



DELHI METRO RAIL CORPORATION LTD.
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Roll No:	
Participant Name:	
Test Center Name:	
Test Date:	18/04/2018
Test Time:	9:00 AM - 10:30 AM
Subject:	Maintainer Electronic Mechanic RNE11

Section : Domain

Q.1 If a register can work with either serial or parallel inputs/outputs and shift the data either right or left, it is called a:

- Ans**
- ☒ 1. Serial / Parallel Out Register
 - ☒ 2. Bidirectional Register
 - ☒ 3. Universal Register
 - ☒ 4. Serial / Parallel In Register

Question ID : **569090915**
Chosen Option : 3

Q.2 The anode in a Leclanche cell is a _____.

- Ans**
- ☒ 1. Cathode rod
 - ☒ 2. Silver rod
 - ☒ 3. Carbon tube
 - ☒ 4. Zinc container

Question ID : **569090846**
Chosen Option : --

Q.3 In the diagram given below, what is the type of trigger pulse needed to operate the flip flop?



- Ans**
- ☒ 1. Negative edge trigger
 - ☒ 2. Positive edge trigger
 - ☒ 3. Negative level trigger
 - ☒ 4. Positive level trigger

Question ID : **569090913**
Chosen Option : 1

Q.4 Which one of the following is NOT a component of an MCB?

- Ans**
- ☒ 1. Bimetallic strip
 - ☒ 2. Discharge capacitor
 - ☒ 3. On/Off lever
 - ☒ 4. Trip coil

Question ID : **569090886**
Chosen Option : 1

Q.5 How many windings does the stator of a single phase induction motor have?

- Ans**
- ☒ 1. 4
 - ☒ 2. 2
 - ☒ 3. 3
 - ☒ 4. 5

Question ID : **569090902**
Chosen Option : 1

Q.6

An important specification of a laser diode is its _____.

Question ID : 569090883
Chosen Option : 1

- Ans
- ☒ 1. Voltage
 - ☒ 2. Current
 - ☒ 3. Frequency
 - ☒ 4. Resistance

Q.7 Most of the contactors have a diode built inside the case. What is the function of this diode?

Question ID : 569090885
Chosen Option : --

- Ans
- ☒ 1. For the safety of the user
 - ☒ 2. For protecting the circuit against spikes
 - ☒ 3. For providing a DC voltage to the contactor
 - ☒ 4. For clipping the extra voltage

Q.8 How many layers does an SCR have?

Question ID : 569090878
Chosen Option : 2

- Ans
- ☒ 1. 6
 - ☒ 2. 4
 - ☒ 3. 2
 - ☒ 4. 3

Q.9 In which region is the transistor operating if the Emitter Base junction is forward biased and the Collector Base junction is reverse biased?

Question ID : 569090867
Chosen Option : 4

- Ans
- ☒ 1. Saturation
 - ☒ 2. Balanced
 - ☒ 3. Cutoff
 - ☒ 4. Active

Q.10 What is the purpose of a diode connected between the gate and cathode of an SCR?

Question ID : 569090881
Chosen Option : --

- Ans
- ☒ 1. To protect the gate against high frequencies.
 - ☒ 2. To allow the gate to operate for negative voltages.
 - ☒ 3. For commutation.
 - ☒ 4. To protect the junction against reverse gate voltage.

Q.11 How many parasitic elements does a Yagi antenna have?

Question ID : 569090895
Chosen Option : --

- Ans
- ☒ 1. 6
 - ☒ 2. 4
 - ☒ 3. 8
 - ☒ 4. 2

Q.12 A 2 V lead acid cell has an internal resistance of 1 ohm. What will be the value of current flowing through a 100 ohm resistor connected to this cell?

Question ID : 569090847
Chosen Option : 1

- Ans
- ☒ 1. 19.8 mA
 - ☒ 2. 20.01 mA
 - ☒ 3. 1.98 mA
 - ☒ 4. 2.01 mA

Q.13 The minimum acceptable input value for Logic 1 in TTL logic is _____.

Question ID : 569090907
Chosen Option : 1

- Ans
- ☒ 1. 5.0 V

- ☒ 2. 2.0 V
☐ 3. 2.6 V
☐ 4. 3.5 V

Q.14 Identify the number of radians in a complete cycle.

Question ID : 569090843

Chosen Option : 2

- Ans ☐ 1. π
☒ 2. 2π
☐ 3. $\frac{\pi}{2}$
☐ 4. $\frac{3\pi}{2}$

Q.15 A transformer is connected to 250 Volts in the primary and the secondary voltage is 500 Volts. If the number of turns in the primary is 1000, what is the number of turns in the secondary?

