

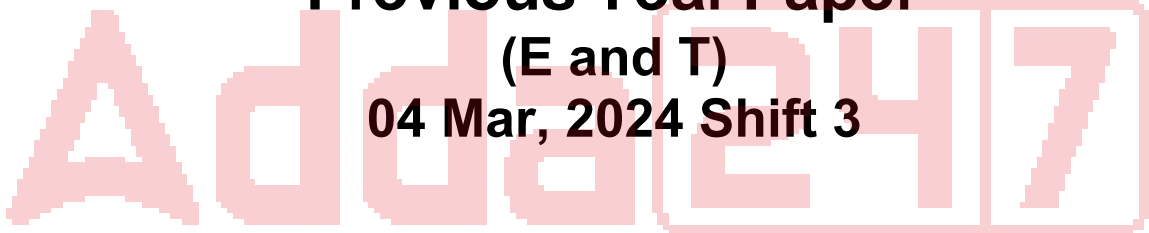


**NCL
AFT**

Previous Year Paper

(E and T)

04 Mar, 2024 Shift 3



Adda247



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|------------------|-----------------------------------|
| Participant ID | |
| Participant Name | ... |
| Test Center Name | iON Digital Zone iDZ3 Patliputra |
| Test Date | 04/03/2024 |
| Test Time | 3:30 PM - 5:00 PM |
| Subject | Assistant Foreman E and T Trainee |

Section : Section A

Q.1 Which of the following is NOT correct regarding time division multiple access (TDMA)?

- Ans
- 1. At any instant of time the carrier from only one station is present at the transponder, this increases the intermodulation distortion.
 - 2. Precise synchronization is required.
 - 3. TDMA is a method of time division multiplexing, the digitally modulated carriers between various earth stations in a satellite network through a common satellite transponder.
 - 4. TDMA is suitable for transmission of digital information.

Question ID : 630680634194
 Option 1 ID : 6306802482654
 Option 2 ID : 6306802482655
 Option 3 ID : 6306802482652
 Option 4 ID : 6306802482653
 Status : Answered
 Chosen Option : 3

Q.2 Which of the following is INCORRECT about half-wave rectifier?

- Ans
- 1. The ratio of DC power output to the applied input AC power is known as rectifier efficiency.
 - 2. The pulsating current in the load contains alternating component whose basic frequency is not equal to the supply frequency.
 - 3. In half-wave rectification, the rectifier conducts current only during the positive half-cycles of input AC supply.
 - 4. The AC supply delivers power only half the time, therefore the output is low.

Question ID : 630680634130
 Option 1 ID : 6306802482397
 Option 2 ID : 6306802482398
 Option 3 ID : 6306802482396
 Option 4 ID : 6306802482399
 Status : Answered
 Chosen Option : 2

Question ID : 630680634195

Option 1 ID : 6306802482659

Option 2 ID : 6306802482656

Option 3 ID : 6306802482657

Option 4 ID : 6306802482658

Status : Answered

Chosen Option : 3

Q.4 In the context of sampling theorem, a band limited signal having no frequency components higher than f_m Hz may be completely recovered from the knowledge of its sample taken at the rate of at least _____ samples per second.

- Ans
- 1. $4f_m$
 - 2. f_m
 - 3. $2f_m$
 - 4. $\frac{1}{4f_m}$

Question ID : 630680634161

Option 1 ID : 6306802482522

Option 2 ID : 6306802482520

Option 3 ID : 6306802482521

Option 4 ID : 6306802482523

Status : Answered

Chosen Option : 3

Q.5 Which of the following is NOT correct regarding n-type semiconductor?
 I. When a small amount of pentavalent impurity is added to a pure semiconductor, it is known as n-type semiconductor.
 II. Impurities which produce n-type semiconductor are known as acceptor impurities.

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

Question ID : 630680634127

Option 1 ID : 6306802482384

Option 2 ID : 6306802482387

Option 3 ID : 6306802482385

Option 4 ID : 6306802482386

Status : Answered

Chosen Option : 3

- 3. Neither I nor II
- 4. Both I and II

Question ID : 630680634158
 Option 1 ID : 6306802482508
 Option 2 ID : 6306802482509
 Option 3 ID : 6306802482511
 Option 4 ID : 6306802482510
 Status : Answered
 Chosen Option : 4

Q.7 Which of the following statement is correct regarding entropy?
 I. Entropy is the average information content per message of a source.
 II. Entropy is maximized when all messages occur with equal probability.

- Ans**
- 1. Neither I nor II
 - 2. Both I and II
 - 3. Only II
 - 4. Only I

Question ID : 630680634141
 Option 1 ID : 6306802482443
 Option 2 ID : 6306802482442
 Option 3 ID : 6306802482441
 Option 4 ID : 6306802482440
 Status : Answered
 Chosen Option : 4

Q.8 Which of the following is NOT correct regarding prominent hardware techniques used in signal to noise ratio improvement?

- Ans**
- 1. To reduce distortion, use the devices (and circuits) in the linear regions of the operating curves as far as possible.
 - 2. To avoid power supply noises, use highly stable power supplies like battery supply.
 - 3. To reduce thermal noise, the main method is to cool the system to lowest possible temperature.
 - 4. To avoid partition noise, use diode or devices with huge number of internal current divisions.

Question ID : 630680634140
 Option 1 ID : 6306802482439
 Option 2 ID : 6306802482438
 Option 3 ID : 6306802482436
 Option 4 ID : 6306802482437
 Status : Answered
 Chosen Option : 2

- ✗ 1. $\text{---} \rightarrow [Ts] \rightarrow \text{---}$
- ✗ 2. $R(s) \rightarrow \left[\frac{1}{Ts} \right] \rightarrow C(s)$
- ✓ 3. $R(s) \rightarrow \left[\frac{1}{Ts + 1} \right] \rightarrow C(s)$
- ✗ 4. $R(s) \rightarrow [1 + Ts] \rightarrow C(s)$

Question ID : 630680634177
 Option 1 ID : 6306802482586
 Option 2 ID : 6306802482585
 Option 3 ID : 6306802482587
 Option 4 ID : 6306802482584
 Status : Answered
 Chosen Option : 3

Q.10 What is the decimal equivalent of the $(1111)_2$?

