INTELLIGENCE BUREAU

(Ministry of Home Affairs)

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Section : **General Mental Ability**

Q.1 **A, B, C, D, E and F live on six different floors of the same building. The lowermost floor in the building is numbered 1, the floor above it, number 2 and so on till the topmost floor is numbered 6. C lives on a floor which is a prime number. The product of floors on which C and A live is 8. D lives immediately above E. The sum of floors on which A and B lives is 7. How many people live above E?**

Ans ✗ 1. 4

✔ 2. 1

✗ 3. 2

✗ 4. 3

Question ID : **441009864290**
Option 1 ID : **4410093410263**
Option 2 ID : **4410093410260**
Option 3 ID : **4410093410261**
Option 4 ID : **4410093410262**
Status : **Answered**
Chosen Option : **2**

Q.2 **What should come in place of the question mark (?) in the given series?**

94 104 119 139 164 ?

Ans ✗ 1. 196

✓ 2. 194

✗ 3. 193

✗ 4. 195

Question ID : **441009355712**
Option 1 ID : **4410091388959**
Option 2 ID : **4410091388956**
Option 3 ID : **4410091388957**
Option 4 ID : **4410091388958**
Status : **Answered**
Chosen Option : **2**

Q.3 **Select the set in which the numbers are related in the same way as are the numbers of the following sets.**
(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

(1, 26, 8)
(29, 106, 16)

Ans ✗ 1. (50, 132, 12)

✗ 2. (48, 104, 4)

✗ 3. (15, 38, 4)

✓ 4. (4, 68, 20)

Question ID : **441009355802**
Option 1 ID : **4410091389302**
Option 2 ID : **4410091389301**
Option 3 ID : **4410091389303**
Option 4 ID : **4410091389300**
Status : **Answered**
Chosen Option : **2**

Q.4 **Refer to the given letter series and answer the question that follows.**
Counting to be done from left to right only.

(Left) T Y H G U K S D B F C X I M R E Q Z O W A (Right)

How many such consonants are there, each of which is immediately
preceded by a vowel and also immediately followed by a vowel?

Ans ✗ 1. None

✗ 2. Three

✓ 3. One

✗ 4. Two

Question ID : **441009864295**
Option 1 ID : **4410093410280**
Option 2 ID : **4410093410283**
Option 3 ID : **4410093410281**
Option 4 ID : **4410093410282**
Status : **Answered**
Chosen Option : **4**

Q.5 **What should come in place of the question mark (?) in the given series?**

70 71 73 77 85 ?

Ans ✗ 1. 103

✓ 2. 101

✗ 3. 100

✗ 4. 102

Question ID : **441009355723**
Option 1 ID : **4410091388993**
Option 2 ID : **4410091388992**
Option 3 ID : **4410091388995**
Option 4 ID : **4410091388994**
Status : **Answered**
Chosen Option : **3**

Q.6 **7 is related to 54 following a certain logic. Following the same logic, 5 is related to 30. To which of the following is 3 related, following the same logic? (NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding to/subtracting from/multiplying with 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)**

Ans ✔ 1. 14

✘ 2. 16

✘ 3. 12

✘ 4. 15

Question ID : **441009355821**
Option 1 ID : **4410091389380**
Option 2 ID : **4410091389381**
Option 3 ID : **4410091389382**
Option 4 ID : **4410091389383**
Status : **Answered**
Chosen Option : **4**

Q.7 **A, B, C, D, E, F and G are sitting in a straight line facing North. Only 2 people sit to the left of D. Only 3 people sit between F and B, neither of whom sits on the extreme ends. A sits immediately to the right of C. G sits immediately to the left of F. How many people sit to the right of A?**

Ans ✘ 1. 3

✘ 2. 1

✘ 3. 4

✔ 4. 2

Question ID : **441009864102**
Option 1 ID : **4410093409514**
Option 2 ID : **4410093409512**
Option 3 ID : **4410093409515**
Option 4 ID : **4410093409513**
Status : **Answered**
Chosen Option : **4**

Q.8 Which of the given letter-number clusters will replace the question mark (?) in the following series to make it logically complete?

DGK33 EHL42 FIM51 GJN60 ?

Ans ✘ 1. HKP68

✘ 2. HKP69

✘ 3. HKO68

✔ 4. HKO69

> Question ID : **441009864343**
> Option 1 ID : **4410093410475**
> Option 2 ID : **4410093410474**
> Option 3 ID : **4410093410473**
> Option 4 ID : **4410093410472**
> Status : **Answered**
> Chosen Option : **2**

Q.9 In a certain code language, 'FEAR' is coded as '3157' and 'AIDS' is coded as '2416'. How is 'A' coded in that language?

Ans ✘ 1. 5

✔ 2. 1

✘ 3. 6

✘ 4. 2

> Question ID : **441009864310**
> Option 1 ID : **4410093410342**
> Option 2 ID : **4410093410340**
> Option 3 ID : **4410093410343**
> Option 4 ID : **4410093410341**
> Status : **Answered**
> Chosen Option : **4**

Q.10 In a certain code language,
A+ B means 'A is the sister of B',
A – B means 'A is the brother of B',
A & B means 'A is the wife of B' and
A $ B means ' A is the father of B'.
How is R related to D if 'R-A$S+E&D '?

Ans ✗ 1. Brother

✗ 2. Father

✓ 3. Wife's father's brother

✗ 4. Wife's father's father

Question ID : **441009346897**
Option 1 ID : **4410091353662**
Option 2 ID : **4410091353661**
Option 3 ID : **4410091353659**
Option 4 ID : **4410091353660**
Status : **Answered**
Chosen Option : **3**

Q.11 Select the triad which follows the same pattern as that followed by the two triads given below. Both triads follow the same pattern.

GQ-JS-MO
IS-LU-OQ

Ans ✗ 1. CL-EM-HI

✗ 2. BL-EN-HI

✓ 3. BL-EN-HJ

✗ 4. CL-EN-HI

Question ID : **441009864093**
Option 1 ID : **4410093409479**
Option 2 ID : **4410093409477**
Option 3 ID : **4410093409476**
Option 4 ID : **4410093409478**
Status : **Answered**
Chosen Option : **2**

Q.12 **Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?**
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. LTB

✗ 2. OWE

✓ 3. GLP

✗ 4. DLT

Question ID : **441009346914**
Option 1 ID : **4410091353729**
Option 2 ID : **4410091353728**
Option 3 ID : **4410091353727**
Option 4 ID : **4410091353730**
Status : **Answered**
Chosen Option : **2**

Q.13 **PAID is related to BMUP in a certain way based on the English alphabetical order. In the same way, LWEZ is related to XIQL. To which of the given options is VGOJ related, following the same logic?**

Ans ✗ 1. SAVH

✓ 2. HSAV

✗ 3. HAVS

✗ 4. SAVD

Question ID : **441009346922**
Option 1 ID : **4410091353762**
Option 2 ID : **4410091353759**
Option 3 ID : **4410091353760**
Option 4 ID : **4410091353761**
Status : **Answered**
Chosen Option : **2**

Q.14 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−', then what will come in place of the question mark (?) in the following equation?