Question ID : 569090853

Chosen Option : 4

- Ans ☐ 1. 250
☐ 2. 500
☐ 3. 1000
☒ 4. 2000

Q.16 Identify the term used to indicate the potential difference between two terminals.

Question ID : 569090842

Chosen Option : 2

- Ans ☐ 1. MMF
☒ 2. EMF
☐ 3. VA
☐ 4. ETF

Q.17 What does an inductive proximity sensor use to switch the output state?

Question ID : 569090899

Chosen Option : --

- Ans ☐ 1. Change in capacitance
☐ 2. Change in incoming voltage
☐ 3. Change in incoming light
☒ 4. Change in oscillation frequency

Q.18 What is the maximum modulating frequency transmitted in FM?

Question ID : 569090896

Chosen Option : --

- Ans ☒ 1. 15 kHz
☐ 2. 58 kHz
☐ 3. 22 kHz
☐ 4. 108 kHz

Q.19 How many bits can a single full adder circuit add?

Question ID : 569090909

Chosen Option : 4

- Ans ☐ 1. 2
☐ 2. 4
☐ 3. 5
☒ 4. 3

Q.20 What is the synchronous speed of a 4 pole induction motor running on 220 V, 50 Hz supply?

Question ID : 569090903

Chosen Option : --

- Ans ☐ 1. 1000 RPM
☐ 2. 4800 RPM
☐ 3. 2000 RPM
☒ 4. 1500 RPM

Q.21 When used in multivibrator circuits, the transistors operate as _____.

- Ans
- ☒ 1. non-linear amplifiers
 - ☒ 2. switches
 - ☒ 3. linear amplifiers
 - ☒ 4. error amplifiers

Question ID : 569090873
Chosen Option : 2

Q.22 Which one of the materials given below is NOT a preferred material for construction of LEDs?

- Ans
- ☒ 1. Gallium phosphide
 - ☒ 2. Gallium arsenide
 - ☒ 3. Gallium arsenide phosphide
 - ☒ 4. Silicon phosphide

Question ID : 569090882
Chosen Option : 4

Q.23 In fiber optic communications involving large distances and high speed transmission, which one of the following diodes is best suited as a source of light?

- Ans
- ☒ 1. Laser diode
 - ☒ 2. Photo diode
 - ☒ 3. PIN diode
 - ☒ 4. LED

Question ID : 569090900
Chosen Option : 2

Q.24 The number of flip flops needed to construct a decade counter is _____.

- Ans
- ☒ 1. 2
 - ☒ 2. 4
 - ☒ 3. 5
 - ☒ 4. 3

Question ID : 569090912
Chosen Option : 2

Q.25 Heat sink is used to _____.

- Ans
- ☒ 1. decrease distortion
 - ☒ 2. prevent PCB damage
 - ☒ 3. decrease noise
 - ☒ 4. prevent thermal runaway

Question ID : 569090868
Chosen Option : 4

Q.26 The expansion of the term HDMI is _____.

- Ans
- ☒ 1. High Definition Media Interactor
 - ☒ 2. High Definition Multimedia Interface
 - ☒ 3. High Definition Media Interchange
 - ☒ 4. High Distortion Media Indicator

Question ID : 569090905
Chosen Option : 2

Q.27 A current of 1 mA is passing through a carbon film resistor when connected to a 10 V supply. Identify the colour code of the resistor.

- Ans
- ☒ 1. Brown, Black, Orange
 - ☒ 2. Black, Brown, Orange
 - ☒ 3. Brown, Black, Red
 - ☒ 4. Black, Brown, Red

Question ID : 569090849
Chosen Option : 1

Q.28 Which process is employed in a digital storage oscilloscope during Data Acquisition?

- Ans
- ☒ 1. Chopping

Question ID : 569090857
Chosen Option : 1

- ☒ 2. Analysing
- ☒ 3. Filtering
- ☒ 4. Sampling

Q.29 For an SCR, commutation is the term used to describe _____.

- Ans
- ☒ 1. Controlling angle
 - ☒ 2. Latching state
 - ☒ 3. Switching on
 - ☒ 4. Switching off

Question ID : 569090879
Chosen Option : 1

Q.30 Identify the feature of an autotransformer from the given options.

- Ans
- ☒ 1. Automatic tap changing in secondary
 - ☒ 2. Has a single winding
 - ☒ 3. Has very few turns in the secondary
 - ☒ 4. Used for isolation

Question ID : 569090854
Chosen Option : 2

Q.31 Identify the function of a multiplier in a voltmeter.