- Ans
- ✗ 1. 10
 - ✗ 2. 12
 - ✓ 3. 15
 - ✗ 4. 17

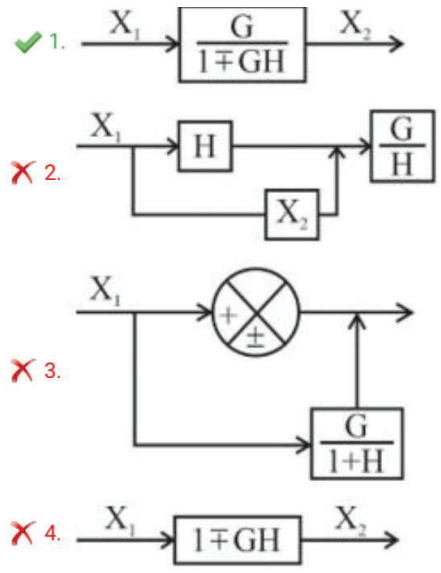
Question ID : 630680634142
 Option 1 ID : 6306802482444
 Option 2 ID : 6306802482445
 Option 3 ID : 6306802482446
 Option 4 ID : 6306802482447
 Status : Answered
 Chosen Option : 3

Q.11 It is useful to plot polar lines from the centre of antenna in different directions such that the length of a line is proportional to intensity S_r of radiation in that direction, the _____ of these lines gives the radiation pattern of the antenna.

- Ans
- ✗ 1. sum of heights
 - ✗ 2. sum of width
 - ✗ 3. average of length
 - ✓ 4. locus of tips

Question ID : 630680634169
 Option 1 ID : 6306802482554
 Option 2 ID : 6306802482555
 Option 3 ID : 6306802482552
 Option 4 ID : 6306802482553
 Status : Answered
 Chosen Option : 4

AIS



Question ID : 630680634201
 Option 1 ID : 6306802482680
 Option 2 ID : 6306802482683
 Option 3 ID : 6306802482682
 Option 4 ID : 6306802482681
 Status : Answered
 Chosen Option : 1

Q.13 The value of probability error of a system indicates its performance in presence of AWGN, what does 'A' stands for in AWGN?

- Ans
- ✓ 1. Additive
 - ✗ 2. Acoustic
 - ✗ 3. Amplitude
 - ✗ 4. Assertive

Question ID : 630680634136
 Option 1 ID : 6306802482422
 Option 2 ID : 6306802482421
 Option 3 ID : 6306802482420
 Option 4 ID : 6306802482423
 Status : Answered
 Chosen Option : 1

4. Common receiver amplifier

Question ID : 630680634132
 Option 1 ID : 6306802482406
 Option 2 ID : 6306802482405
 Option 3 ID : 6306802482404
 Option 4 ID : 6306802482407
 Status : Answered
 Chosen Option : 3

Q.15 Which of the following is NOT correct regarding full-wave bridge rectifier?

- Ans 1. The need for centre-tapped transformer is eliminated.
2. The output is twice that of the centre-tap circuit for the same secondary voltage.
3. The peak inverse voltage is one-half that of the centre-tap circuit.
4. It is difficult to locate the centre-tap on the secondary winding.

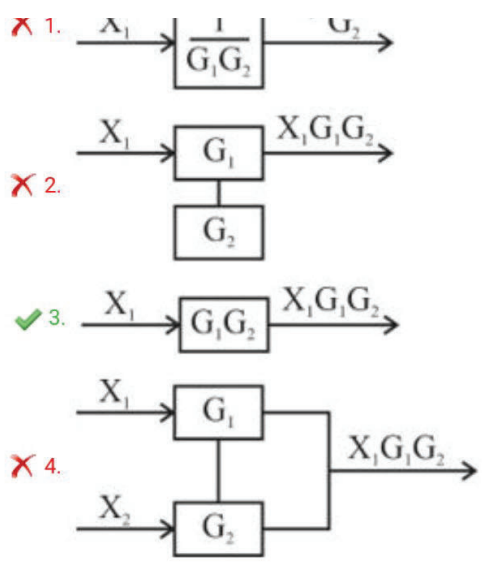
Question ID : 630680634131
 Option 1 ID : 6306802482400
 Option 2 ID : 6306802482401
 Option 3 ID : 6306802482402
 Option 4 ID : 6306802482403
 Status : Answered
 Chosen Option : 2

Q.16 Which of the following statement is correct regarding Multiplexing?

- I. Multiplexing allows use of single channel for carrying multiple signals.
 II. In optical fibres, wavelength division multiplexing is done.

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

Question ID : 630680634178
 Option 1 ID : 6306802482589
 Option 2 ID : 6306802482588
 Option 3 ID : 6306802482591
 Option 4 ID : 6306802482590
 Status : Answered
 Chosen Option : 4



Question ID : 630680634173
 Option 1 ID : 6306802482570
 Option 2 ID : 6306802482569
 Option 3 ID : 6306802482568
 Option 4 ID : 6306802482571
 Status : Answered
 Chosen Option : 3

Q.18 Frequency modulation index m_f is defined as the _____.

- Ans
- ✓ 1. ratio of the maximum deviation occurring in the frequency of modulated wave and the maximum frequency of the modulating signal
 - ✗ 2. inverse of the maximum deviation occurring in the frequency of modulated wave
 - ✗ 3. sum of the maximum deviation occurring in the frequency of modulated wave and the maximum frequency of the modulating signal
 - ✗ 4. product of the maximum deviation occurring in the frequency of modulated wave and the maximum frequency of the modulating signal

Question ID : 630680634155
 Option 1 ID : 6306802482496
 Option 2 ID : 6306802482499
 Option 3 ID : 6306802482497
 Option 4 ID : 6306802482498
 Status : Answered
 Chosen Option : 1

✗ 3. $\frac{1}{f_m}$ s

✓ 4. $\frac{1}{2f_m}$ s

Question ID : 630680634160

Option 1 ID : 6306802482518

Option 2 ID : 6306802482517

Option 3 ID : 6306802482519

Option 4 ID : 6306802482516

Status : Answered

Chosen Option : 1

Q.20 Which of the following statement is correct regarding multistage transistor amplifier?