9 B 3 D 24 A 6 C 3 = ? D 5

Ans ✓ 1. 31

 ✗ 2. 41

 ✗ 3. 35

 ✗ 4. 38

Question ID : **44100945784**
Option 1 ID : **441009182327**
Option 2 ID : **441009182324**
Option 3 ID : **441009182326**
Option 4 ID : **441009182325**
Status : **Marked For Review**
Chosen Option : **1**

Q.15 In this question, a statement is given followed by two courses of action, numbered I and II. You must assume everything in the statement to be true, and on the basis of the information given in the statement, decide which of the given courses of action logically follow(s) for pursuing.

Statement:
A large number of people in City Y is being diagnosed with respiratory problems due to increasing levels of air pollution.

Courses of Action:
I. The government should introduce stricter emission norms for vehicles and industries in City Y.
II. All residents should be advised to move out of City Y immediately.

Ans ✗ 1. Neither I nor II follows.

 ✓ 2. Only I follows.

 ✗ 3. Only II follows.

 ✗ 4. Both I and II follow.

Question ID : **441009355202**
Option 1 ID : **4410091386904**
Option 2 ID : **4410091386902**
Option 3 ID : **4410091386903**
Option 4 ID : **4410091386905**
Status : **Answered**
Chosen Option : **2**

Q.16 HUNT is related to VIBH in a certain way based on the English alphabetical order. In the same way, LYRX is related to ZMFL. To which of the following options is BOHN related, following the same logic?

Ans ✘ 1. PBVF

✘ 2. POIL

✘ 3. PCVF

✔ 4. PCVB

Question ID : **441009347258**
Option 1 ID : **4410091355119**
Option 2 ID : **4410091355121**
Option 3 ID : **4410091355120**
Option 4 ID : **4410091355118**
Status : **Answered**
Chosen Option : **3**

Q.17 Each of F, G, H, I, U, V and W has an exam on a different day of a week starting from Monday and ending on Sunday of the same week.
F has an exam on Thursday. I has an exam on one of the days after G and on one of the days before H. U has an exam on one of the days after V but on one of the days before W. V has an exam on one of the days after F.
How many people have exams between U and I?

Ans ✘ 1. Two

✘ 2. Four

✔ 3. Three

✘ 4. One

Question ID : **441009346863**
Option 1 ID : **4410091353518**
Option 2 ID : **4410091353520**
Option 3 ID : **4410091353519**
Option 4 ID : **4410091353517**
Status : **Answered**
Chosen Option : **1**

Q.18 If 'A' stands for '÷', 'B' stands for '×', 'C' stands for '+' and 'D' stands for '−',
what will come in place of the question mark (?) in the following equation?

34 D 50 B 39 A 39 C 22 = ?

Ans   ✗ 1. 8

✗ 2. 4

✓ 3. 6

✗ 4. 7

Question ID : **441009355757**
Option 1 ID : **4410091389125**
Option 2 ID : **4410091389126**
Option 3 ID : **4410091389124**
Option 4 ID : **4410091389127**
Status : **Answered**
Chosen Option : **3**

Q.19 In a certain code language, 'DIVE' is coded as '9815' and 'WIDE' is coded as
'5108'. What is the code for 'W' in that language?

Ans   ✗ 1. 8

✓ 2. 0

✗ 3. 1

✗ 4. 9

Question ID : **441009346880**
Option 1 ID : **4410091353594**
Option 2 ID : **4410091353591**
Option 3 ID : **4410091353593**
Option 4 ID : **4410091353592**
Status : **Marked For Review**
Chosen Option : **4**

Q.20 In a certain code language,

A + B means 'A is the son of B',
A – B means 'A is the brother of B',
A @ B means 'A is the wife of B', and
A % B means 'A is the father of B'.

Based on the above, how is T related to K if 'T + Y – B @ G % K'?

Ans ✗ 1. Son

✓ 2. Mother's brother's son

✗ 3. Mother's brother

✗ 4. Brother's son

Question ID : **441009361528**
Option 1 ID : **4410091412258**
Option 2 ID : **4410091412255**
Option 3 ID : **4410091412256**
Option 4 ID : **4410091412257**
Status : **Answered**
Chosen Option : **2**

Q.21 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which letter-cluster pair DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)

Ans ✗ 1. NR - MQ

✓ 2. IM - HK

✗ 3. PT - OS

✗ 4. FJ - EI

Question ID : **441009747827**
Option 1 ID : **4410092945074**
Option 2 ID : **4410092945076**
Option 3 ID : **4410092945073**
Option 4 ID : **4410092945075**
Status : **Answered**
Chosen Option : **2**

Q.22 Refer to the given number series and answer the question that follows. Counting to be done from left to right only. All numbers are single-digit numbers.

(Left) 6 6 7 8 5 4 1 6 3 6 5 8 3 3 6 8 8 3 9 1 9 (Right)

How many such odd numbers are there, each of which is immediately preceded by an odd number and also immediately followed by an even number?

Ans ✖ 1. Two

✖ 2. Four

✖ 3. Three

✔ 4. One

Question ID : **441009346934**
Option 1 ID : **4410091353808**
Option 2 ID : **4410091353810**
Option 3 ID : **4410091353809**
Option 4 ID : **4410091353807**
Status : **Not Answered**
Chosen Option : **--**

Q.23 This question consists of a statement followed by two arguments I and II. Read the statement and the arguments carefully and select the most appropriate answer from the given options.
Statement:
Plastic bags should be completely banned.
Arguments:
I. Plastic bags are non-biodegradable and cause pollution.
II. Plastic bags are cheaper and more convenient for shopkeepers.

Ans ✖ 1. I weakens while II strengthens the statement.

✔ 2. II weakens while I strengthens the statement.

✖ 3. Both I and II weaken the statement.

✖ 4. Both I and II strengthen the statement.

Question ID : **441009346947**
Option 1 ID : **4410091353859**
Option 2 ID : **4410091353860**
Option 3 ID : **4410091353861**
Option 4 ID : **4410091353862**
Status : **Answered**
Chosen Option : **2**

Q.24 What will come in the place of the question mark (?) in the following equation, if '+' and '−' are interchanged and '×' and '÷' are interchanged?

41 × 42 ÷ 42 − 47 + 3 = ?

Ans ✗ 1. 83

✗ 2. 86

✗ 3. 87

✓ 4. 85

Question ID : **441009355786**
Option 1 ID : **4410091389247**
Option 2 ID : **4410091389246**
Option 3 ID : **4410091389245**
Option 4 ID : **4410091389244**
Status : **Marked For Review**
Chosen Option : **2**

Q.25 In this question, a statement is given followed by two courses of action, numbered I and II. You must assume everything in the statement to be true, and on the basis of the information given in the statement, decide which of the given courses of action logically follow(s) for pursuing.

Statement:
Many consumers have complained about adulteration in milk supplied by local vendors.

Courses of Action:
I. Regular quality checks should be conducted on milk samples from vendors.
II. All local milk vendors should be banned from selling milk.

Ans ✓ 1. Only I follows.

✗ 2. Neither I nor II follows.

