24}{3} - \left(\frac{88}{56} \times \frac{7}{9} \div \frac{5}{36}\right)$?

Ans
1. $\frac{5}{2}$
2. $\frac{7}{2}$
3. $\frac{11}{2}$
4. $\frac{9}{2}$

Question ID : **630680515605**
Option 1 ID : **6306802014828**
Option 2 ID : **6306802014827**
Option 3 ID : **6306802014825**
Option 4 ID : **6306802014826**
Status : **Answered**
Chosen Option : **1**

Q.38 **Which of the following change brought about by the iterative waterfall model to the classical waterfall model?**

Ans
1. Addition of feedback paths
2. Easy to accommodate change request
3. Efficient error correction
4. Overlapping of phases

Question ID : **630680515585**
Option 1 ID : **6306802014745**
Option 2 ID : **6306802014746**
Option 3 ID : **6306802014747**
Option 4 ID : **6306802014748**
Status : **Answered**
Chosen Option : **3**

Q.39 **Database designers use _____ to define the structure of a database (database scheme) which typically includes definition of all data elements of the database and organization of data elements into records, tables etc.**

Ans
1. Query by example
2. Data Manipulation Language
3. Find Command Language
4. Data Definition Language

Question ID : **630680515568**
Option 1 ID : **6306802014678**
Option 2 ID : **6306802014677**
Option 3 ID : **6306802014680**
Option 4 ID : **6306802014679**
Status : **Answered**
Chosen Option : **4**

Q.40 **Choose the CORRECT sequence of steps involved in machine learning cycle.**

Ans ✗ 1.
Data identification → Data preparation → Selection of machine learning algorithm → Train model → Deploy the model → Evaluate the model

✓ 2.
Data identification → Data preparation → Selection of machine learning algorithm → Train model → Evaluate the model → Deploy the model

✗ 3.
Data identification → Data preparation → Selection of machine learning algorithm → Evaluate the model → Train model → Deploy the model

✗ 4.
Data identification → Selection of machine learning algorithm → Data preparation → Train model → Evaluate the model → Deploy the model

Question ID : **630680515594**
Option 1 ID : **6306802014784**
Option 2 ID : **6306802014781**
Option 3 ID : **6306802014783**
Option 4 ID : **6306802014782**
Status : **Answered**
Chosen Option : **3**

Q.41 **What is the approximate value of 149.832 ÷ 25.0138 + 7.10 × 2.008?**

Ans ✗ 1. 35

✓ 2. 20

✗ 3. 11

✗ 4. 27

Question ID : **630680515603**
Option 1 ID : **6306802014820**
Option 2 ID : **6306802014817**
Option 3 ID : **6306802014818**
Option 4 ID : **6306802014819**
Status : **Answered**
Chosen Option : **2**

Q.42 **In context of computer networks which of the following is a data transmission mode?**

I. Simplex
II. Half Simplex
III. Full Duplex

Ans ✗ 1. Only I and II

✗ 2. I, II and III

✗ 3. Only II and III

✓ 4. Only I and III

Question ID : **630680515576**
Option 1 ID : **6306802014709**
Option 2 ID : **6306802014712**
Option 3 ID : **6306802014710**
Option 4 ID : **6306802014711**
Status : **Answered**
Chosen Option : **4**

Q.43 Which of the following pair of Application layer protocol of OSI model and its services is CORRECT?

I. X.400 – Directory
II. X.500 – Electronic Mail protocol

Ans
✔ 1. Neither I nor II
✘ 2. Both I and II
✘ 3. Only I
✘ 4. Only II

Question ID : **630680515582**
Option 1 ID : **6306802014736**
Option 2 ID : **6306802014735**
Option 3 ID : **6306802014733**
Option 4 ID : **6306802014734**
Status : **Answered**
Chosen Option : **4**

Q.44 Name the phase of compiler, which separates characters of the source language into groups that logically belong together, these groups are called tokens.

Ans
✘ 1. Code optimization
✘ 2. Syntax analysis
✘ 3. Error handling
✔ 4. Lexical analysis

Question ID : **630680515551**
Option 1 ID : **6306802014611**
Option 2 ID : **6306802014610**
Option 3 ID : **6306802014612**
Option 4 ID : **6306802014609**
Status : **Answered**
Chosen Option : **4**

Q.45 Which of the following is the CORRECT for O- notation?

Ans
✔ 1.
$O(g(n)) = \{f(n)$: there exist positive constant C and n_o such that $O \leq f(n) \leq cg(n)$ for all $n \geq n_o\}$

✘ 2.
$O(g(n)) = \{f(n)$: there exist positive constant C and n_o such that $O \leq C\, g(n) \leq f(n)$ for all $n \geq n_o\}$

✘ 3.
$O(g(n)) = \{f(n)$: there exist positive constant C_1, C_2 and n_o such that $O \leq C_1\, g(n) \leq f(n) \leq C_2\, g(n)$ for all $n \geq n_o\}$

✘ 4.
$O(g(n)) = \{f(n)$: there exist positive constant C and n_o such that $O \geq f(n) \geq cg(n)$ for all $n \geq n_o\}$

Question ID : **630680515540**
Option 1 ID : **6306802014565**
Option 2 ID : **6306802014567**
Option 3 ID : **6306802014568**
Option 4 ID : **6306802014566**
Status : **Answered**
Chosen Option : **2**

Q.46 Which of the following is the external sorting?