I. A transistor circuit containing more than one stage of amplification is known as multistage transistor amplifier.

II. In multistage amplifier a number of single amplifiers are connected in cascade arrangement.

Ans ✓ 1. Both I and II

✗ 2. Only II

✗ 3. Only I

✗ 4. Neither I nor II

Question ID : 630680634133

Option 1 ID : 6306802482410

Option 2 ID : 6306802482409

Option 3 ID : 6306802482408

Option 4 ID : 6306802482411

Status : Answered

Chosen Option : 1

Q.21 Which of the following is NOT correct regarding semiconductors?

Ans ✗ 1. The process of adding impurities to a semiconductor is known as doping.

✗ 2. Depending upon the type of impurity added, extrinsic semiconductors are classified into n-type or p-type.

✓ 3. The purpose of adding impurity is to decrease either the number of free electrons or holes in the semiconductor crystal.

✗ 4. The intrinsic semiconductor has little current conduction capability at room temperature.

Question ID : 630680634126

Option 1 ID : 6306802482381

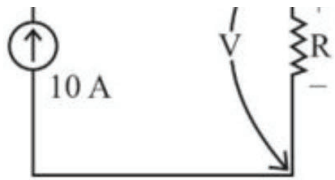
Option 2 ID : 6306802482383

Option 3 ID : 6306802482382

Option 4 ID : 6306802482380

Status : Answered

Chosen Option : 3



- Ans
- 1. 10Ω
 - 2. 2Ω
 - 3. 1Ω
 - 4. 0.5Ω

Question ID : 630680634190
 Option 1 ID : 6306802482639
 Option 2 ID : 6306802482638
 Option 3 ID : 6306802482637
 Option 4 ID : 6306802482636
 Status : Answered
 Chosen Option : 2

Q.23 Which of the following statement is correct regarding application of smith chart?
 I. Determination of input impedance and admittance of short circuited line.
 II. Used for line matching by the parallel stubs.

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

Question ID : 630680634200
 Option 1 ID : 6306802482677
 Option 2 ID : 6306802482679
 Option 3 ID : 6306802482676
 Option 4 ID : 6306802482678
 Status : Answered
 Chosen Option : 3

✗ 4. Linearity property

Question ID : **630680634159**
 Option 1 ID : **6306802482513**
 Option 2 ID : **6306802482514**
 Option 3 ID : **6306802482515**
 Option 4 ID : **6306802482512**
 Status : **Answered**
 Chosen Option : **3**

Q.25 The 8085 microprocessor has _____ address lines which give a maximum possible memory size of 64 K bytes.

- Ans 1. 16
 2. 12
 3. 6
 4. 10

Question ID : **630680634150**
 Option 1 ID : **6306802482479**
 Option 2 ID : **6306802482478**
 Option 3 ID : **6306802482476**
 Option 4 ID : **6306802482477**
 Status : **Answered**
 Chosen Option : **1**

Q.26 In the context of Colpitt's oscillator, which of the following is correct regarding frequency of oscillations?

(where C_1, C_2 are capacitors L is inductor, $C_T = \frac{C_1 C_2}{C_1 + C_2}$)

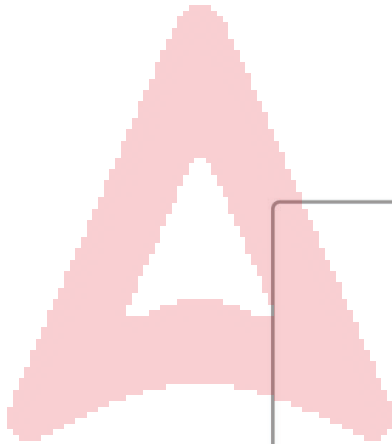
- Ans 1. $f = \frac{1}{2\pi\sqrt{LC_T}}$
 2. $f = \frac{\sqrt{LC_T}}{2\pi}$
 3. $f = \frac{2\pi}{\sqrt{LC_T}}$
 4. $f = 2\pi\sqrt{LC_T}$

Question ID : **630680634135**
 Option 1 ID : **6306802482416**
 Option 2 ID : **6306802482419**
 Option 3 ID : **6306802482417**
 Option 4 ID : **6306802482418**
 Status : **Answered**
 Chosen Option : **1**

Question ID : 630680634168
Option 1 ID : 6306802482550
Option 2 ID : 6306802482548
Option 3 ID : 6306802482551
Option 4 ID : 6306802482549
Status : Answered
Chosen Option : 3

Q.28 Which of the following is correct regarding register?
I. Registers are used for storage of small data in the microprocessor.
II. Flags are single-bit registers used to store certain conditions which arise as a result of execution of certain instructions.

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



Question ID : 630680634149
Option 1 ID : 6306802482474
Option 2 ID : 6306802482472
Option 3 ID : 6306802482475
Option 4 ID : 6306802482473
Status : Answered
Chosen Option : 1

Q.29 Which of the following is NOT the terminal of transistor?

- Ans 1. Emitter
 2. Base
 3. Collector
 4. Receiver



Question ID : 630680634128
Option 1 ID : 6306802482389
Option 2 ID : 6306802482391
Option 3 ID : 6306802482390
Option 4 ID : 6306802482388
Status : Answered
Chosen Option : 4

✗ 4. Bridge

Question ID : 630680634186
 Option 1 ID : 6306802482623
 Option 2 ID : 6306802482622
 Option 3 ID : 6306802482621
 Option 4 ID : 6306802482620
 Status : Answered
 Chosen Option : 2

Q.31 Which of the following statement is correct regarding multiplexer?
 I. It is a logic circuit that gates one out of several inputs to a single output.
 II. The input selected is controlled by a set of select input.

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

Question ID : 630680634145
 Option 1 ID : 6306802482457
 Option 2 ID : 6306802482459
 Option 3 ID : 6306802482458
 Option 4 ID : 6306802482456
 Status : Answered
 Chosen Option : 3

Q.32 Which of the following is correct about Thevenin's theorem?

- Ans
- ✗ 1. Any linear active network consisting of only dependent voltage and linear bilateral network elements can be replaced by an equivalent circuit consisting of a current source in parallel with resistance.
 - ✗ 2. The algebraic sum of currents at any node of a circuit is not zero.
 - ✗ 3. The algebraic sum of currents entering a node must be equal to the algebraic sum of the currents leaving a node.
 - ✓ 4. Any two terminal bilateral linear DC circuits can be replaced by an equivalent circuit consisting of a voltage source and a series resistor.