- Ans
- ☒ 1. To increase its bandwidth
 - ☒ 2. To increase its response time
 - ☒ 3. To increase its accuracy
 - ☒ 4. To extend its range

Question ID : 569090859
Chosen Option : --

Q.32 The wavelength of the IR signal used in TV remote controls is _____.

- Ans
- ☒ 1. 1020 nm
 - ☒ 2. 460 nm
 - ☒ 3. 980 nm
 - ☒ 4. 100 nm

Question ID : 569090906
Chosen Option : --

Q.33 Which of the following does NOT have four electrons in its outermost orbit?

- Ans
- ☒ 1. Antimony
 - ☒ 2. Carbon
 - ☒ 3. Silicon
 - ☒ 4. Germanium

Question ID : 569090864
Chosen Option : 2

Q.34 The binary equivalent of the hexadecimal number FF is _____.

- Ans
- ☒ 1. 11111111
 - ☒ 2. 10001000
 - ☒ 3. 10000000
 - ☒ 4. 10101010

Question ID : 569090908
Chosen Option : 1

Q.35 The LCR bridge employs _____ for measurements in the low to medium frequency range.

- Ans
- ☒ 1. Wheatstone bridge
 - ☒ 2. Differential measurement
 - ☒ 3. Series resistances
 - ☒ 4. Power measurement

Question ID : 569090860
Chosen Option : --

Q.36 In case of overloading, IC voltage regulators reduce both the output current and voltage for protection of the IC. What is this feature called?

- Ans
- ☒ 1. Crowbar protection
 - ☒ 2. Fold back current limiting
 - ☒ 3. Feedback current limiting
 - ☒ 4. Reverse switching

Question ID : 569090889

Chosen Option : --

Q.37 In an RC phase shift oscillator, the total phase shift provided by the RC networks is _____.

- Ans
- ☒ 1. 180 degrees
 - ☒ 2. 120 degrees
 - ☒ 3. 90 degrees
 - ☒ 4. 60 degrees

Question ID : 569090872

Chosen Option : 1

Q.38 The number of triggering modes for a Triac is _____.

- Ans
- ☒ 1. 4
 - ☒ 2. 1
 - ☒ 3. 2
 - ☒ 4. 3

Question ID : 569090880

Chosen Option : 2

Q.39 A photo sensor switch contains which of the following components?

- Ans
- ☒ 1. LED and Switch
 - ☒ 2. LED and LDR
 - ☒ 3. Photodiode and Switch
 - ☒ 4. LED and Photodiode

Question ID : 569090884

Chosen Option : 2

Q.40 An LVDT is a transducer used to measure _____.

- Ans
- ☒ 1. Angular Velocity
 - ☒ 2. Linear Displacement
 - ☒ 3. Linear Velocity
 - ☒ 4. Angular Displacement

Question ID : 569090897

Chosen Option : 2

Q.41 How many select lines are needed to realise an 8 : 1 multiplexer?

- Ans
- ☒ 1. 1
 - ☒ 2. 2
 - ☒ 3. 3
 - ☒ 4. 4

Question ID : 569090910

Chosen Option : 3

Q.42 Which of the following is NOT a characteristic of an ideal OP Amp?

- Ans
- ☒ 1. Infinite open loop gain
 - ☒ 2. Infinite bandwidth
 - ☒ 3. Infinite input impedance
 - ☒ 4. Infinite offset voltage

Question ID : 569090874

Chosen Option : 4

Q.43 The internal resistance of a voltmeter is _____.

- Ans
- ☒ 1. zero

Question ID : 569090858

Chosen Option : --

✓ 2. very high

✗ 3. low

✗ 4. infinity

Q.44 If the value of β is 99, the value of α will be _____.

Question ID : 569090866

Chosen Option : 1

Ans ✓ 1. 0.99

✗ 2. 9.99

✗ 3. 99.9

✗ 4. 0.09

Q.45 Identify the correct statement for a 3 phase Star connection.

Question ID : 569090845

Chosen Option : 4

Ans ✗ 1. Line Voltage < Phase Voltage

✗ 2. Line Current < Phase Current

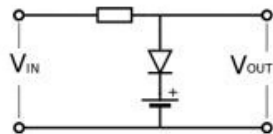
✓ 3. Line Current = Phase Current

✗ 4. Line Voltage = Phase Voltage

Q.46 What will be the output of the given circuit?

Question ID : 569090861

Chosen Option : 2



Ans ✗ 1. Positive half cycles only

✓ 2.

Partially clipped positive half cycle and full negative cycle

✗ 3. Negative half cycles only

✗ 4.