Ans
✗ 1. Insertion sort
✓ 2. Merge sort
✗ 3. Quick sort
✗ 4. Selection sort

Question ID : **630680515539**
Option 1 ID : **6306802014561**
Option 2 ID : **6306802014564**
Option 3 ID : **6306802014562**
Option 4 ID : **6306802014563**
Status : **Answered**
Chosen Option : **4**

Q.47 Match the following algorithms with the data structure it uses.

	Algorithm		Data structure
I	Breadth first search	1	Stacks
II	Heap sort	2	Queue
III	Depth first search	3	Arrays

Ans
✗ 1. I – 1; II – 2; III – 3
✗ 2. I – 3; II – 1; III - 2
✓ 3. I – 2; II – 3; III – 1
✗ 4. I – 3; II – 2, III – 1

Question ID : **630680515530**
Option 1 ID : **6306802014527**
Option 2 ID : **6306802014526**
Option 3 ID : **6306802014525**
Option 4 ID : **6306802014528**
Status : **Answered**
Chosen Option : **3**

Q.48 What is the total number of swaps performed to sort the following list of elements 18, 32, 17, 19, 41, 15, 23 in an ascending order, using bubble sort?

Ans
✗ 1. 12
✗ 2. 13
✓ 3. 10
✗ 4. 11

Question ID : **630680515536**
Option 1 ID : **6306802014550**
Option 2 ID : **6306802014549**
Option 3 ID : **6306802014552**
Option 4 ID : **6306802014551**
Status : **Answered**
Chosen Option : **2**

Q.49 Mixture of milk and water in three bottles of equal capacity is in the ratio 3 : 4, 1 : 2 and 9 : 5 respectively. These three bottles are emptied into a large bottle. What will be the ratio of milk and water respectively in the large bottle?

Ans
✔ 1. 59 : 67
✘ 2. 49 : 37
✘ 3. 59 : 57
✘ 4. 69 : 57

Question ID : **630680515604**
Option 1 ID : **6306802014821**
Option 2 ID : **6306802014822**
Option 3 ID : **6306802014824**
Option 4 ID : **6306802014823**
Status : **Answered**
Chosen Option : **3**

Q.50 Which of the following array representation is CORRECT for the max heap of the following data elements?

20, 30, 70, 10, 5, 50, 80

Ans
✘ 1. 80, 70, 50, 30, 20, 10, 5
✘ 2. 5, 10, 20, 30, 50, 70, 80
✘ 3. 70, 20, 80, 10, 5, 30, 50
✔ 4. 80, 20, 70, 10, 5, 30, 50

Question ID : **630680515533**
Option 1 ID : **6306802014538**
Option 2 ID : **6306802014537**
Option 3 ID : **6306802014539**
Option 4 ID : **6306802014540**
Status : **Answered**
Chosen Option : **1**

Q.51 Which of the following is NOT the action performed by a shift – reduce parser?

Ans
✘ 1. Shift
✘ 2. Accept
✔ 3. Debase
✘ 4. Error

Question ID : **630680515555**
Option 1 ID : **6306802014625**
Option 2 ID : **6306802014627**
Option 3 ID : **6306802014626**
Option 4 ID : **6306802014628**
Status : **Answered**
Chosen Option : **4**

Q.52 Match the following type of software maintenance to the situation where it carried out.

	Maintenance		Situation
I	Corrective	1	Carried out to improve the performance of the system or to enhance the functionalities of the system
II	Perfective	2	Usually required for porting the software to work in new environment
III	Adaptive	3	Carried out to correct errors that were not discovered during the product development phase

Ans
✗ 1. I – 1; II – 2; III – 3
✗ 2. I – 3; II – 2; III – 1
✗ 3. I – 1; II – 3; III – 2
✓ 4. I – 3; II – 1; III – 2

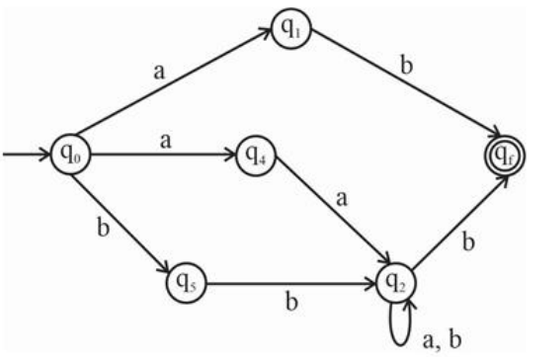
Question ID : **630680515584**
Option 1 ID : **6306802014742**
Option 2 ID : **6306802014741**
Option 3 ID : **6306802014744**
Option 4 ID : **6306802014743**
Status : **Not Answered**
Chosen Option : **--**

Q.53 **In context of Relational Algebra of Database Management System, SELECT operation is used to select a subset of the tuples from a relation that satisfy a _____.**

Ans
✗ 1. Attribute Criteria
✗ 2. Block Criteria
✓ 3. Selection Criteria
✗ 4. Relation Criteria

Question ID : **630680515572**
Option 1 ID : **6306802014696**
Option 2 ID : **6306802014694**
Option 3 ID : **6306802014693**
Option 4 ID : **6306802014695**
Status : **Answered**
Chosen Option : **4**

Q.54 The given finite automata is equivalent to which of the following regular expression?