Question ID : 630680634119
 Option 1 ID : 6306802482353
 Option 2 ID : 6306802482354
 Option 3 ID : 6306802482355
 Option 4 ID : 6306802482352
 Status : Answered
 Chosen Option : 1

voltage and the expected output voltage.

4. In DAC equal increments in the numerical significance of the digital input should result in equal increments in the analog output voltage.

Question ID : 630680634147
 Option 1 ID : 6306802482467
 Option 2 ID : 6306802482466
 Option 3 ID : 6306802482465
 Option 4 ID : 6306802482464
 Status : Answered
 Chosen Option : 1

Q.34 Which of the following statement is correct regarding Repeater networking device?

- I. They have no in-built intelligence.
- II. They do not look at the contents of the packet as they regenerate the signal.

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

Question ID : 630680634187
 Option 1 ID : 6306802482627
 Option 2 ID : 6306802482625
 Option 3 ID : 6306802482624
 Option 4 ID : 6306802482626
 Status : Answered
 Chosen Option : 1

Q.35 An 8-bit microprocessor like the 8085 has _____ data lines.

- Ans 1. four
 2. eleven
 3. six
 4. eight

Question ID : 630680634148
 Option 1 ID : 6306802482468
 Option 2 ID : 6306802482471
 Option 3 ID : 6306802482469
 Option 4 ID : 6306802482470
 Status : Answered
 Chosen Option : 4

✗ 4. $I(X; Y) = I(Y; X)$

Question ID : 630680634137
 Option 1 ID : 6306802482426
 Option 2 ID : 6306802482427
 Option 3 ID : 6306802482425
 Option 4 ID : 6306802482424
 Status : Answered
 Chosen Option : 2

Q.37 "If a number of voltage or current sources are acting simultaneously in a linear network, the resultant current in any branch is the algebraic sum of the currents that would be produced in it, when each source acts alone replacing all other independent sources by their internal resistances."

The statement given above is related to which of the following?

- Ans
- ✗ 1. Maximum power transfer theorem
 - ✗ 2. Norton's theorem
 - ✗ 3. Kirchhoff's voltage law
 - ✓ 4. Superposition theorem

Question ID : 630680634120
 Option 1 ID : 6306802482356
 Option 2 ID : 6306802482358
 Option 3 ID : 6306802482359
 Option 4 ID : 6306802482357
 Status : Answered

Chosen Option : 4

Q.38 Which of the following statement is correct regarding photo-diode?

- I. A photo-diode is a reverse biased silicon or germanium pn junction in which reverse current decreases when the junction is exposed to light.
- II. The reverse current in a photo-diode is directly proportional to the intensity of light falling on its pn junction.

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

Question ID : 630680634191
 Option 1 ID : 6306802482642
 Option 2 ID : 6306802482641
 Option 3 ID : 6306802482640
 Option 4 ID : 6306802482643
 Status : Answered

Chosen Option : 1

- ✓ 3. $\frac{1}{4400} \Omega$
- ✗ 4. 4400Ω

Question ID : 630680634123
 Option 1 ID : 6306802482370
 Option 2 ID : 6306802482371
 Option 3 ID : 6306802482368
 Option 4 ID : 6306802482369
 Status : Answered
 Chosen Option : 3

Q.40 Which of the following type of network topology uses a common backbone (a single cable) to connect all devices with terminators at both ends?

- Ans
- ✗ 1. Tree topology
 - ✓ 2. Bus topology
 - ✗ 3. Star topology
 - ✗ 4. Ring topology

Question ID : 630680634184
 Option 1 ID : 6306802482615
 Option 2 ID : 6306802482614
 Option 3 ID : 6306802482613
 Option 4 ID : 6306802482612
 Status : Answered
 Chosen Option : 4

Q.41 In computer networks, a fully connected mesh network has _____ physical links to link n devices.

- Ans
- ✗ 1. $n(n+1/2)$
 - ✓ 2. $n(n-1)/2$
 - ✗ 3. $n-1(n/2)$
 - ✗ 4. $n(n/2)$

Question ID : 630680634185
 Option 1 ID : 6306802482619
 Option 2 ID : 6306802482616
 Option 3 ID : 6306802482618
 Option 4 ID : 6306802482617
 Status : Answered
 Chosen Option : 2

✓ 2. $C = B \log_2 \left(1 + \frac{S}{N} \right)$ bits per second

✗ 3. $C = \frac{B}{\log_2 \left(1 - \frac{N}{S} \right)}$ bits per second

✗ 4. $C = B \log_2 (1 + SN)$ bits per second

Question ID : 630680634138

Option 1 ID : 6306802482430

Option 2 ID : 6306802482429

Option 3 ID : 6306802482431

Option 4 ID : 6306802482428

Status : Answered

Chosen Option : 2

Q.43 Which of the following statement is correct regarding antenna gain?

I. It characterises the directivity of the radiation.

II. It is the ratio of maximum intensity obtained in certain direction by the antenna to the intensity obtained from an isotropic radiator of the same power.

Ans ✗ 1. Only I

✗ 2. Neither I nor II

✗ 3. Only II

✓ 4. Both I and II

Question ID : 630680634170

Option 1 ID : 6306802482556

Option 2 ID : 6306802482559

Option 3 ID : 6306802482557

Option 4 ID : 6306802482558

Status : Answered

Chosen Option : 4

Q.44 Which of the following statement is correct regarding Gauss's law?

I. The total flux out of a closed surface is equal to the net charge within the surface.

II. Gauss's law is the basic theorem of electrostatics and it is also a Maxwell's equation.

Ans ✗ 1. Only I

✓ 2. Both I and II

✗ 3. Only II

✗ 4. Neither I nor II

Question ID : 630680634162

Option 1 ID : 6306802482524

Option 2 ID : 6306802482526

Option 3 ID : 6306802482525

Option 4 ID : 6306802482527

Status : Answered

Chosen Option : 2

Question ID : 630680634144
 Option 1 ID : 6306802482452
 Option 2 ID : 6306802482453
 Option 3 ID : 6306802482454
 Option 4 ID : 6306802482455
 Status : Answered
 Chosen Option : 3

Q.46 Which of the following is NOT correct regarding code division multiple access (CDMA)?