Partially clipped negative half cycle and full positive cycle

Q.47 A power amplifier gives an output power of 1 W for an input of 100 mW. Its power gain expressed in dB is:

Question ID : 569090870

Chosen Option : 3

Ans ✗ 1. 50

✗ 2. 100

✓ 3. 10

✗ 4. 1

Q.48 Frequency selective amplifiers employ _____ for coupling.

Question ID : 569090871

Chosen Option : --

Ans ✗ 1. Inductors

✓ 2. Tuned Circuits

✗ 3. Transformers

✗ 4. Capacitors

Q.49 What is the term that measures the ability of a receiver to receive even the weakest signals?

Question ID : 569090892

Chosen Option : 1

Ans ✓ 1. Sensitivity

✗ 2. Rejection

✗ 3. Selectivity

X 4. Filtering**Q.50** When the operating point of a transistor is at cutoff, what is the conduction angle of the amplifier?

- Ans**
- X 1.** 90 degrees
 - ✓ 2.** 180 degrees
 - X 3.** 0 degrees
 - X 4.** 270 degrees

Question ID : **569090869**
Chosen Option : **3**

Q.51 One of the advantages of an FET over BJT is _____.

- Ans**
- X 1.** Lower operating frequency
 - X 2.** Lesser supply voltage
 - X 3.** More number of terminals
 - ✓ 4.** Higher switching speeds

Question ID : **569090877**
Chosen Option : **--**

Q.52 To make a 555 IC work as a pulse width modulator, to which pin should the variable voltage be applied?

- Ans**
- X 1.** Threshold pin
 - X 2.** Trigger pin
 - ✓ 3.** Control pin
 - X 4.** Discharge pin

Question ID : **569090875**
Chosen Option : **1**

Q.53 What type of regulator is the IC 7812?

- Ans**
- X 1.** -12 volts regulator
 - X 2.** Single +8.12 volts regulator
 - ✓ 3.** +12 volts regulator
 - X 4.** Dual 7.81 volts regulator

Question ID : **569090888**
Chosen Option : **3**

Q.54 In which stage of communication is Pre Emphasis performed?

- Ans**
- X 1.** Receiver
 - X 2.** Audio Amplifier
 - X 3.** Antenna
 - ✓ 4.** Transmitter

Question ID : **569090893**
Chosen Option : **1**

Q.55 Which component is used with a relay to avoid damage due to the collapsing magnetic field?

- Ans**
- ✓ 1.** Diode
 - X 2.** Fuse
 - X 3.** Capacitor
 - X 4.** Thermistor

Question ID : **569090852**
Chosen Option : **--**

Q.56 What type of insulation is provided for thermocouple cables?

- Ans**
- ✓ 1.** Mineral Insulated
 - X 2.** Glass Insulation
 - X 3.** PVC Cable
 - X 4.** Cotton Sleeve

Question ID : **569090898**
Chosen Option : **--**

Q.57 The effective value of a Sine Wave of 100 V_{pp} is _____.

- Ans ☒ 1. 70.71 volts
☒ 2. 50.0 volts
☒ 3. 35.35 volts
☒ 4. 63.7 volts

Question ID : 569090844

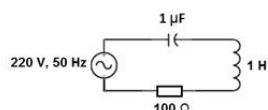
Chosen Option : 3

Q.58 What is the type of display used in LED TV?

- Ans ☒ 1. LED
☒ 2. TFT
☒ 3. Plasma
☒ 4. LCD

Question ID : 569090904

Chosen Option : 1

Q.59 Identify the value of the current flowing through the given circuit at resonance.

- Ans ☒ 1. 22.5 A
☒ 2. 12.5 A
☒ 3. 10 A
☒ 4. 2.2 A

Question ID : 569090850

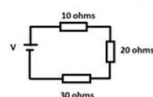
Chosen Option : --

Q.60 Which of the statements holds true for a transformer to have maximum efficiency?

- Ans ☒ 1. Copper Losses = 0
☒ 2. Copper Losses = Iron Losses
☒ 3. Copper Losses > Iron Losses
☒ 4. Copper Losses < Iron Losses

Question ID : 569090855

Chosen Option : 1

Q.61 What will be the value of voltage V in the given circuit if a current of 2 Amps is flowing through the circuit?

- Ans ☒ 1. 120 volts
☒ 2. 20 volts
☒ 3. 60 volts
☒ 4. 40 volts

Question ID : 569090848

Chosen Option : 1

Q.62 Which of the following statements is true for a Common Emitter configuration?