✗ 3. Both I and II follow.

✗ 4. Only II follows.

Question ID : **441009355221**
Option 1 ID : **4410091386982**
Option 2 ID : **4410091386984**
Option 3 ID : **4410091386985**
Option 4 ID : **4410091386983**
Status : **Answered**
Chosen Option : **3**

Section : **Questions based on combinations of subject as per essential qualification**

Q.1 **Which of the following is the main difference between LTE-FDD and LTE-TDD?**

Ans ✗ 1. LTE-FDD uses a single frequency and LTE-TDD uses two frequencies.

✓ 2. LTE-FDD uses two frequencies and LTE-TDD uses a single frequency.

✗ 3. LTE-FDD uses a single frequency and LTE-TDD uses a single frequency.

✗ 4. LTE-FDD uses two frequencies and LTE-TDD uses two frequencies.

Question ID : **441009874306**
Option 1 ID : **4410093450702**
Option 2 ID : **4410093450704**
Option 3 ID : **4410093450701**
Option 4 ID : **4410093450703**
Status : **Answered**
Chosen Option : **1**

Q.2 **In a series L-C circuit, if the frequency is increased above the resonant frequency, the circuit behaves:**

Ans ✗ 1. as a short circuit

✓ 2. as an inductive circuit

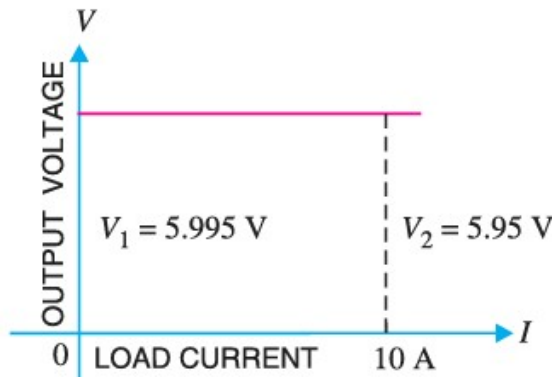✗ 3. as a capacitive circuit

✗ 4. as a resistive circuit

Question ID : **4410091002106**
Option 1 ID : **4410093960132**
Option 2 ID : **4410093960131**
Option 3 ID : **4410093960129**
Option 4 ID : **4410093960130**
Status : **Answered**
Chosen Option : **3**

Q.3 **Which of the following instructions in a PLC programme is used to hold the output in the ON state even after the input is turned OFF?**

Ans ✓ 1. Latch

✗ 2. Timer

✗ 3. Counter

✗ 4. Reset

Question ID : **441009822174**
Option 1 ID : **4410093242811**
Option 2 ID : **4410093242810**
Option 3 ID : **4410093242812**
Option 4 ID : **4410093242813**
Status : **Marked For Review**
Chosen Option : **3**

Q.4 **The graph depicted in the given figure illustrates the characteristics of a _____ circuit.**

Ans ✔ 1. constant voltage source

✘ 2. constant current source

✘ 3. differentiator

✘ 4. ramp generator

Question ID : **441009850907**
Option 1 ID : **4410093356530**
Option 2 ID : **4410093356531**
Option 3 ID : **4410093356533**
Option 4 ID : **4410093356532**
Status : **Answered**
Chosen Option : **3**

Q.5 **Which mechanism is most effective for enforcing protection domains?**

Ans ✘ 1. CAPTCHAs

✘ 2. User training programs

✘ 3. Password complexity policies

✔ 4. Network segmentation

Question ID : **441009462718**
Option 1 ID : **4410091809421**
Option 2 ID : **4410091809422**
Option 3 ID : **4410091809419**
Option 4 ID : **4410091809420**
Status : **Answered**
Chosen Option : **1**

Q.6 **What does the bias-variance tradeoff describe?**

Ans ✔ 1. The balance between model simplicity and complexity

✘ 2. The size of the training set

✘ 3. The speed of gradient descent convergence

✘ 4. The number of features in a dataset

Question ID : **441009461118**
Option 1 ID : **4410091803157**
Option 2 ID : **4410091803160**
Option 3 ID : **4410091803158**
Option 4 ID : **4410091803159**
Status : **Answered**
Chosen Option : **1**

Q.7 **In a control system block diagram, two blocks $G_1(s)$ and $G_2(s)$ are connected in cascade. What is the equivalent transfer function of their combination?**

Ans ✘ 1. G1(s)/G2(s)

✘ 2. G1(s) − G2(s)

✔ 3. G1(s)·G2(s)

✘ 4. G1(s) + G2(s)

Question ID : **441009800006**
Option 1 ID : **4410093154104**
Option 2 ID : **4410093154102**
Option 3 ID : **4410093154103**
Option 4 ID : **4410093154101**
Status : **Answered**
Chosen Option : **1**

Q.8 **Which of the following statements is correct?**
S1: Switched combining avoids deep fades by switching to antennas with better signal.
S2: Disadvantage of the switched combining in a wireless channel is the Possible delay during switching between antennas.

Ans ✔ 1. S1 and S2 both

✘ 2. S2 only

✘ 3. Neither S1 nor S2

✘ 4. S1 only

Question ID : **441009874322**
Option 1 ID : **4410093450767**
Option 2 ID : **4410093450766**
Option 3 ID : **4410093450768**
Option 4 ID : **4410093450765**
Status : **Answered**
Chosen Option : **2**

Q.9 **What is the output of the following python code?**

for i in range(5):
if i == 3:
break
print(i)

Ans ✗ 1. 0 1 2 3 4

✓ 2. 0 1 2

✗ 3. 1 2 3

✗ 4. 0 1 2 3

Question ID : **441009462664**
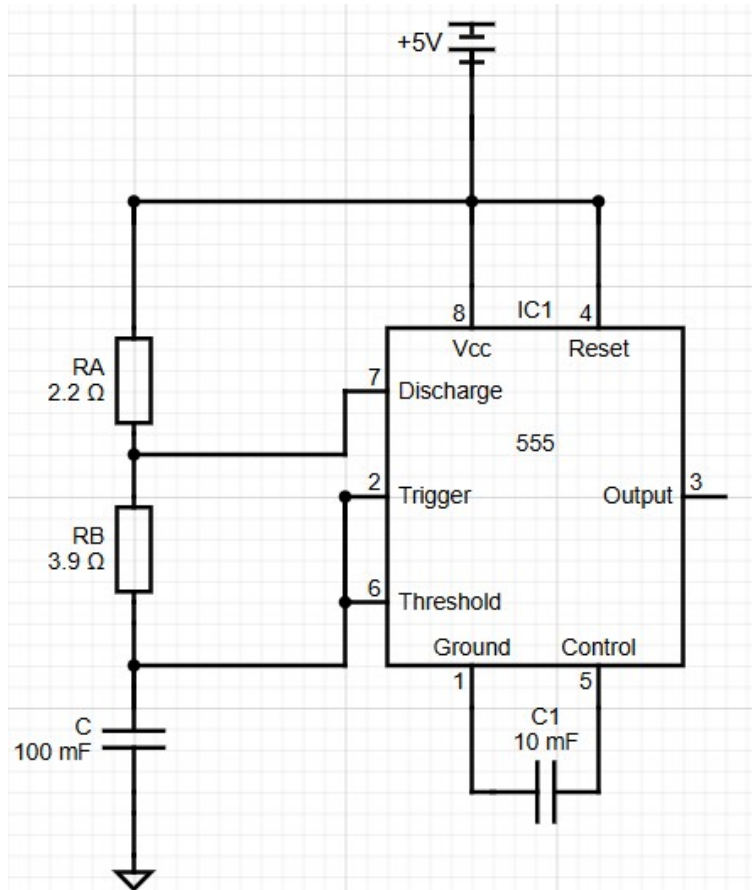Option 1 ID : **4410091809203**
Option 2 ID : **4410091809204**
Option 3 ID : **4410091809205**
Option 4 ID : **4410091809206**
Status : **Answered**
Chosen Option : **2**

Q.10 In a 555 -timer configured as an astable multivibrator, as shown in the given figure, which equation is used to determine the duration of the output signal when it is low?