- Ans 1. Code sequence or signature waveforms are not required.
2. In CDMA the user access the channel in a random manner.
3. In CDMA one channel carries all the transmission simultaneously.
4. CDMA is sometimes also called as spread spectrum multiple access.

Question ID : 630680634196
 Option 1 ID : 6306802482661
 Option 2 ID : 6306802482663
 Option 3 ID : 6306802482660
 Option 4 ID : 6306802482662
 Status : Answered
 Chosen Option : 1

Q.47 Which of the following is NOT correct regarding wave guide?

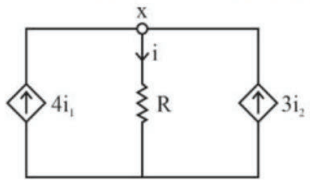
- Ans 1. It can typically handle very large power.
2. Wave guide is a one conductor structure that can support transverse electromagnetic waves.
3. A wave guide is not considered to strictly be a transmission line, as it is not constructed with two separate conductors.
4. It can have very low loss.

Question ID : 630680634164
 Option 1 ID : 6306802482534
 Option 2 ID : 6306802482532
 Option 3 ID : 6306802482533
 Option 4 ID : 6306802482535
 Status : Answered
 Chosen Option : 3

4. Neither I nor II

Question ID : **630680634139**
 Option 1 ID : **6306802482433**
 Option 2 ID : **6306802482432**
 Option 3 ID : **6306802482434**
 Option 4 ID : **6306802482435**
 Status : **Answered**
 Chosen Option : **3**

Q.49 Obtain the value of 'i' in the given figure, if $i_1 = 4A$, $i_2 = -3A$ in the dependent current sources.



- Ans 1. 25 A
 2. 7 A
 3. -9 A
 4. 16 A

Question ID : **630680634189**
 Option 1 ID : **6306802482632**
 Option 2 ID : **6306802482633**
 Option 3 ID : **6306802482635**
 Option 4 ID : **6306802482634**
 Status : **Answered**
 Chosen Option : **2**

Q.50 In the context of multiplexing, sending different signals on the same channel at different points of time is known as _____.

- Ans 1. frequency division multiplexing (FDM)
 2. time division multiplexing (TDM)
 3. space division multiplexing (SDM)
 4. wavelength division multiplexing (WDM)

Question ID : **630680634179**
 Option 1 ID : **6306802482593**
 Option 2 ID : **6306802482592**
 Option 3 ID : **6306802482594**
 Option 4 ID : **6306802482595**
 Status : **Answered**
 Chosen Option : **2**

✗ 4. 2λ

Question ID : 630680634167
 Option 1 ID : 6306802482546
 Option 2 ID : 6306802482547
 Option 3 ID : 6306802482544
 Option 4 ID : 6306802482545
 Status : Answered
 Chosen Option : 2

Q.52 In the context of Maxwell's equation, which of the following is NOT correct?

- Ans
- ✗ 1. The electromotive force around a closed path is equal to the time derivative of the magnetic displacement through any surface bounded by the path.
 - ✗ 2. The net magnetic flux emerging through any closed surface is zero.
 - ✗ 3. The total displacement through the surface enclosing a volume is equal to the total charge within the volume.
 - ✓ 4. The magneto motive force around a close path is not equal to the conduction.

Question ID : 630680634163
 Option 1 ID : 6306802482528
 Option 2 ID : 6306802482529
 Option 3 ID : 6306802482530
 Option 4 ID : 6306802482531
 Status : Answered
 Chosen Option : 4

Q.53 Which of the following statement is correct regarding Smith chart?

- I. The smith chart is one of the most useful graphical tools for high frequency circuit applications.
- II. Transmission lines and impedance matching problems can be solved by smith chart.

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

Question ID : 630680634166
 Option 1 ID : 6306802482541
 Option 2 ID : 6306802482540
 Option 3 ID : 6306802482542
 Option 4 ID : 6306802482543
 Status : Answered
 Chosen Option : 3

- 3. Only I
- 4. Both I and II

Question ID : 630680634165
 Option 1 ID : 6306802482539
 Option 2 ID : 6306802482537
 Option 3 ID : 6306802482536
 Option 4 ID : 6306802482538
 Status : Answered
 Chosen Option : 4

Q.55 In phase modulation (PM) type of angle modulation, the phase angle $\psi(t)$ is varied _____ with a modulating signal $f(t)$ about an unmodulated phase angle $\omega_c t$.

- Ans**
- 1. sinusoidally
 - 2. linearly
 - 3. exponentially
 - 4. inversely

Question ID : 630680634151
 Option 1 ID : 6306802482482
 Option 2 ID : 6306802482480
 Option 3 ID : 6306802482481
 Option 4 ID : 6306802482483
 Status : Answered
 Chosen Option : 2

Q.56 In the context of communication channel, in _____ type of channel, transmission can take place in either direction, but not at the same time.

- Ans**
- 1. half-duplex
 - 2. half-simplex
 - 3. full-duplex
 - 4. simplex

Question ID : 630680634181
 Option 1 ID : 6306802482600
 Option 2 ID : 6306802482603
 Option 3 ID : 6306802482602
 Option 4 ID : 6306802482601
 Status : Answered
 Chosen Option : 1

- 3. Neither I nor II
- 4. Only I

Question ID : 630680634156
 Option 1 ID : 6306802482502
 Option 2 ID : 6306802482501
 Option 3 ID : 6306802482503
 Option 4 ID : 6306802482500
 Status : Answered
 Chosen Option : 1

Q.58 Which of the following statement is correct regarding FM detector extraction process?
 I. It converts the frequency modulated (FM) signal into corresponding amplitude modulated (AM) signal by using frequency dependent circuits.
 II. The original modulating signal $f(t)$ is recovered from amplitude modulated (AM) signal by using a linear diode envelope detector.