- Ans ☒ 1. It has only Current Gain
☒ 2. It has only Voltage Gain
☒ 3. It is called Emitter Follower
☒ 4. It has both Current and Voltage Gains

Question ID : 569090865

Chosen Option : 4

Q.63 Identify the value of the power factor of a parallel resonant circuit at resonance.

- Ans ☒ 1. 0.5
☒ 2. 1
☒ 3. 0.75
☒ 4. 0

Question ID : 569090851

Chosen Option : --

Q.64 Ground wave propagation is suitable for which of the following frequencies?

Question ID : 569090894

Chosen Option : --

- Ans
- ☒ 1. <50 MHz
 - ☒ 2. <5 GHz
 - ☒ 3. <5 MHz
 - ☒ 4. <500 kHz

Q.65 Which mode is used to measure the phase difference between two signals in an oscilloscope?

Question ID : 569090856

Chosen Option : 4

- Ans
- ☒ 1. X mode
 - ☒ 2. Chop mode
 - ☒ 3. Alt mode
 - ☒ 4. X - Y mode

Q.66 A current of 1.6 A is flowing through a wire of unit cross sectional area. How many electrons are moving through this wire per second?

Question ID : 569090841

Chosen Option : --

- Ans
- ☒ 1. 1.6×10^{10}
 - ☒ 2. 1.6×10^{19}
 - ☒ 3. 10^{19}
 - ☒ 4. 10^{10}

Q.67 The function of a Clamper circuit is to _____.

Question ID : 569090862

Chosen Option : 2

- Ans
- ☒ 1. limit the negative peak
 - ☒ 2. remove the DC value
 - ☒ 3. limit the positive peak
 - ☒ 4. insert a DC value

Q.68 In an AM signal, the number of sidebands is _____.

Question ID : 569090891

Chosen Option : 1

- Ans
- ☒ 1. 2
 - ☒ 2. 6
 - ☒ 3. 4
 - ☒ 4. 8

Q.69 The refractive index of an optical fiber varies when the distance from the core is varied. Identify the type of optical fiber from the options given.

Question ID : 569090901

Chosen Option : --

- Ans
- ☒ 1. Graded index fiber
 - ☒ 2. Linear index fiber
 - ☒ 3. Non-linear index fiber
 - ☒ 4. Step index fiber

Q.70 A NOR gate SR flip flop has both inputs at logic 0. The output of this flip flop _____.

Question ID : 569090911

Chosen Option : 4

- Ans
- ☒ 1. toggles
 - ☒ 2. is LOW
 - ☒ 3. does not change
 - ☒ 4. is HIGH

Q.71 What is the term that indicates the current which a fuse can carry without interrupting the circuit in which it is connected?

Question ID : 569090887

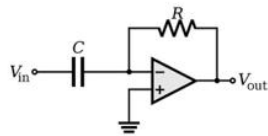
Chosen Option : 1

- Ans
- ☒ 1. Current carrying capacity
 - ☒ 2. Peak current

☒ 3. Breaking current

☒ 4. Latching current

Q.72 Identify the name of the OP Amp circuit in the diagram given below.



Question ID : 569090876

Chosen Option : 3

Ans ☒ 1. Integrator

☒ 2. Non Inverting Amplifier

☒ 3. Differentiator

☒ 4. Inverting Amplifier

Q.73 The number of output states in a Schmitt trigger circuit is _____.

Ans ☒ 1. 2

☒ 2. 8

☒ 3. 10

☒ 4. 4

Question ID : 569090863

Chosen Option : 1

Q.74 In a seven segment display, the LED segments light up when the corresponding pins are connected to ground. This type of display is _____.

Ans ☒ 1. Common cathode display

☒ 2. Common anode display

☒ 3. Common logic display

☒ 4. Common grid display

Question ID : 569090914

Chosen Option : 1

Q.75 In electronics communications, the undesirable interference is referred to as _____.

Ans ☒ 1. Noise

☒ 2. Spike

☒ 3. Distortion

☒ 4. Glitch

Question ID : 569090890

Chosen Option : 1

Section : General Awareness

Q.1 Which of these cities is not included in the centrally sponsored Smart Cities Mission?

Ans ☒ 1. Kalyan-Dombivali

☒ 2. Solapur

☒ 3. Pune

☒ 4. Latur

Question ID : 569090926

Chosen Option : 4

Q.2 Name the position that Muhammad Ali Jinnah held as the head of Pakistan from its formation till his death.

Ans ☒ 1. Governor General of Pakistan

☒ 2. Sultan of Pakistan

☒ 3. President of Pakistan

☒ 4. Prime Minister of Pakistan

Question ID : 569090918

Chosen Option : 4

Q.3 The number of ministers, including the Chief Minister in a state, cannot be less than:

Ans ☒ 1. 38

Question ID : 569090921

Chosen Option : 2

- ✓ 2. 12
✗ 3. 26
✗ 4. 18

Q.4 Kanyakumari, the southernmost tip of peninsular India, is nearest to which of these lines?