Ans

✗ 1. $T_{low} = 0.7 R_A C$

✗ 2. $T_{low} = 0.7(R_A + R_B).C$

✔ 3. $T_{low} = 0.7 R_B C$

✗ 4. $T_{low} = \dfrac{1.44}{(R_A + R_B).\ C}$

Question ID : **441009851014**

Option 1 ID : **4410093357031**

Option 2 ID : **4410093357032**

Option 3 ID : **4410093357030**

Option 4 ID : **4410093357033**

Status : **Answered**

Chosen Option : **4**

Q.11 **Which of the following statements about Python dictionaries is true?**

Ans ✗ 1. Dictionaries can have duplicate keys

✗ 2. Dictionary values must be unique

✗ 3. Dictionary keys can be mutable objects

✓ 4. Dictionary keys must be immutable

Question ID : **441009461903**
Option 1 ID : **4410091806034**
Option 2 ID : **4410091806035**
Option 3 ID : **4410091806033**
Option 4 ID : **4410091806036**
Status : **Answered**
Chosen Option : **2**

Q.12 **What is the purpose of a subnet mask?**

Ans ✗ 1. To encrypt IP packets

✗ 2. To convert private IPs to public IPs

✗ 3. To identify multicast groups

✓ 4. To differentiate the network and host portions of an IP address

Question ID : **441009389871**
Option 1 ID : **4410091525069**
Option 2 ID : **4410091525071**
Option 3 ID : **4410091525072**
Option 4 ID : **4410091525070**
Status : **Answered**
Chosen Option : **4**

Q.13 **Which of the following statements about the base station is correct?**
S1: The primary function of a base station in a cellular network is to provide radio communication with mobile devices.
S2: Base Transceiver Station (BTS) is usually part of a base station in a cellular network.
S3: In LTE architecture, the base station is called an eNodeB.

Ans ✗ 1. S1 and S2 only

✓ 2. S1, S2 and S3

✗ 3. S2 and S3 only

✗ 4. S1 and S3 only

Question ID : **441009862223**
Option 1 ID : **4410093402028**
Option 2 ID : **4410093402026**
Option 3 ID : **4410093402029**
Option 4 ID : **4410093402027**
Status : **Answered**
Chosen Option : **2**

Q.14 **Which of the following statements about a serial adder is true?**

Ans ✗ 1. It requires more hardware and adds bits in parallel.

✗ 2. It performs addition without carry storage.

✗ 3. It requires separate adders for each bit of the operands.

✓ 4. It uses a single full adder and a clock to process one bit at a time.

Question ID : **441009751445**
Option 1 ID : **4410092959710**
Option 2 ID : **4410092959713**
Option 3 ID : **4410092959712**
Option 4 ID : **4410092959711**
Status : **Answered**
Chosen Option : **4**

Q.15 **Which of the following statements about decision trees is FALSE?**

Ans ✓ 1. They require feature scaling.

✗ 2. They are prone to overfitting.

✗ 3. They can handle both regression and classification.

✗ 4. They split data based on impurity measures (e.g., Gini index).

Question ID : **441009461106**
Option 1 ID : **4410091803111**
Option 2 ID : **4410091803110**
Option 3 ID : **4410091803109**
Option 4 ID : **4410091803112**
Status : **Answered**
Chosen Option : **4**

Q.16 **Which of the following statements correctly describes virtual circuit switching?**

Ans ✗ 1. No path is determined in advance; switching decisions are made per packet.

✗ 2. A dedicated path is established and maintained for the entire communication.

✗ 3. Each packet takes a completely independent route to the destination.

✓ 4. A logical path is established before transmission, but resources are shared.

Question ID : **441009655758**
Option 1 ID : **4410092577336**
Option 2 ID : **4410092577333**
Option 3 ID : **4410092577334**
Option 4 ID : **4410092577335**
Status : **Answered**
Chosen Option : **2**

Q.17 **Which of the following statements is correct?**
S1: In on-off line coding, 1 is transmitted by a pulse and 0 is transmitted by no pulse.
S2: In polar line coding, 1 is transmitted by a pulse and 0 is transmitted by negative of pulse.

Ans ✓ 1. Both S1 and S2

✗ 2. Neither S1 nor S2

✗ 3. S1 only

✗ 4. S2 only

Question ID : **441009748004**
Option 1 ID : **4410092945773**
Option 2 ID : **4410092945776**
Option 3 ID : **4410092945774**
Option 4 ID : **4410092945775**
Status : **Answered**
Chosen Option : **3**

Q.18 **What is the minimum number of 1-to-2 DEMUX units required to implement a 1-to-8 DEMUX?**

Ans ✗ 1. Three

✗ 2. Two

✗ 3. Four

✓ 4. Seven

Question ID : **441009644501**
Option 1 ID : **4410092532196**
Option 2 ID : **4410092532195**
Option 3 ID : **4410092532197**
Option 4 ID : **4410092532198**
Status : **Answered**
Chosen Option : **4**

Q.19 **Which of the following is NOT a function of IMAP (Internet Mail Access Protocol)?**

Ans ✗ 1. Organising emails into server-side folders

✗ 2. Searching emails on the server

✓ 3. Sending emails to recipients

✗ 4. Flagging emails as read/unread

Question ID : **441009390024**
Option 1 ID : **4410091525685**
Option 2 ID : **4410091525686**
Option 3 ID : **4410091525687**
Option 4 ID : **4410091525688**
Status : **Answered**
Chosen Option : **2**

Q.20 **Which of the following statements about Cell Breathing in wireless communication is correct?**
S1: It is the variation in cell coverage due to traffic load.
S2: Cell breathing is a phenomenon primarily observed in CDMA.
S3: The primary cause of cell breathing is increase in system load.