Ans
✗ 1. $(a + b)^* (aa + bb) (a + b)^*$
✓ 2. $ab + (aa + bb) (a + b)^* b$
✗ 3. $ab (aa + bb)(a + b)^* b$
✗ 4. $ab (aa + b) (a + b)^* a$

Question ID : **630680515545**
Option 1 ID : **6306802014585**
Option 2 ID : **6306802014587**
Option 3 ID : **6306802014586**
Option 4 ID : **6306802014588**
Status : **Answered**
Chosen Option : **3**

Q.55 What is the decimal conversion of $(1010.011)_2$?

Ans
✗ 1. 12
✗ 2. 14
✓ 3. 10.375
✗ 4. 11.375

Question ID : **630680515509**
Option 1 ID : **6306802014443**
Option 2 ID : **6306802014444**
Option 3 ID : **6306802014441**
Option 4 ID : **6306802014442**
Status : **Answered**
Chosen Option : **4**

Q.56 The following C function is an example of what type of recursion?

```
int f(int n)
{
    if(n==1)
    return 1;
    else if(n==0)
    return 0;
    else
    return(f(n-1)+f(n-2));
}
```

Ans
✔ 1. Binary
✘ 2. Tail
✘ 3. Linear
✘ 4. Head

Question ID : **630680515527**
Option 1 ID : **6306802014514**
Option 2 ID : **6306802014515**
Option 3 ID : **6306802014513**
Option 4 ID : **6306802014516**
Status : **Answered**
Chosen Option : **1**

Q.57 In context of Database, which of the following is the CORRECT order for creating a database?

A → Defining its structure (scheme)
B → Entering data into the database
C → Designing forms (custom screens) for displaying and entering data

Ans
✘ 1. $C \rightarrow A \rightarrow B$
✘ 2. $A \rightarrow B \rightarrow C$
✔ 3. $A \rightarrow C \rightarrow B$
✘ 4. $B \rightarrow A \rightarrow C$

Question ID : **630680515567**
Option 1 ID : **6306802014676**
Option 2 ID : **6306802014673**
Option 3 ID : **6306802014675**
Option 4 ID : **6306802014674**
Status : **Answered**
Chosen Option : **1**

Q.58 **Which of the following identities of regular expression is NOT correct?**

Ans
✗ 1. $\phi + R = R$
✗ 2. $R^* R^* = R^*$
✗ 3. $\Lambda R = R$
✓ 4. $\phi R = R$

Question ID : **630680515544**
Option 1 ID : **6306802014581**
Option 2 ID : **6306802014584**
Option 3 ID : **6306802014583**
Option 4 ID : **6306802014582**
Status : **Answered**
Chosen Option : **4**

Q.59 Consider the following confusion matrix.

	Positive (Predicted)	Negative (Predicted)
Positive (Actual)	100	50
Negative (Actual)	150	9700

What is the value of False Negative in this confusion matrix?

Ans
✗ 1. 9700
✓ 2. 50
✗ 3. 100
✗ 4. 150

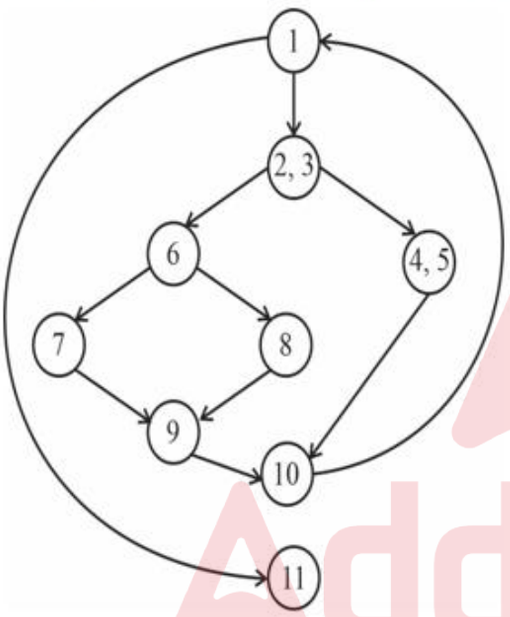
Question ID : **630680515598**
Option 1 ID : **6306802014800**
Option 2 ID : **6306802014798**
Option 3 ID : **6306802014797**
Option 4 ID : **6306802014799**
Status : **Answered**
Chosen Option : **2**

Q.60 The time dispatcher takes and for the dispatcher to stop one process and start another running is known as _____.