- Ans** ✗ 1. Greenwich Meridian
✗ 2. Tropic of Cancer
✓ 3. Equator
✗ 4. Tropic of Capricorn

Question ID : **569090920**
Chosen Option : 3

Q.5 The Gangaur festival, glorifying the celestial couple of Shiva and Gauri, is primarily celebrated in which Indian state?

- Ans** ✗ 1. Punjab
✗ 2. Maharashtra
✓ 3. Rajasthan
✗ 4. Orissa

Question ID : **569090924**
Chosen Option : --

Q.6 The then capital city of Indus Valley Civilization Harappa is located in the _____ province of Pakistan.

- Ans** ✓ 1. Punjab
✗ 2. Baluchistan
✗ 3. Khyber Pakhtunkhwa
✗ 4. Sind

Question ID : **569090916**
Chosen Option : 4

Q.7 Name the smallest state of India by population.

- Ans** ✗ 1. Goa
✗ 2. Tripura
✗ 3. Mizoram
✓ 4. Sikkim

Question ID : **569090919**
Chosen Option : 4

Q.8 What is the IBC Amendment Bill related to?

- Ans** ✗ 1. Corruption in government
✗ 2. Information and broadcasting rights
✗ 3. Intellectual Property Rights (IPR)
✓ 4. Insolvency and bankruptcy

Question ID : **569090922**
Chosen Option : 4

Q.9 In which year did Burma (now Myanmar) become an independent republic nation?

- Ans** ✗ 1. 1944
✗ 2. 1958
✓ 3. 1948
✗ 4. 1950

Question ID : **569090917**
Chosen Option : --

Q.10 Total FDI inflow in India has gone up by _____ in the last three years.

- Ans** ✓ 1. 38%
✗ 2. 22%
✗ 3. 45%
✗ 4. 12%

Question ID : **569090923**
Chosen Option : --

Q.11 Who is the first Indian to win a gold medal in an international fencing event?

Question ID : 569090925

Chosen Option : --

- Ans
- ☒ 1. Bhavani Devi
 - ☐ 2. Neha Karmakar
 - ☐ 3. Ruchi Trikha
 - ☐ 4. P.V. Sindhu

Q.12 Which city of the following has hosted the FIFA U-17 world cup matches?

Question ID : 569090927

Chosen Option : --

- Ans
- ☐ 1. Mumbai
 - ☐ 2. Nagpur
 - ☐ 3. Pune
 - ☒ 4. Navi Mumbai

Section : Quantitative Aptitude

Q.1 One of the factors of the expression $x(3x + 2)(x - 2)(3x - 4) - 21$ is:

Question ID : 569090938

Chosen Option : --

- Ans
- ☐ 1. $3x^2 - 4x + 7$
 - ☒ 2. $3x^2 - 4x + 3$
 - ☐ 3. $3x^2 + 4x - 7$
 - ☐ 4. $3x^2 + 4x - 3$

Q.2 Surbhi sets out to walk from place A towards place B. At the same time, Abhi starts to walk from B to A. After meeting each other, Surbhi and Abhi take 3 hour 20 minutes and 4 hour 48 minutes respectively to reach their destinations. If Surbhi walks at 9 km/h, then the speed of Abhi (in km/h) is:

Question ID : 569090932

Chosen Option : --

- Ans
- ☒ 1. $7\frac{1}{2}$
 - ☐ 2. $6\frac{1}{2}$
 - ☐ 3. 6
 - ☐ 4. 8

Q.3 Two pillars A and B of heights h_1 and h_2 respectively stand on either side of a road that is 50 m wide. At a point on the road between A and B, 10 m away from A, the angles of elevation of the tops of A and B are 60° and 30° , respectively. What is $h_1 : h_2$?