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

Question ID : 630680634154
 Option 1 ID : 6306802482492
 Option 2 ID : 6306802482495
 Option 3 ID : 6306802482493
 Option 4 ID : 6306802482494
 Status : Answered
 Chosen Option : 3

Q.59 Which of the following is correct regarding inductive reactance (X_L)? (where f = supply frequency, L = pure inductance element)

- Ans
- 1. $X_L = 2\pi fL$
 - 2. $X_L = \frac{2\pi f}{L}$
 - 3. $X_L = \frac{1}{2\pi} fL$
 - 4. $X_L = \frac{2\pi}{fL}$

Question ID : 630680634122
 Option 1 ID : 6306802482367
 Option 2 ID : 6306802482365
 Option 3 ID : 6306802482366
 Option 4 ID : 6306802482364
 Status : Answered
 Chosen Option : 1

- 3. Only I
- 4. Both I and II

Question ID : 630680634180
Option 1 ID : 6306802482599
Option 2 ID : 6306802482597
Option 3 ID : 6306802482596
Option 4 ID : 6306802482598
Status : Answered
Chosen Option : 4

Q.61 A _____ is a special type of diode that is designed to operate in the reverse breakdown region.

- Ans
- 1. tunnel diode
 - 2. photo-diode
 - 3. light-emitting-diode
 - 4. zener diode

Question ID : 630680634129
Option 1 ID : 6306802482395
Option 2 ID : 6306802482394
Option 3 ID : 6306802482393
Option 4 ID : 6306802482392
Status : Answered
Chosen Option : 4

Q.62 A tree topology combines the characteristics of linear _____ and _____ topologies.

- Ans
- 1. bus, ring
 - 2. star, mesh
 - 3. bus, star
 - 4. ring, star

Question ID : 630680634188
Option 1 ID : 6306802482628
Option 2 ID : 6306802482631
Option 3 ID : 6306802482629
Option 4 ID : 6306802482630
Status : Answered
Chosen Option : 3

- 3. Both I and II
- 4. Only II

Question ID : 630680634175
 Option 1 ID : 6306802482579
 Option 2 ID : 6306802482576
 Option 3 ID : 6306802482578
 Option 4 ID : 6306802482577
 Status : Answered
 Chosen Option : 3

Q.64 In the context of fourier series, two real time functions are said to be mutually orthogonal over an interval between t_1 and t_2 , if the _____ of their product over this interval is _____.

- Ans
- 1. differential, infinite
 - 2. differential, not zero
 - 3. integral, zero
 - 4. integral, not zero

Question ID : 630680634157
 Option 1 ID : 6306802482506
 Option 2 ID : 6306802482507
 Option 3 ID : 6306802482504
 Option 4 ID : 6306802482505
 Status : Answered
 Chosen Option : 3

Q.65 The silicon controlled rectifier (SCR) is a _____ terminal semiconductor switching device.

- Ans
- 1. four
 - 2. three
 - 3. two
 - 4. six

Question ID : 630680634193
 Option 1 ID : 6306802482650
 Option 2 ID : 6306802482649
 Option 3 ID : 6306802482648
 Option 4 ID : 6306802482651
 Status : Answered
 Chosen Option : 2

Question ID : 630680634143
 Option 1 ID : 6306802482451
 Option 2 ID : 6306802482450
 Option 3 ID : 6306802482448
 Option 4 ID : 6306802482449
 Status : Answered
 Chosen Option : 4

Q.67 In the context of field effect transistors, what does 'M' stands for in MOSFET?

- Ans 1. Metal
 2. Moving
 3. Miniature
 4. Mono

Question ID : 630680634134
 Option 1 ID : 6306802482412
 Option 2 ID : 6306802482415
 Option 3 ID : 6306802482414
 Option 4 ID : 6306802482413
 Status : Answered
 Chosen Option : 1

Q.68 Which of the following statement is correct regarding FM demodulation?
 I. The process of extracting modulating signal from a frequency modulated carrier is known as demodulation.
 II. Electronic circuits that perform the demodulation process are called FM detectors.

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

Question ID : 630680634153
 Option 1 ID : 6306802482491
 Option 2 ID : 6306802482488
 Option 3 ID : 6306802482489
 Option 4 ID : 6306802482490
 Status : Answered
 Chosen Option : 4

3. Only II
 4. Both I and II

Question ID : 630680634146
Option 1 ID : 6306802482460
Option 2 ID : 6306802482463
Option 3 ID : 6306802482461
Option 4 ID : 6306802482462
Status : Answered
Chosen Option : 1

Q.70 A typical control system has _____.
I. controller to which input signal is applied
II. plant or process which receives signals, called manipulated variables, from controller and produces desired output

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

Question ID : 630680634172
Option 1 ID : 6306802482567
Option 2 ID : 6306802482566
Option 3 ID : 6306802482564
Option 4 ID : 6306802482565
Status : Answered
Chosen Option : 4

Section : Section B

Q.1 संगम साहित्य प्राचीन ____ कृतियों का संग्रह है।

- Ans 1. संस्कृत
 2. मलयालम
 3. तमिल
 4. तेलुगू

Question ID : 630680634343
Option 1 ID : 6306802483250
Option 2 ID : 6306802483249
Option 3 ID : 6306802483248
Option 4 ID : 6306802483251
Status : Answered
Chosen Option : 3

Question ID : 630680634396
Option 1 ID : 6306802483463
Option 2 ID : 6306802483460
Option 3 ID : 6306802483461
Option 4 ID : 6306802483462
Status : Answered
Chosen Option : 3

Q.3 Fill in the blank with the most appropriate article:

As a nation, Bangladeshis are ____ religious-minded but not zealots.

- Ans 1. no article
 2. a
 3. the
 4. an

Question ID : 630680634307
Option 1 ID : 6306802483107
Option 2 ID : 6306802483104
Option 3 ID : 6306802483106
Option 4 ID : 6306802483105
Status : Answered
Chosen Option : 1

Q.4 सविनय अवज्ञा आंदोलन का नेतृत्व _____ ने किया था।

- Ans 1. गोपाल कृष्ण गोखले
 2. जवाहरलाल नेहरू बाल
 3. महात्मा गांधी
 4. गंगाधर तिलक

Question ID : 630680634342
Option 1 ID : 6306802483247
Option 2 ID : 6306802483245
Option 3 ID : 6306802483244
Option 4 ID : 6306802483246
Status : Answered
Chosen Option : 3

Question ID : 630680634330
Option 1 ID : 6306802483198
Option 2 ID : 6306802483196
Option 3 ID : 6306802483197
Option 4 ID : 6306802483199
Status : Answered
Chosen Option : 2

Q.6 14 और 56 के तृतीयानुपाती तथा 11 और 44 के माध्यानुपाती का अनुपात ज्ञात कीजिए।

- Ans 1. 112 : 11
 2. 114 : 11
 3. 109 : 12
 4. 107 : 12

Question ID : 630680634379
Option 1 ID : 6306802483392
Option 2 ID : 6306802483393
Option 3 ID : 6306802483394
Option 4 ID : 6306802483395
Status : Answered
Chosen Option : 1

Q.7 Choose the synonym for the word "ascertain" in the sentence given below:

Before I book the flight, I need to ascertain how it affects my finances.