Ans
✗ 1. dispatch wasting time
✓ 2. dispatch latency
✗ 3. dispatch turnaround time
✗ 4. dispatch response time

Question ID : **630680515562**
Option 1 ID : **6306802014656**
Option 2 ID : **6306802014655**
Option 3 ID : **6306802014653**
Option 4 ID : **6306802014654**
Status : **Answered**
Chosen Option : **2**

Q.61 What is the cyclomatic complexity of the given flow graph?



Ans
✗ 1. 3
✗ 2. 6
✓ 3. 4
✗ 4. 5

Question ID : **630680515589**
Option 1 ID : **6306802014761**
Option 2 ID : **6306802014764**
Option 3 ID : **6306802014762**
Option 4 ID : **6306802014763**
Status : **Answered**
Chosen Option : **4**

Q.62 What is the output of the following postfix expression?

5, 6, 2, +, *, 8, 4, /, –

Ans
✗ 1. 39
✗ 2. 36
✓ 3. 38
✗ 4. 37

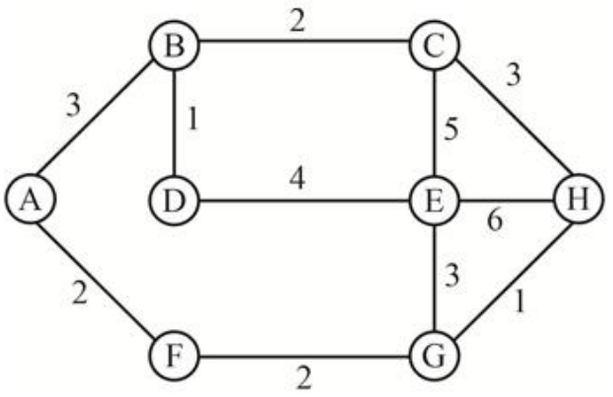
Question ID : **630680515528**
Option 1 ID : **6306802014520**
Option 2 ID : **6306802014517**
Option 3 ID : **6306802014519**
Option 4 ID : **6306802014518**
Status : **Answered**
Chosen Option : **3**

Q.63 Which of the following is NOT the part of the organization of C programming language Activation Record?

Ans
✗ 1. Argument count
✗ 2. Return address
✗ 3. Local data
✓ 4. Formal parameters

Question ID : **630680515557**
Option 1 ID : **6306802014635**
Option 2 ID : **6306802014636**
Option 3 ID : **6306802014634**
Option 4 ID : **6306802014633**
Status : **Answered**
Chosen Option : **1**

Q.64 What is the minimum cost of the spanning tree of the given graph?



Ans
✗ 1. 12
✗ 2. 13
✗ 3. 11
✓ 4. 14

Question ID : **630680515531**
Option 1 ID : **6306802014530**
Option 2 ID : **6306802014531**
Option 3 ID : **6306802014529**
Option 4 ID : **6306802014532**
Status : **Answered**
Chosen Option : **4**

Q.65 **Which of the following statement is CORRECT about software testing?**

I. White box testing is performed early in the testing phase.
II. Black box testing tends to be applied during later stages of testing.

Ans
✗ 1. Neither I nor II
✗ 2. Only II
✓ 3. Both I and II
✗ 4. Only I

Question ID : **630680515592**
Option 1 ID : **6306802014776**
Option 2 ID : **6306802014774**
Option 3 ID : **6306802014775**
Option 4 ID : **6306802014773**
Status : **Answered**
Chosen Option : **2**

Q.66 Consider the following queue of character, implemented using array of 7 memory, Front = 3 Rear = 4 Queue: –, –, A, B, __, __, __, where '–', denote empty memory cell. What is the value of front and rear after the following operation?

Enqueue C, D
Dequeue
Enqueue E, F
Dequeue

Ans
✗ 1. Front = 3 Rear = 6
✗ 2. Front = 4 Rear = 7
✓ 3. Front = 5 Rear = 1
✗ 4. Front = 1 Rear = 4

Question ID : **630680515529**
Option 1 ID : **6306802014524**
Option 2 ID : **6306802014523**
Option 3 ID : **6306802014522**
Option 4 ID : **6306802014521**
Status : **Answered**
Chosen Option : **3**

Q.67 How many distinct binary tress are constructed using 5 nodes?

Ans
✓ 1. 42
✗ 2. 30
✗ 3. 16
✗ 4. 5

Question ID : **630680515532**
Option 1 ID : **6306802014534**
Option 2 ID : **6306802014536**
Option 3 ID : **6306802014535**
Option 4 ID : **6306802014533**
Status : **Answered**
Chosen Option : **2**

Q.68 Which of the following is the CORRECT sequence of the phases of a compiler?

Ans
✗ 1. Lexical analysis, syntax analysis, intermediate code generation, code generation, code optimization
✗ 2. Lexical analysis, intermediate code generation, syntax analysis, code generation, code optimization
✗ 3. Lexical analysis, intermediate code generation, syntax analysis, code optimization, code generation
✓ 4. Lexical analysis, syntax analysis, intermediate code generation, code optimization, code generation

Question ID : **630680515558**
Option 1 ID : **6306802014639**
Option 2 ID : **6306802014638**
Option 3 ID : **6306802014637**
Option 4 ID : **6306802014640**
Status : **Answered**
Chosen Option : **4**

Q.69 $10 + (1010)^* [\wedge + (1010)^*]$ is equivalent to _____, where $\wedge$ represent null.