Question ID : 569090936

Chosen Option : 2

- Ans
- ☐ 1. $\sqrt{3} : 2$
 - ☒ 2. 3 : 4
 - ☐ 3. 4 : 3
 - ☐ 4. $2 : \sqrt{3}$

Q.4 The average score in mathematics of students in a class is x and the ratio of the number of boys to that of girls is 4 : 3. If the average score of girls is $x + 6$, then the average score of boys is:

Question ID : 569090934

Chosen Option : 4

- Ans
- ☐ 1. $x - 8$
 - ☐ 2. $x + 9$
 - ☐ 3. $x + 8$
 - ☒ 4. $x - 4.5$

Q.5 In an arithmetic series of 24 terms, if the sum of a_i , $i = 1, 5, 10, 15, 20, 24$ is 225, where a_i denotes i^{th} term, then the sum of the series is:

Question ID : 569090935

Chosen Option : --

- Ans
- ☐ 1. 850
 - ☐ 2. 450
 - ☒ 3. 900
 - ☐ 4. 750

Q.6 Three men and 4 women earn ₹ 36,400 in 7 days, whereas 16 men and 13 women earn ₹ 1,75,200 in 8 days. In how many days 4 men and 5 women will earn ₹ 40,200?

- Ans ☒ 1. 6
☒ 2. 9
☒ 3. 10
☒ 4. 8

Question ID : 569090933
 Chosen Option : --

Q.7 Gaurav bought 864 articles and sold 800 of them for the price he paid for all 864 articles. He sold the remaining articles at the same price per article as the first 800. The percentage gain is:

- Ans ☒ 1. 8
☒ 2. $8\frac{1}{2}$
☒ 3. 9
☒ 4. $7\frac{1}{2}$

Question ID : 569090930
 Chosen Option : --

Q.8 What is the value of $2(\sin^6 \theta + \cos^6 \theta) - 3(\sin^4 \theta + \cos^4 \theta) + 4$?

- Ans ☒ 1. 1
☒ 2. 3
☒ 3. 5
☒ 4. 0

Question ID : 569090937
 Chosen Option : --

Q.9 If the equations $3x^2 + 4kx + 2 = 0$ and $2x^2 + 3x - 2 = 0$ have a common root, then the sum of possible values of k is:

- Ans ☒ 1. $\frac{3}{8}$
☒ 2. $\frac{9}{4}$
☒ 3. $\frac{13}{8}$
☒ 4. 2

Question ID : 569090939
 Chosen Option : --

Q.10 Let x be the least number which, on being divided by 5, 6, 8, 9 and 12, leaves in each case a remainder of 1. This number x is exactly divisible by 13. What is the sum of the digits of x ?

- Ans ☒ 1. 11
☒ 2. 13
☒ 3. 9
☒ 4. 10

Question ID : 569090928
 Chosen Option : --

Q.11 Two identical jars are full of solutions of alcohol and water. One jar contains 60% alcohol whereas the other contains $33\frac{1}{3}\%$ water. If the contents of these jars are emptied into a third jar and mixed, the percentage of alcohol in resulting solution will be:

- Ans ☒ 1. $63\frac{1}{3}$
☒ 2. $60\frac{1}{3}$
☒ 3. $62\frac{2}{3}$
☒ 4. $60\frac{2}{3}$

Question ID : 569090931
 Chosen Option : 1

Q.12 Let N be the greatest natural number that will divide 13511, 13903 and 14589, leaving the same remainder in each case. The difference between N and the remainder is:

- Ans ☒ 1. 13
☒ 2. 17
☒ 3. 14
☒ 4. 18

Question ID : 569090929
 Chosen Option : --

Section : General Intelligence and Reasoning

Q.1 What will come in place of the blank in the series?

6, 8, 12, 18, 26, 36, _____

- Ans
- ☒ 1. 52
 - ☒ 2. 48
 - ☒ 3. 54
 - ☒ 4. 45

Question ID : 569090950
Chosen Option : --

Q.2 Which word CANNOT be formed using letters of the given word only as many times as each letter appears in the word?

ADVERTISE

- Ans
- ☒ 1. SATIRE
 - ☒ 2. DERIVATE
 - ☒ 3. STERIOD
 - ☒ 4. SEDATIVE

Question ID : 569090945
Chosen Option : 3

Q.3 Introducing a man, Garima said, "He is my mother's only son's only sister's son." How is the man related to Garima?

- Ans
- ☒ 1. Brother-in-law
 - ☒ 2. Brother
 - ☒ 3. Son
 - ☒ 4. Cousin

Question ID : 569090940
Chosen Option : 3

Q.4 What will be the value of the expression given below if the sign ' $\times$ ' is interchanged with '+' and the number '4' is interchanged with '5'?

$(21 + 5) \times 4 = ?$

- Ans
- ☒ 1. 41
 - ☒ 2. 30
 - ☒ 3. 109
 - ☒ 4. 89

Question ID : 569090946
Chosen Option : 2

Q.5 Manoj walks from his home to the cowshed on his farm. He starts by facing West. After walking for 5 km, he turns to his left and walks for a distance of 3 km. Then, he turns left and walks for another 1 km to reach the cowshed.