- Ans 1. combust
 2. determine
 3. control
 4. discount

Question ID : 630680634311
Option 1 ID : 6306802483122
Option 2 ID : 6306802483121
Option 3 ID : 6306802483123
Option 4 ID : 6306802483120
Status : Answered
Chosen Option : 3

- 2. 51324
- 3. 51243
- 4. 51234

Question ID : 630680634364
 Option 1 ID : 6306802483333
 Option 2 ID : 6306802483335
 Option 3 ID : 6306802483334
 Option 4 ID : 6306802483332
 Status : Answered
 Chosen Option : 4

Q.9 एक कार 5 घंटे में 80 km/hr की चाल से एक निश्चित दूरी तय करती है। वही दूरी 4 घंटे में तय करने के लिए इसकी आवश्यक चाल ज्ञात कीजिए।

- Ans
- 1. 120 km/hr
 - 2. 100 km/hr
 - 3. 80 km/hr
 - 4. 90 km/hr

Question ID : 630680634401
 Option 1 ID : 6306802483481
 Option 2 ID : 6306802483482
 Option 3 ID : 6306802483480
 Option 4 ID : 6306802483483
 Status : Answered
 Chosen Option : 2

Q.10 भारत से शतरंज में तीसरी महिला ग्रैंड-मास्टर कौन बनी?

- Ans
- 1. कुलकर्णी भक्ति
 - 2. कोनेरू हम्पी
 - 3. वैशाली रमेशबाबू
 - 4. हरिका द्रोणावल्ली

Question ID : 630680634337
 Option 1 ID : 6306802483227
 Option 2 ID : 6306802483225
 Option 3 ID : 6306802483224
 Option 4 ID : 6306802483226
 Status : Answered
 Chosen Option : 4

✗ 4. whom

Question ID : 630680634309
 Option 1 ID : 6306802483112
 Option 2 ID : 6306802483114
 Option 3 ID : 6306802483113
 Option 4 ID : 6306802483115
 Status : Answered
 Chosen Option : 3

Q.12 निम्नलिखित कथनों पर विचार कीजिए:

- A) भारत का संविधान संघ की कार्यकारी शक्ति औपचारिक रूप से राष्ट्रपति में निहित करता है।
 B) राष्ट्रपति के पास वीटो शक्ति है जिसके द्वारा वह संसद द्वारा पारित विधेयकों को अनुमति देने से रोक सकता है या मना कर सकता है।
 C) भारतीय संसद के दो सदन राज्यसभा और लोकसभा हैं।

- Ans ✗ 1. केवल A और B सत्य हैं
 ✗ 2. केवल A और C सत्य हैं
 ✗ 3. केवल B और C सत्य हैं
 ✓ 4. A, B, C सत्य हैं

Question ID : 630680634335
 Option 1 ID : 6306802483216
 Option 2 ID : 6306802483218
 Option 3 ID : 6306802483217
 Option 4 ID : 6306802483219
 Status : Answered
 Chosen Option : 3

Q.13 2023 में, आईआईटी मद्रास (IIT Madras) के _____ को, उन्नत नैनोस्केल सामग्रियों के उपयोग द्वारा किफायती और संधारणीय स्वच्छ जल उपलब्ध कराने में उनके अभूतपूर्व कार्य के लिए, प्रसिद्ध एनी पुरस्कार (Eni Award) से सम्मानित किया गया है।

- Ans ✗ 1. प्रोफेसर रजनीश कुमार
 ✗ 2. प्रोफेसर इंदुमति नांबी
 ✗ 3. प्रोफेसर लेलिथा देवी वनजाक्षी
 ✓ 4. प्रोफेसर थलप्पिल प्रदीप

Question ID : 630680634331
 Option 1 ID : 6306802483200
 Option 2 ID : 6306802483202
 Option 3 ID : 6306802483203
 Option 4 ID : 6306802483201
 Status : Answered
 Chosen Option : 1

✗ 4.5

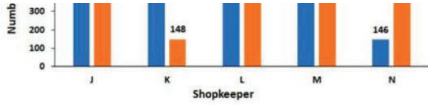
Question ID : 630680634368
Option 1 ID : 6306802483350
Option 2 ID : 6306802483348
Option 3 ID : 6306802483349
Option 4 ID : 6306802483351
Status : Answered
Chosen Option : 2

Q.15 भारत के प्रधान मंत्री नरेंद्र मोदी ने निम्नलिखित में से किस लड़ाकू विमान में उड़ान भरी और ऐसा करने वाले पहले प्रधान मंत्री बन गए?

- Ans
- ✗ 1. वायु (Vayu)
 - ✗ 2. विभूति (Vibuthi)
 - ✗ 3. तलवार (Talwar)
 - ✓ 4. तेजस (Tejas)

Question ID : 630680634339
Option 1 ID : 6306802483235
Option 2 ID : 6306802483232
Option 3 ID : 6306802483234
Option 4 ID : 6306802483233
Status : Answered
Chosen Option : 4

Adda247



Number of books = पुस्तकों की संख्या, Mystery books purchased = मिस्ट्री की खरीदी गई पुस्तकें

Comedy books purchased = कॉमेडी की खरीदी गई पुस्तकें, Shopkeeper = दुकानदार

Ans 1. 1482

2. 1442

3. 1432

4. 1452

Question ID : 630680634384

Option 1 ID : 6306802483412

Option 2 ID : 6306802483413

Option 3 ID : 6306802483415

Option 4 ID : 6306802483414

Status : Answered

Chosen Option : 1

Q.17 Select the option related to the third word in the same way as the second word is related to the first word.

Oven : Baker :: Scalpel : ?