Ans
✗ 1. $(1010)^*$

✗ 2. $(1010)^* + 10$

✗ 3. $(1100)^*$

✓ 4. $10 + (1010)^*$

Question ID : **630680515543**
Option 1 ID : **6306802014577**
Option 2 ID : **6306802014579**
Option 3 ID : **6306802014580**
Option 4 ID : **6306802014578**
Status : **Answered**
Chosen Option : **4**

Q.70 **A process is _____, if it cannot affect or be affected by the other processes executing in the system.**

Ans
✗ 1. dependent

✓ 2. independent

✗ 3. co-operating

✗ 4. self-supporting

Question ID : **630680515560**
Option 1 ID : **6306802014646**
Option 2 ID : **6306802014647**
Option 3 ID : **6306802014645**
Option 4 ID : **6306802014648**
Status : **Answered**
Chosen Option : **2**

Q.71 **Which derivation is also known as canonical derivations?**

Ans
✗ 1. Left most derivation in reverse

✗ 2. Left most derivation

✓ 3. Right most derivation

✗ 4. Right most derivations in reverse

Question ID : **630680515554**
Option 1 ID : **6306802014622**
Option 2 ID : **6306802014623**
Option 3 ID : **6306802014624**
Option 4 ID : **6306802014621**
Status : **Answered**
Chosen Option : **4**

Q.72 **K-Nearest Neighbours algorithm is a _____ classification algorithm that classifies new data point based on the nearest data point.**

Ans
✗ 1. Unsupervised
✓ 2. Supervised
✗ 3. Reinforcement
✗ 4. Deep learning

Question ID : **630680515596**
Option 1 ID : **6306802014790**
Option 2 ID : **6306802014789**
Option 3 ID : **6306802014791**
Option 4 ID : **6306802014792**
Status : **Not Answered**
Chosen Option : **--**

Q.73 Match the following algorithm with its average complexity.

	Algorithm		Average Complexity
I	Binary search	1	O (n^2)
II	Quick sort	2	O (log n)
III	Linear search	3	O (n log n)
IV	Selection sort	4	O (n)

Ans
✗ 1. I – 4; II – 3; III – 2; IV – 1
✓ 2. I – 2; II – 3; III – 4; IV – 1
✗ 3. I – 1; II – 4; III – 2; IV – 3
✗ 4. I – 3; II – 1; III – 2; IV – 4

Question ID : **630680515542**
Option 1 ID : **6306802014576**
Option 2 ID : **6306802014575**
Option 3 ID : **6306802014573**
Option 4 ID : **6306802014574**
Status : **Answered**
Chosen Option : **1**

Q.74 In any computer network, a communication protocol normally perform, which of the following functions for efficient and error free transmission of data?

I. Data Routing
II. Procedure and order of Transmission
III. Data security
IV. Data formatting

Ans
✗ 1. Only II, III and IV
✗ 2. Only I, II and III
✓ 3. I, II, III and IV
✗ 4. Only I, III, IV

Question ID : **630680515581**
Option 1 ID : **6306802014730**
Option 2 ID : **6306802014729**
Option 3 ID : **6306802014732**
Option 4 ID : **6306802014731**
Status : **Answered**
Chosen Option : **4**

Q.75 What is the least number which when divided by 12, 16, 18 and 30 leaves a remainder of 4 in each case but is completely divisible by 7?

Ans
✗ 1. 4245
✗ 2. 4242
✗ 3. 2324
✓ 4. 2884

Question ID : **630680515606**
Option 1 ID : **6306802014830**
Option 2 ID : **6306802014829**
Option 3 ID : **6306802014832**
Option 4 ID : **6306802014831**
Status : **Answered**
Chosen Option : **3**

Q.76 Which of the following is NOT a process state?

Ans
✗ 1. Ready
✓ 2. Start
✗ 3. New
✗ 4. Running

Question ID : **630680515559**
Option 1 ID : **6306802014644**
Option 2 ID : **6306802014641**
Option 3 ID : **6306802014642**
Option 4 ID : **6306802014643**
Status : **Answered**
Chosen Option : **2**

Q.77 Match of the language with its machine format.

	Language		Machine
I	Unrestricted language	1	Finite automata
II	Context sensitive language	2	Push down automata
III	Context free language	3	Linear bounded automata
IV	Regular expression	4	Turing machine

Ans
✗ 1. I – 2; II – 3; III – 4; IV – 1
✗ 2. I – 4; II – 2; III – 1; IV – 3
✗ 3. I – 3; II – 4; III – 1; IV – 2
✓ 4. I – 4; II – 3; III – 2; IV – 1

Question ID : **630680515547**
Option 1 ID : **6306802014593**
Option 2 ID : **6306802014595**
Option 3 ID : **6306802014594**
Option 4 ID : **6306802014596**
Status : **Answered**
Chosen Option : **4**

Q.78 **Which of the following statement is CORRECT?**

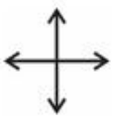
I. An input device is an electromechanical device that accepts data from the outside world and translates it into a form a computer can interpret.
II. An output device is an electromechanical device that accepts data from a computer and translates them into a form suitable for use by outside world.