Ans ✗ 1. S1 and S3 only

✗ 2. S2 and S3 only

✓ 3. S1, S2 and S3

✗ 4. S1 and S2 only

Question ID : **441009874331**
Option 1 ID : **4410093450802**
Option 2 ID : **4410093450803**
Option 3 ID : **4410093450801**
Option 4 ID : **4410093450804**
Status : **Answered**
Chosen Option : **2**

Q.21 **Which combination of gates is used to implement A + B' (' indicates complement)?**

Ans ✗ 1. AND and NOT

✓ 2. OR and NOT

✗ 3. OR and AND

✗ 4. XOR and NOT

Question ID : **441009644573**
Option 1 ID : **4410092532477**
Option 2 ID : **4410092532476**
Option 3 ID : **4410092532475**
Option 4 ID : **4410092532478**
Status : **Answered**
Chosen Option : **1**

Q.22 **Which of the following statements about FHSS spread spectrum technique is True?**
Statement I: FHSS is a method of transmitting radio signals by rapidly switching the carrier frequency among many distinct frequencies within a wide band in a pseudorandom sequence.
Statement II: The receiver and the transmitter follow the different hopping pattern to enhance data security.

Ans ✗ 1. Neither statements I nor II are true.

✓ 2. Only statement I is true.

✗ 3. Both statements I and II are true.

✗ 4. Only statement II is true.

Question ID : **441009452865**
Option 1 ID : **4410091770132**
Option 2 ID : **4410091770129**
Option 3 ID : **4410091770131**
Option 4 ID : **4410091770130**
Status : **Answered**
Chosen Option : **2**

Q.23 **What is the purpose of pooling layers in CNNs?**

Ans ✗ 1. To introduce non-linearity

✗ 2. To normalise pixel values

✓ 3. To reduce spatial dimensions

✗ 4. To add more trainable parameters

Question ID : **441009460858**
Option 1 ID : **4410091802129**
Option 2 ID : **4410091802130**
Option 3 ID : **4410091802127**
Option 4 ID : **4410091802128**
Status : **Answered**
Chosen Option : **2**

Q.24 **Voltage-series feedback in amplifiers _____.**

Ans ✓ 1. increases input impedance but decreases output impedance

✗ 2. decreases input impedance but increases output impedance

✗ 3. increases both input and output impedance

✗ 4. decreases both input and output impedance

Question ID : **4410091074968**
Option 1 ID : **4410094237372**
Option 2 ID : **4410094237373**
Option 3 ID : **4410094237370**
Option 4 ID : **4410094237371**
Status : **Answered**
Chosen Option : **3**

Q.25 **In a clipping circuit, Zener diodes are used to:**

Ans ✗ 1. filter noise

✓ 2. limit signal amplitude

✗ 3. shift DC levels

✗ 4. amplify signals

Question ID : **4410091026557**
Option 1 ID : **4410094057805**
Option 2 ID : **4410094057804**
Option 3 ID : **4410094057806**
Option 4 ID : **4410094057803**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.26 **What is the primary function of an analogue input module in a PLC system?**

Ans ✗ 1. To store control logic programmes

✗ 2. To send ON/OFF signals to actuators

✗ 3. To convert digital signals into analogue signals

✓ 4. To convert analogue signals from field devices into digital values for the CPU

Question ID : **441009822159**
Option 1 ID : **4410093242753**
Option 2 ID : **4410093242752**
Option 3 ID : **4410093242750**
Option 4 ID : **4410093242751**
Status : **Answered**
Chosen Option : **4**

Q.27 **Transform the following sinusoids into phasors.**

v = 10 sin (ωt − 12°)

Ans ✗ 1. $10\angle 102°$

✗ 2. $20\angle -102°$

✓ 3. $10\angle -102°$

✗ 4. $20\angle 102°$

Question ID : **4410091002284**
Option 1 ID : **4410093960824**
Option 2 ID : **4410093960825**
Option 3 ID : **4410093960823**
Option 4 ID : **4410093960826**
Status : **Answered**
Chosen Option : **3**

Q.28 What type of signal does a coaxial cable typically carry?

Ans ✗ 1. Analog signals only

✓ 2. Both analog and digital signals

✗ 3. Digital signals only

✗ 4. Optical signals only

Question ID : **441009515398**
Option 1 ID : **4410092016923**
Option 2 ID : **4410092016924**
Option 3 ID : **4410092016922**
Option 4 ID : **4410092016925**
Status : **Answered**
Chosen Option : **2**

Q.29 In a De Sauty's Bridge experiment, the following values are used:

Standard capacitor, C2 = 0.2 µF
Resistors: R3 = 500 Ω, R4 = 1.5 kΩ

What is the value of the unknown capacitor C1 when the bridge is balanced, where symbols have their usual meaning?

Ans ✓ 1. 0.6 µF

✗ 2. 0.1 µF

✗ 3. 0.4 µF

✗ 4. 0.8 µF

Question ID : **441009945457**
Option 1 ID : **4410093735368**
Option 2 ID : **4410093735366**
Option 3 ID : **4410093735367**
Option 4 ID : **4410093735369**
Status : **Answered**
Chosen Option : **2**

Q.30 Which protocol is primarily used for domain name resolution?

Ans ✗ 1. ICMP

✓ 2. DNS

✗ 3. TCP/IP

✗ 4. HTTP

Question ID : **441009462680**
Option 1 ID : **4410091809268**
Option 2 ID : **4410091809269**
Option 3 ID : **4410091809270**
Option 4 ID : **4410091809267**
Status : **Answered**
Chosen Option : **4**

Q.31 **In the PLC instruction set, which instruction is typically used to retain output status even after power failure?**

Ans ✗ 1. SET

✗ 2. RST

✓ 3. LATCH

✗ 4. OUT

Question ID : **441009822171**
Option 1 ID : **4410093242799**
Option 2 ID : **4410093242800**
Option 3 ID : **4410093242801**
Option 4 ID : **4410093242798**
Status : **Answered**
Chosen Option : **2**

Q.32 **What does a thermocouple use to measure temperature?**

Ans ✗ 1. Null measurement

✓ 2. Differential measurement

✗ 3. Direct measurement

✗ 4. It does not measure temperature.

Question ID : **441009969287**
Option 1 ID : **4410093830284**
Option 2 ID : **4410093830282**
Option 3 ID : **4410093830281**
Option 4 ID : **4410093830283**
Status : **Answered**
Chosen Option : **4**

Q.33 **The number of equations required in node analysis depends on:**

Ans ✗ 1. the number of loops

✗ 2. the number of current sources

✓ 3. the number of essential nodes minus one

✗ 4. the number of voltage sources

Question ID : **441009974405**
Option 1 ID : **4410093850661**
Option 2 ID : **4410093850664**
Option 3 ID : **4410093850662**
Option 4 ID : **4410093850663**
Status : **Answered**
Chosen Option : **3**

Q.34 **What is the basic principle of operation of a solenoid valve?**

Ans ✔ 1. Electromagnetic actuation of a plunger

✖ 2. Pneumatic diaphragm displacement

✖ 3. Thermal expansion of a bimetallic strip

✖ 4. Mechanical gear rotation

Question ID : **441009822051**
Option 1 ID : **4410093242323**
Option 2 ID : **4410093242322**
Option 3 ID : **4410093242325**
Option 4 ID : **4410093242324**
Status : **Answered**
Chosen Option : **2**

Q.35 **Which of the following statements is true about the Python int type?**

Ans ✖ 1. It has a fixed size of 32 bits.