Ans 1. Gardener

2. Surgeon

3. Architect

4. Painter

Question ID : 630680634366

Option 1 ID : 6306802483340

Option 2 ID : 6306802483341

Option 3 ID : 6306802483343

Option 4 ID : 6306802483342

Status : Answered

Chosen Option : 3

✗ 4.7

Question ID : 630680634380
 Option 1 ID : 6306802483397
 Option 2 ID : 6306802483398
 Option 3 ID : 6306802483399
 Option 4 ID : 6306802483396
 Status : Answered
 Chosen Option : 2

Q.19 दो उम्मीदवारों अमन और रीना ने एक चुनाव लड़ा। 70% मतदाताओं ने वोट डाला और कोई भी अवैध वोट नहीं था। डाले गए वोटों में से अमन को 57% वोट मिले और वह 882 वोटों से जीत गया। मतदाता सूची में मतदाताओं की कुल संख्या कितनी है?

- Ans
- ✗ 1. 8000
 - ✗ 2. 10000
 - ✓ 3. 9000
 - ✗ 4. 7000

Question ID : 630680634387
 Option 1 ID : 6306802483425
 Option 2 ID : 6306802483426
 Option 3 ID : 6306802483424
 Option 4 ID : 6306802483427
 Status : Answered
 Chosen Option : 3

Q.20 A trader bought 17 books for 68 rupees. Determine the selling price per book to make a profit of 30%.

- Ans
- ✗ 1. ₹ 7.6
 - ✗ 2. ₹ 4.8
 - ✗ 3. ₹ 6.6
 - ✓ 4. ₹ 5.2

Question ID : 630680634398
 Option 1 ID : 6306802483471
 Option 2 ID : 6306802483470
 Option 3 ID : 6306802483468
 Option 4 ID : 6306802483469
 Status : Answered
 Chosen Option : 4

✓ 3. तुलनात्मक विश्लेषण

✗ 4. सार्वनामिक विशेषण

Question ID : 630680634313
 Option 1 ID : 6306802483131
 Option 2 ID : 6306802483129
 Option 3 ID : 6306802483128
 Option 4 ID : 6306802483130
 Status : Answered
 Chosen Option : 4

Q.22 आबनूस, महोगनी, शीशम, रबर निम्नलिखित में से किस वन के व्यावसायिक रूप से महत्वपूर्ण पेड़ हैं?

- Ans ✓ 1. उष्णकटिबंधीय सदाबहार वन
 ✗ 2. पर्वतीय वन
 ✗ 3. कंटक वन और झाड़ियाँ
 ✗ 4. उष्णकटिबंधीय पर्णपाती वन

Question ID : 630680634344
 Option 1 ID : 6306802483255
 Option 2 ID : 6306802483254
 Option 3 ID : 6306802483252
 Option 4 ID : 6306802483253
 Status : Answered
 Chosen Option : 1

Q.23 लड़कों की एक पंक्ति में, जय, पंक्ति के बाएँ छोर से 11वें स्थान पर है और सागर, पंक्ति के दाएँ छोर से 23वें स्थान पर है। यदि सागर और जय के बीच 14 लड़के हैं। पंक्ति में कितने लड़के हैं?

- Ans ✗ 1. 40
 ✓ 2. 48
 ✗ 3. 44
 ✗ 4. 47

Question ID : 630680634357
 Option 1 ID : 6306802483307
 Option 2 ID : 6306802483306
 Option 3 ID : 6306802483304
 Option 4 ID : 6306802483305
 Status : Answered
 Chosen Option : 2

✗ 4. ₹ 3255

Question ID : 630680634373
Option 1 ID : 6306802483368
Option 2 ID : 6306802483371
Option 3 ID : 6306802483369
Option 4 ID : 6306802483370
Status : Answered
Chosen Option : 2

Q.25 निम्नलिखित प्रश्न में, चार विकल्पों में से, उस विकल्प का चयन करें जो दिए गए शब्द के विलोम शब्द का विकल्प है।
अमर

- Ans ✓ 1. मर्त्य
✗ 2. ग्रहण
✗ 3. थोड़ा
✗ 4. विरोध

Question ID : 630680634321
Option 1 ID : 6306802483163
Option 2 ID : 6306802483160
Option 3 ID : 6306802483162
Option 4 ID : 6306802483161
Status : Answered
Chosen Option : 1

Q.26 पुरुष हॉकी खेल में भारत ने किस टीम को हराकर एशियाई चैंपियंस ट्रॉफी 2023 का खिताब जीता?

- Ans ✗ 1. जापान
✗ 2. दक्षिण कोरिया
✓ 3. मलेशिया
✗ 4. पाकिस्तान

Question ID : 630680634338
Option 1 ID : 6306802483231
Option 2 ID : 6306802483228
Option 3 ID : 6306802483230
Option 4 ID : 6306802483229
Status : Answered
Chosen Option : 2

Question ID : 630680634336
Option 1 ID : 6306802483223
Option 2 ID : 6306802483220
Option 3 ID : 6306802483221
Option 4 ID : 6306802483222
Status : Answered
Chosen Option : 1

Q.28 शिल्पा, धीरज की पत्नी है और धीरज, सुमित का भाई है। सुमित, गगन का पुत्र है। गगन का शिल्पा से क्या संबंध है?

- Ans
- 1. पिता
 - 2. भाई
 - 3. ससुर (पति का पिता)
 - 4. पुत्र

Question ID : 630680634370
Option 1 ID : 6306802483356
Option 2 ID : 6306802483358
Option 3 ID : 6306802483357
Option 4 ID : 6306802483359
Status : Answered
Chosen Option : 3

Q.29 चार क्रमागत पूर्णांकों का योगफल 174 है। इन चार पूर्णांकों में से कौन-सी एक अभाज्य संख्या है?

- Ans
- 1. 37
 - 2. 43
 - 3. 31
 - 4. 41

Question ID : 630680634395
Option 1 ID : 6306802483457
Option 2 ID : 6306802483459
Option 3 ID : 6306802483456
Option 4 ID : 6306802483458
Status : Answered
Chosen Option : 2

✘ 4.117

Question ID : 630680634392
Option 1 ID : 6306802483446
Option 2 ID : 6306802483445
Option 3 ID : 6306802483447
Option 4 ID : 6306802483444
Status : Answered
Chosen Option : 3