Ans
✗ 1. Only II
✓ 2. Both I and II
✗ 3. Only I
✗ 4. Neither I nor II

Question ID : **630680515520**
Option 1 ID : **6306802014486**
Option 2 ID : **6306802014487**
Option 3 ID : **6306802014485**
Option 4 ID : **6306802014488**
Status : **Answered**
Chosen Option : **3**

Q.79 In the context of Relational Algebra of Database Management System, which of the following is a symbol JOIN operation?

Ans

✗ 1. 

✗ 2. 

✓ 3. 

✗ 4. 

Question ID : **630680515575**
Option 1 ID : **6306802014706**
Option 2 ID : **6306802014708**
Option 3 ID : **6306802014707**
Option 4 ID : **6306802014705**
Status : **Answered**
Chosen Option : **4**

Q.80 Which of the following pair is CORRECT?

I. Associative law : (x*y)*z = x*(y*z)
II. Distributive law : x*(y+z) = (x*y)+(x*z)

Ans

✗ 1. Only II

✓ 2. Both I and II

✗ 3. Only I

✗ 4. Neither I nor II

Question ID : **630680515512**
Option 1 ID : **6306802014454**
Option 2 ID : **6306802014455**
Option 3 ID : **6306802014453**
Option 4 ID : **6306802014456**
Status : **Answered**
Chosen Option : **2**

Q.81 Which view of the quality argues that quality is something you immediately recognize but cannot explicitly define according to David Galvin of the Harvard Business school?

Ans

✗ 1. Manufacturer's view

✗ 2. Product view

✓ 3. Transcendental view

✗ 4. User view

Question ID : **630680515590**
Option 1 ID : **6306802014767**
Option 2 ID : **6306802014768**
Option 3 ID : **6306802014765**
Option 4 ID : **6306802014766**
Status : **Not Answered**
Chosen Option : **--**

Q.82 **Name the phase of the unified process model where customer communication and planning take place.**

Ans
✗ 1. Construction phase
✗ 2. Elaboration phase
✗ 3. Transition phase
✓ 4. Inception phase

Question ID : **630680515586**
Option 1 ID : **6306802014751**
Option 2 ID : **6306802014750**
Option 3 ID : **6306802014752**
Option 4 ID : **6306802014749**
Status : **Answered**
Chosen Option : **1**

Q.83 **Consider 2 dimensional array A[10][15]. Assume that each element takes one memory location and base address of array A is 100. Consider the lower bound of row and column as 0. What is the address of A[i][j] if array A is stored in row major from?**

Ans
✗ 1. i + 15j + 100
✗ 2. 10i + j + 100
✗ 3. i + 10j + 100
✓ 4. 15i + j + 100

Question ID : **630680515526**
Option 1 ID : **6306802014511**
Option 2 ID : **6306802014510**
Option 3 ID : **6306802014512**
Option 4 ID : **6306802014509**
Status : **Answered**
Chosen Option : **3**

Q.84 In the push down automata, transitional function δ is in the form _____.

Ans
✗ 1. $Q \times \Sigma \times \Gamma \rightarrow Q$
✗ 2. $Q \times \Sigma \rightarrow Q$
✓ 3. $Q \times (\Sigma \cup \{\lambda\}) \times \Gamma \rightarrow (Q, \Gamma^*)$
✗ 4. $Q \times \Sigma \rightarrow (Q, \Gamma)$

Question ID : **630680515549**
Option 1 ID : **6306802014604**
Option 2 ID : **6306802014602**
Option 3 ID : **6306802014601**
Option 4 ID : **6306802014603**
Status : **Answered**
Chosen Option : **2**

Q.85 _____ begins at the vortex of the spiral and concentrate on each component of the software as implemented in source code.

Ans
✗ 1. Integration testing
✗ 2. Validation testing
✗ 3. System testing
✓ 4. Unit testing

Question ID : **630680515588**
Option 1 ID : **6306802014758**
Option 2 ID : **6306802014759**
Option 3 ID : **6306802014760**
Option 4 ID : **6306802014757**
Status : **Answered**
Chosen Option : **2**

Q.86 Which of the following is part of the hierarchical storage system?

I. Cache memory
II. Near-line mass storage devices

Ans
✗ 1. Only I
✗ 2. Neither I nor II
✗ 3. Only II
✓ 4. Both I and II

Question ID : **630680515523**
Option 1 ID : **6306802014497**
Option 2 ID : **6306802014500**
Option 3 ID : **6306802014498**
Option 4 ID : **6306802014499**
Status : **Answered**
Chosen Option : **1**

Q.87 Match the component of software architecture with its roles.