✖ 2. It can represent numbers up to 2^31 - 1.

✔ 3. It has unlimited precision, limited only by available memory.

✖ 4. It cannot represent negative numbers.

Question ID : **441009461875**
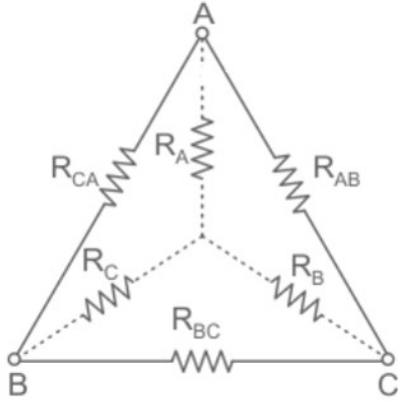Option 1 ID : **4410091805925**
Option 2 ID : **4410091805926**
Option 3 ID : **4410091805927**
Option 4 ID : **4410091805928**
Status : **Answered**
Chosen Option : **3**

Q.36 Find the equivalent delta connection of the circuit in star with resistances R_A = 8 Ω, R_B = 8 Ω, and R_C = 16 Ω, respectively, in the given figure. Find the values of R_{AB}, R_{CA}, and R_{BC}.

Ans ✗ 1. RAB = 30 Ω, RBC = 30 Ω, RCA = 40 Ω

✗ 2. RAB = 40 Ω, RBC = 40 Ω, RCA = 20 Ω

✗ 3. RAB = 20 Ω, RBC = 20 Ω, RCA = 20 Ω

✓ 4. RAB = 20 Ω, RBC = 40 Ω, RCA = 40 Ω

Question ID : **441009975340**
Option 1 ID : **4410093854391**
Option 2 ID : **4410093854392**
Option 3 ID : **4410093854390**
Option 4 ID : **4410093854389**
Status : **Answered**
Chosen Option : **4**

Q.37 In a parallel R-C circuit, what happens to the total current if the frequency increases?

Ans ✗ 1. It remains the same.

✓ 2. It increases.

✗ 3. It becomes zero.

✗ 4. It decreases.

Question ID : **441009977907**
Option 1 ID : **4410093864352**
Option 2 ID : **4410093864350**
Option 3 ID : **4410093864353**
Option 4 ID : **4410093864351**
Status : **Answered**
Chosen Option : **1**

Q.38 **The primary method to reduce ratio error in a current transformer is by:**

Ans ✗ 1. operating above rated current

✓ 2. using a high-permeability core material

✗ 3. increasing the burden impedance

✗ 4. reducing the number of secondary turns

Question ID : **441009962997**
Option 1 ID : **4410093805364**
Option 2 ID : **4410093805362**
Option 3 ID : **4410093805363**
Option 4 ID : **4410093805365**
Status : **Answered**
Chosen Option : **2**

Q.39 **What will be the output of the following code?**

```
my_tuple = (1, 2, [3, 4])
my_tuple[2].append(5)
print(my_tuple)
```

Ans ✗ 1. Error: Tuples are immutable

✓ 2. (1, 2, [3, 4, 5])

✗ 3. (1, 2, [3, 4])

✗ 4. (1, 2, (3, 4, 5))

Question ID : **441009663348**
Option 1 ID : **4410092607442**
Option 2 ID : **4410092607439**
Option 3 ID : **4410092607441**
Option 4 ID : **4410092607440**
Status : **Answered**
Chosen Option : **2**

Q.40 **What will be the output of the following code?**

let x = 0;

if ("0") {
console.log("Hello");
} else {
console.log("Goodbye");
}

Ans ✗ 1. 0

✗ 2. Undefined

✗ 3. Goodbye

✓ 4. Hello

Question ID : **441009512481**
Option 1 ID : **4410092005072**
Option 2 ID : **4410092005073**
Option 3 ID : **4410092005071**
Option 4 ID : **4410092005070**
Status : **Answered**
Chosen Option : **4**

Q.41 **The current-series feedback topology is also known as:**

Ans ✗ 1. series-shunt feedback

✗ 2. shunt-series feedback

✗ 3. shunt-shunt feedback

✓ 4. series-series feedback

Question ID : **4410091074938**
Option 1 ID : **4410094237245**
Option 2 ID : **4410094237244**
Option 3 ID : **4410094237242**
Option 4 ID : **4410094237243**
Status : **Answered**
Chosen Option : **2**

Q.42 **A bridge rectifier uses how many diodes?**

Ans ✗ 1. 1

✗ 2. 2

✓ 3. 4

✗ 4. 3

Question ID : **4410091075056**
Option 1 ID : **4410094237722**
Option 2 ID : **4410094237723**
Option 3 ID : **4410094237725**
Option 4 ID : **4410094237724**
Status : **Answered**
Chosen Option : **2**

Q.43 **Thermal runaway in a common emitter amplifier is prevented by which of the following factors?**

a) Coupling capacitors
b) Emitter resistor (R_e)
c) Base divider network
d) Bypass capacitor

Ans ✗ 1. Only a and b

✓ 2. Only b

✗ 3. Only b and d

✗ 4. Only b and c

Question ID : **4410091058936**
Option 1 ID : **4410094184730**
Option 2 ID : **4410094184729**
Option 3 ID : **4410094184732**
Option 4 ID : **4410094184731**
Status : **Answered**
Chosen Option : **1**

Q.44 **Which XML Schema (XSD) data type represents a date in "YYYY-MM-DD" format?**

Ans ✗ 1. xs:time

✗ 2. xs:string

✗ 3. xs:datetime

✓ 4. xs:date

Question ID : **441009378748**
Option 1 ID : **4410091480649**
Option 2 ID : **4410091480652**
Option 3 ID : **4410091480651**
Option 4 ID : **4410091480650**
Status : **Answered**
Chosen Option : **4**

Q.45 **Which of the following statements is correct?**
S1: A linear block code has the property that the modulo-2 sum of any two
valid codewords is also a valid codeword.
S2: A linear (n, k) block code maps n data bits into k code bits.
S3: (n-k) bits are parity bits.

Ans ✘ 1. S1, S2 and S3

✘ 2. S2 and S3 only

✔ 3. S1 and S3 only

✘ 4. S2 only

Question ID : **441009751375**
Option 1 ID : **4410092959440**
Option 2 ID : **4410092959441**
Option 3 ID : **4410092959438**
Option 4 ID : **4410092959439**
Status : **Marked For Review**
Chosen Option : **1**

Q.46 **In AM demodulation, the _____ signal frequency is converted into**
_____ signal frequency with the help of a mixer circuit.