	Component		Role
I	Control component	1	That implements a complete or partial function i.e. required by the customer
II	Problem domain component	2	Responsible for function that support the processing required in the problem domain
III	Infrastructure component	3	Co-ordinate the invocation of all other problem domain components

Ans
✗ 1. I – 3; II – 2; III – 1
✗ 2. I – 1; II – 3; III – 2
✓ 3. I – 3; II – 1; III – 2
✗ 4. I – 1; II – 2; III – 3

Question ID : **630680515587**
Option 1 ID : **6306802014753**
Option 2 ID : **6306802014756**
Option 3 ID : **6306802014755**
Option 4 ID : **6306802014754**
Status : **Not Answered**
Chosen Option : **--**

Q.88 Which of the following is the mostly used activation function in the area of deep learning?

Ans
✔ 1. Rectified linear unit function
✘ 2. Identity function
✘ 3. Step function
✘ 4. Sigmoid function

Question ID : **630680515600**
Option 1 ID : **6306802014805**
Option 2 ID : **6306802014807**
Option 3 ID : **6306802014806**
Option 4 ID : **6306802014808**
Status : **Not Answered**
Chosen Option : **--**

Q.89 Which of the following is NOT part of the mechanical diagram of the Turing machine?

Ans
✔ 1. Queue
✘ 2. Finite control
✘ 3. Input tape
✘ 4. Read-write head

Question ID : **630680515550**
Option 1 ID : **6306802014608**
Option 2 ID : **6306802014607**
Option 3 ID : **6306802014605**
Option 4 ID : **6306802014606**
Status : **Answered**
Chosen Option : **1**

Q.90 Dot-matrix printers are character printers that print _____ character at a time.

Ans
✔ 1. one
✘ 2. three
✘ 3. two
✘ 4. four

Question ID : **630680515522**
Option 1 ID : **6306802014493**
Option 2 ID : **6306802014495**
Option 3 ID : **6306802014494**
Option 4 ID : **6306802014496**
Status : **Answered**
Chosen Option : **1**

Q.91 Three unbiased dices are thrown, what is the probability of getting a sum of at least 11?

Ans
✗ 1. 1/2
✗ 2. 13/36
✗ 3. 1/3
✓ 4. 11/36

Question ID : **630680515607**
Option 1 ID : **6306802014834**
Option 2 ID : **6306802014836**
Option 3 ID : **6306802014833**
Option 4 ID : **6306802014835**
Status : **Answered**
Chosen Option : **2**

Q.92 _____ acts as a high-speed buffer between CPU and main memory and computer systems use it to store temporarily very active data and instructions during processing.

Ans
✗ 1. EPROM
✗ 2. Flash memory
✗ 3. PROM
✓ 4. Cache memory

Question ID : **630680515519**
Option 1 ID : **6306802014482**
Option 2 ID : **6306802014484**
Option 3 ID : **6306802014483**
Option 4 ID : **6306802014481**
Status : **Answered**
Chosen Option : **4**

Q.93 Which of the following statement is correct regarding complements?

I. Complements are used in digital computers for simplifying the subtraction operation and for logical manipulations.
II. There are two types of complements for each base-r system: the r's complement and (r-1)'s complement.

Ans
✓ 1. Both I and II
✗ 2. Only I
✗ 3. Neither I nor II
✗ 4. Only II

Question ID : **630680515511**
Option 1 ID : **6306802014451**
Option 2 ID : **6306802014449**
Option 3 ID : **6306802014452**
Option 4 ID : **6306802014450**
Status : **Answered**
Chosen Option : **1**

Q.94 Which of the following statement is CORRECT regarding FLIP-FLOPS?

I. A FLIP-FLOP circuit can maintain a binary state indefinitely (as long as power is applied) until directed by an input signal to switch states.
II. The major differences among various types of FLIP-FLOPS are in the number of inputs they possess and in the manner in which the inputs affect the binary state.

Ans
✗ 1. Only II
✗ 2. Neither I nor II
✗ 3. Only I
✓ 4. Both I and II

Question ID : **630680515517**
Option 1 ID : **6306802014474**
Option 2 ID : **6306802014476**
Option 3 ID : **6306802014473**
Option 4 ID : **6306802014475**
Status : **Not Answered**
Chosen Option : **--**

Q.95 Which of the following formula is used to calculate the sensitivity of a model?

Ans
✗ 1. $\frac{FP}{TP+FN}$
✗ 2. $\frac{TN}{TP+FN}$
✓ 3. $\frac{TP}{TP+FN}$
✗ 4. $\frac{FN}{TP+FN}$

Question ID : **630680515599**
Option 1 ID : **6306802014804**
Option 2 ID : **6306802014801**
Option 3 ID : **6306802014803**
Option 4 ID : **6306802014802**
Status : **Not Answered**
Chosen Option : **--**

Q.96 Match the machine learning technique with its way of working.