Ans ✔ 1. radio, intermediate

✘ 2. radio, image

✘ 3. audio, radio

✘ 4. audio, intermediate

Question ID : **441009446317**
Option 1 ID : **4410091743936**
Option 2 ID : **4410091743934**
Option 3 ID : **4410091743935**
Option 4 ID : **4410091743933**
Status : **Answered**
Chosen Option : **1**

Q.47 **Which JavaScript method is used to select an HTML element by its ID?**

Ans ✘ 1. document.findElementById()

✘ 2. document.querySelector()

✘ 3. document.getElementByClass()

✔ 4. document.getElementById()

Question ID : **441009363602**
Option 1 ID : **4410091420665**
Option 2 ID : **4410091420662**
Option 3 ID : **4410091420664**
Option 4 ID : **4410091420663**
Status : **Answered**
Chosen Option : **4**

Q.48 **What is the output of the following Python code?**

temp = 22
if temp > 30:
print("Hot")
elif temp > 20:
print("Warm")
elif temp > 10:
print("Cool")
else:
print("Cold")

Ans ✔️ 1. Warm

❌ 2. Hot

❌ 3. Cold

❌ 4. Cool

Question ID : **441009462641**
Option 1 ID : **4410091809064**
Option 2 ID : **4410091809063**
Option 3 ID : **4410091809066**
Option 4 ID : **4410091809065**
Status : **Answered**
Chosen Option : **1**

Q.49 **In a series RLC circuit, V_R = 3 V, V_L = 14 V, V_C = 10 V. The input voltage to the circuit is:**

Ans ❌ 1. 10 V

✔️ 2. 5 V

❌ 3. 3 V

❌ 4. 27 V

Question ID : **4410091002178**
Option 1 ID : **4410093960421**
Option 2 ID : **4410093960420**
Option 3 ID : **4410093960419**
Option 4 ID : **4410093960422**
Status : **Answered**
Chosen Option : **4**

Q.50 **What is the primary function of the deflecting system in a measuring instrument?**

Ans ✗ 1. To provide mechanical support to the pointer

✗ 2. To calibrate the instrument for zero error

✗ 3. To dampen oscillations of the moving system

✓ 4. To produce a torque that moves the pointer in response to the measured quantity

Question ID : **441009945181**

Option 1 ID : **4410093734286**

Option 2 ID : **4410093734289**

Option 3 ID : **4410093734288**

Option 4 ID : **4410093734287**

Status : **Answered**

Chosen Option : **4**

Q.51 **Which of the following is an example of embedding JavaScript in HTML?**

Ans ✗ 1. <link src="script.js">Hello</link>

✓ 2. <script>document.write("Hello")</script>

✗ 3. <embed>JavaScript goes here</embed>

✗ 4. <style>document.write("Hello")</style>

Question ID : **441009365797**

Option 1 ID : **4410091429340**

Option 2 ID : **4410091429339**

Option 3 ID : **4410091429341**

Option 4 ID : **4410091429338**

Status : **Answered**

Chosen Option : **2**

Q.52 **What is the main disadvantage of using microwave communication in wireless networks?**

Ans ✗ 1. Low data rate

✗ 2. High latency

✓ 3. Susceptibility to physical obstructions and weather conditions

✗ 4. Lack of modulation techniques

Question ID : **441009515430**

Option 1 ID : **4410092017038**

Option 2 ID : **4410092017039**

Option 3 ID : **4410092017041**

Option 4 ID : **4410092017040**

Status : **Answered**

Chosen Option : **4**

Q.53 **Which operator is used for strict equality (value and type) in JavaScript?**

Ans ✗ 1. !=

✗ 2. =

✓ 3. ===

✗ 4. ==

Question ID : **441009364811**

Option 1 ID : **4410091425497**

Option 2 ID : **4410091425495**

Option 3 ID : **4410091425496**

Option 4 ID : **4410091425494**

Status : **Answered**

Chosen Option : **4**

Q.54 **What is the function of the cladding in a fiber optic cable?**

Ans ✗ 1. It protects the fiber from physical damage.

✓ 2. It maintains the core's optical properties by reflecting light back into the core via total internal reflection.

✗ 3. It amplifies the light signal.

✗ 4. It acts as a data converter.

Question ID : **441009515409**

Option 1 ID : **4410092016962**

Option 2 ID : **4410092016963**

Option 3 ID : **4410092016964**

Option 4 ID : **4410092016965**

Status : **Answered**

Chosen Option : **2**

Q.55 **If an amplifier with gain A = 10^4 and β = 0.01 introduces 5% distortion without feedback, the distortion with feedback is (where the symbols have their usual meaning):**

Ans ✗ 1. 0.6%

✗ 2. 0.07%

✗ 3. 0.06%

✓ 4. 0.05%

Question ID : **4410091075025**

Option 1 ID : **4410094237605**

Option 2 ID : **4410094237604**

Option 3 ID : **4410094237603**

Option 4 ID : **4410094237602**

Status : **Not Answered**

Chosen Option : **--**

Q.56 Which of the following best describes ATM switching in computer network?

Ans ✗ 1. Packet switching with variable-length packets

✗ 2. Frequency-based switching

✓ 3. Cell-based switching with fixed-size frame

✗ 4. Circuit switching

Question ID : **441009515321**
Option 1 ID : **4410092016614**
Option 2 ID : **4410092016616**
Option 3 ID : **4410092016617**
Option 4 ID : **4410092016615**
Status : **Answered**
Chosen Option : **3**

Q.57 Which design issue is specific to the Transport Layer?

Ans ✓ 1. Flow control

✗ 2. Framing

✗ 3. Signal modulation

✗ 4. Medium access control

Question ID : **441009378911**
Option 1 ID : **4410091481397**
Option 2 ID : **4410091481398**
Option 3 ID : **4410091481400**
Option 4 ID : **4410091481399**
Status : **Answered**
Chosen Option : **1**

Q.58 The damping torque in a PMMC instrument is provided by:

Ans ✗ 1. spring tension

✗ 2. fluid damping

✗ 3. air friction

✓ 4. eddy currents induced in the metal frame

Question ID : **441009969266**
Option 1 ID : **4410093830192**
Option 2 ID : **4410093830191**
Option 3 ID : **4410093830189**
Option 4 ID : **4410093830190**
Status : **Not Answered**
Chosen Option : **--**

Q.59 **What is the primary reason for using a Real-Time Control System (RTCS) in industrial automation?**

Ans ✘ 1. To allow manual operation of all field devices

✘ 2. To execute control tasks independent of time constraints

✔ 3. To respond to inputs and produce outputs within strict timing constraints

✘ 4. To reduce power consumption in electronic devices

Question ID : **441009822106**
Option 1 ID : **4410093242541**
Option 2 ID : **4410093242539**
Option 3 ID : **4410093242540**
Option 4 ID : **4410093242538**
Status : **Answered**
Chosen Option : **3**

Q.60 **What is the output of console.log(5 + "5");?**

Ans ✘ 1. Error

✔ 2. "55"

✘ 3. 5

✘ 4. 10

Question ID : **441009363904**
Option 1 ID : **4410091421872**
Option 2 ID : **4410091421871**
Option 3 ID : **4410091421873**
Option 4 ID : **4410091421870**
Status : **Answered**
Chosen Option : **1**

Q.61 **Which of the following is NOT an NLP task?**

Ans ✔ 1. Image Segmentation

✘ 2. Sentiment Analysis

✘ 3. Machine Translation

✘ 4. Named Entity Recognition (NER)

Question ID : **441009460867**
Option 1 ID : **4410091802165**
Option 2 ID : **4410091802164**
Option 3 ID : **4410091802166**
Option 4 ID : **4410091802163**
Status : **Answered**
Chosen Option : **4**

Q.62 In the OSI model, routing is the primary responsibility of which layer?

Ans ✗ 1. Session Layer

✗ 2. Transport Layer

✓ 3. Network Layer

✗ 4. Data Link Layer

Question ID : **441009384699**
Option 1 ID : **4410091504449**
Option 2 ID : **4410091504446**
Option 3 ID : **4410091504448**
Option 4 ID : **4410091504447**
Status : **Answered**
Chosen Option : **3**

Q.63 _____ step size techniques help to _____ granular noise and improve Delta modulation performance.

Ans ✗ 1. Constant, increase

✓ 2. Adaptive, decrease

✗ 3. Adaptive, increase

✗ 4. Constant, decrease

Question ID : **441009446339**
Option 1 ID : **4410091744009**
Option 2 ID : **4410091744012**
Option 3 ID : **4410091744011**
Option 4 ID : **4410091744010**
Status : **Answered**
Chosen Option : **1**

Q.64 In monolithic IC technology, which process is used to interconnect all the active and passive components to form the desired circuit?

Ans ✗ 1. Photolithography

✗ 2. Etching

✓ 3. Metallisation

✗ 4. Diffusion

Question ID : **441009846286**
Option 1 ID : **4410093338032**
Option 2 ID : **4410093338031**
Option 3 ID : **4410093338030**
Option 4 ID : **4410093338029**
Status : **Answered**
Chosen Option : **2**

Q.65 **Standardisation of a DC potentiometer involves:**

Ans ✗ 1. calibrating the galvanometer

✗ 2. varying the power supply frequency

✗ 3. replacing the slide wire

✓ 4. adjusting the slide wire current to match a reference voltage

Question ID : **441009971979**
Option 1 ID : **4410093840975**
Option 2 ID : **4410093840976**
Option 3 ID : **4410093840974**
Option 4 ID : **4410093840973**
Status : **Answered**
Chosen Option : **4**

Q.66 **What is the result of the binary subtraction 1010 − 0101?**

Ans ✓ 1. 0101

✗ 2. 0111

✗ 3. 1001

✗ 4. 1111

Question ID : **441009644446**
Option 1 ID : **4410092531975**
Option 2 ID : **4410092531978**
Option 3 ID : **4410092531976**
Option 4 ID : **4410092531977**
Status : **Answered**
Chosen Option : **4**

Q.67 **What will be the output of the following code?**

```
x = 10
if x > 5:
print("Greater")
else:
print("Smaller")
```

Ans ✗ 1. 10

✓ 2. Greater

✗ 3. Error

✗ 4. Smaller

Question ID : **441009664941**
Option 1 ID : **4410092613787**
Option 2 ID : **4410092613788**
Option 3 ID : **4410092613790**
Option 4 ID : **4410092613789**
Status : **Answered**
Chosen Option : **2**

Q.68 **What is the function of the dig command in domain tracing?**

Ans ✔ 1. It performs detailed DNS queries.

✘ 2. It maps physical location of servers.

✘ 3. It tests firewall configurations.

✘ 4. It encrypts DNS traffic.

Question ID : **441009462683**

Option 1 ID : **4410091809281**

Option 2 ID : **4410091809282**

Option 3 ID : **4410091809280**

Option 4 ID : **4410091809279**

Status : **Answered**

Chosen Option : **2**

Q.69 **How many transistors are typically used in one cell of a DRAM?**

Ans ✘ 1. Six

✔ 2. One

✘ 3. Two

✘ 4. Four

Question ID : **441009644594**

Option 1 ID : **4410092532545**

Option 2 ID : **4410092532543**

Option 3 ID : **4410092532546**

Option 4 ID : **4410092532544**

Status : **Answered**

Chosen Option : **4**

Q.70 **How many 4-to-1 only multiplexers are required to implement an 8-to-1 multiplexer?**

Ans ✘ 1. Two

✔ 2. Three

✘ 3. Four

✘ 4. One

Question ID : **441009751454**

Option 1 ID : **4410092959747**

Option 2 ID : **4410092959748**

Option 3 ID : **4410092959749**

Option 4 ID : **4410092959746**

Status : **Answered**

Chosen Option : **1**

Q.71 In a dual-slope ADC (analog-to-digital converter), the output of the integrator is connected to a _____.

Ans ✗ 1. flip-flop

✗ 2. counter

✓ 3. comparator

✗ 4. clock circuit

Question ID : **441009845821**

Option 1 ID : **4410093336163**

Option 2 ID : **4410093336161**

Option 3 ID : **4410093336160**

Option 4 ID : **4410093336162**

Status : **Answered**

Chosen Option : **1**

Q.72 Which of the following blocks in the digital communication system is responsible for the protecting the data against channel noise?

Ans ✓ 1. Channel encoder

✗ 2. Modulator

✗ 3. Source decoder

✗ 4. Source encoder

Question ID : **441009748001**

Option 1 ID : **4410092945762**

Option 2 ID : **4410092945763**

Option 3 ID : **4410092945764**

Option 4 ID : **4410092945761**

Status : **Answered**

Chosen Option : **1**

Q.73 Which of the following is a valid critique of the OSI model when compared to the TCP/IP model?

Ans ✗ 1. The OSI model merges the presentation and session layers, making it more practical for real-world implementation.

✓ 2. The OSI model strictly defines services, interfaces, and protocols, which led to poor adoption in early networks.

✗ 3. The OSI model was designed based on existing protocols, while the TCP/IP model was purely theoretical.

✗ 4. Unlike TCP/IP, the OSI model was immediately adopted by the Internet and is the foundation of all current protocols.

Question ID : **441009653678**

Option 1 ID : **4410092568992**

Option 2 ID : **4410092568993**

Option 3 ID : **4410092568991**

Option 4 ID : **4410092568994**

Status : **Answered**

Chosen Option : **1**

Q.74 **Which of the following statements about differential entropy is correct?**
S1: Differential entropy is always non-negative.
S2: Bits are the units of differential entropy when the logarithm is base 2.
S3: Differential entropy is a measure of the uncertainty of a continuous random variable.

Ans ✗ 1. Only S2 and S1

✔ 2. Only S2 and S3

✗ 3. S1,S2 and S3

✗ 4. Only S1 and S3

Question ID : **441009799460**
Option 1 ID : **4410093151950**
Option 2 ID : **4410093151949**
Option 3 ID : **4410093151951**
Option 4 ID : **4410093151952**
Status : **Not Attempted and Marked For Review**
Chosen Option : **--**

Q.75 **In the process of silicon wafer preparation, _____ is the first step for wafer preparation.**

Ans ✔ 1. silicon crystal growing

✗ 2. wafer shaping

✗ 3. wafer sawing

✗ 4. wafer etching

Question ID : **441009850876**
Option 1 ID : **4410093356376**
Option 2 ID : **4410093356375**
Option 3 ID : **4410093356377**
Option 4 ID : **4410093356378**
Status : **Answered**
Chosen Option : **2**

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