	Machine learning type		Methods
I	Supervised learning	1	Utilizes data that is not labelled and attempts to find patterns by clustering similar objects together
II	Unsupervised learning	2	Work on the principle of reward and punishment
III	Reinforcement	3	Utilizes a labelled dataset

Ans
✗ 1. I – 1; II – 3; III – 2
✗ 2. I – 1; II – 2; III – 3
✗ 3. I – 3; II – 2; III – 1
✓ 4. I – 3; II – 1; III – 2

Question ID : **630680515593**
Option 1 ID : **6306802014779**
Option 2 ID : **6306802014778**
Option 3 ID : **6306802014777**
Option 4 ID : **6306802014780**
Status : **Not Answered**
Chosen Option : --

Q.97 If w : x : y = 3 : 5 : 2 and y : z = 2 : 5, then what is the value of w : x : y : z?

Ans
✗ 1. 2 : 5 : 2 : 5
✗ 2. 4 : 5 : 3 : 5
✓ 3. 3 : 5 : 2 : 5
✗ 4. 3 : 5 : 2 : 4

Question ID : **630680515602**
Option 1 ID : **6306802014815**
Option 2 ID : **6306802014816**
Option 3 ID : **6306802014814**
Option 4 ID : **6306802014813**
Status : **Answered**
Chosen Option : **3**

Q.98 In context to Database management system which of the following is CORRECT regarding query by example?

I. A Query by example form collects all information from a user for composing query language statements for search criterion.
II. Query by example relieves users from remembering query language keywords and using them with correct syntax to form quires.

Ans
✗ 1. Only I
✗ 2. Neither I nor II
✓ 3. Both I and II
✗ 4. Only II

Question ID : **630680515571**
Option 1 ID : **6306802014689**
Option 2 ID : **6306802014692**
Option 3 ID : **6306802014691**
Option 4 ID : **6306802014690**
Status : **Answered**
Chosen Option : **1**

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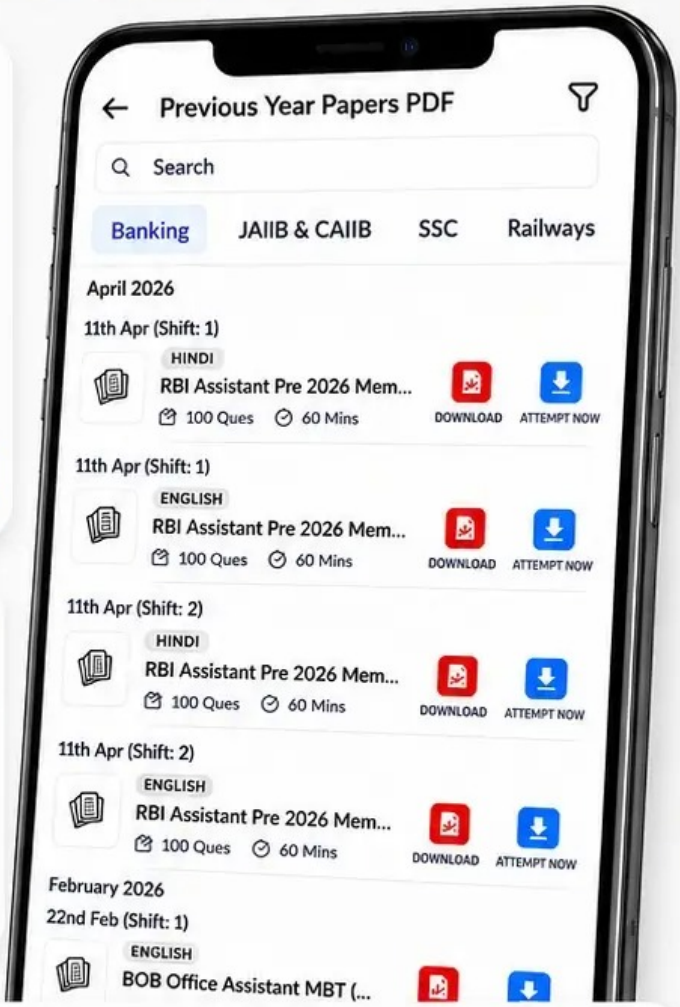
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Q.99 Which of the following is NOT the necessary condition for the deadlock?

Ans
✔ 1. Preemption
✘ 2. Circular wait
✘ 3. Mutual exclusion
✘ 4. Hold and wait

Question ID : **630680515565**
Option 1 ID : **6306802014667**
Option 2 ID : **6306802014668**
Option 3 ID : **6306802014665**
Option 4 ID : **6306802014666**
Status : **Answered**
Chosen Option : **1**

Q.100 Which of the following statement is CORRECT regarding Entropy of which is a measurement the uncertainty in data?

I. Low entropy indicates that the data labels are quite uniform.
II. High entropy means the labels are in chaos.

Ans
✔ 1. Both I and II
✘ 2. Only II
✘ 3. Neither I nor II
✘ 4. Only I

Question ID : **630680515597**
Option 1 ID : **6306802014795**
Option 2 ID : **6306802014794**
Option 3 ID : **6306802014796**
Option 4 ID : **6306802014793**
Status : **Answered**
Chosen Option : **2**