To which direction is Manoj's cowshed located with respect to his home?

- Ans
- ☒ 1. South-West
 - ☒ 2. South-East
 - ☒ 3. North-West
 - ☒ 4. North-East

Question ID : 569090949
Chosen Option : --

Q.6 Select the option that is related to the third term in the same way as the second term is related to the first term.

Carpenter : Wood :: Cobbler : ?

- Ans
- ☒ 1. Silk
 - ☒ 2. Cloth
 - ☒ 3. Leather
 - ☒ 4. Iron

Question ID : 569090942
Chosen Option : 3

Q.7 What will come in place of the blank in the series?

50, 55, 61, 68, 76, 85, _____

- Ans
- ☒ 1. 94
 - ☒ 2. 96

Question ID : 569090951
Chosen Option : 3

- ✓ 3. 95
 ✗ 4. 93

Q.8 In a certain code language, 'POINT' is written as 'KLRMG' and 'RACE' is written as 'IZXV'. How will 'NOTICE' be written in that code?

- Ans** ✗ 1. MLHSZV
 ✓ 2. MLGRXV
 ✗ 3. LMGRZW
 ✗ 4. MKHSWZ

Question ID : **569090948**
 Chosen Option : 2

Q.9 Sula is taller than Ada. Zebu is taller than Sula. Ada is taller than Vanessa but shorter than Tanu. Tanu is not as tall as Sula. Who among the following has two friends taller and two friends shorter than her?

- Ans** ✗ 1. Ada
 ✗ 2. Sula
 ✓ 3. Tanu
 ✗ 4. Zebu

Question ID : **569090943**
 Chosen Option : 3

Q.10 Five friends, J, K, L, M and N are sitting in a circle facing one another. J is not sitting next to N or L. K is sitting next to L. N is sitting to M's immediate left.

Who is sitting between L and J?

- Ans** ✓ 1. Only K
 ✗ 2. Only M
 ✗ 3. Only N
 ✗ 4. Nobody

Question ID : **569090944**
 Chosen Option : --

Q.11 Select the option that is related to the third term in the same way as the second term is related to the first term.

76 : 42 :: 98 : ?

- Ans** ✗ 1. 62
 ✗ 2. 75
 ✓ 3. 72
 ✗ 4. 86

Question ID : **569090941**
 Chosen Option : --

Q.12 In a certain code, 'MOVE' is written as '\$ @ %' and 'RUN' is written as '* × +'. How will the word 'OVER' be written in that code?

- Ans** ✗ 1. \$ # @ *
 ✗ 2. @ \$ * #
 ✓ 3. \$ @ % *
 ✗ 4. \$ × @ %

Question ID : **569090947**
 Chosen Option : 3

Section : General English

Q.1 Select the correct passive form of the given sentence.

The teacher praised Avika for her dance.

- Ans** ✗ 1. Avika is being praised by the teacher for her dance.
 ✓ 2. Avika was praised by the teacher for her dance.
 ✗ 3. Avika praised the teacher for her dance.
 ✗ 4. The teacher was praised by Avika for her dance.

Question ID : **569090957**
 Chosen Option : 1

Q.2 Select the antonym of the given word.

Question ID : 569090958
Chosen Option : 1

ARRIVE

- Ans
- ☒ 1. Depart
 - ☐ 2. Come
 - ☐ 3. Appear
 - ☐ 4. Enter

Q.3 Select the most appropriate option to fill in the blank.

Question ID : 569090954
Chosen Option : 1

Dalhousie is _____ than Chamba.

- Ans
- ☒ 1. cooler
 - ☐ 2. more cool
 - ☐ 3. cool
 - ☐ 4. coolest

Q.4 Select the most appropriate option to fill in the blanks.

Question ID : 569090955
Chosen Option : 3

Alice opened the door. _____ led _____ into a narrow passage.

- Ans
- ☒ 1. It, her
 - ☐ 2. He, her
 - ☐ 3. She, it
 - ☐ 4. This, she

Q.5 Select the adverb in the given sentence.

Question ID : 569090952
Chosen Option : 2

He always tries to do his best.

- Ans
- ☐ 1. best
 - ☒ 2. always
 - ☐ 3. tries
 - ☐ 4. his

Q.6 Select the most appropriate option to fill in the blank.

Question ID : 569090953
Chosen Option : 1

The telephone was invented _____ Graham Bell.

- Ans
- ☒ 1. by
 - ☐ 2. at
 - ☐ 3. with
 - ☐ 4. from

Q.7 Select the option that gives the correct indirect form of the given sentence.

Question ID : 569090956
Chosen Option : 3

Mother asked me, "Are you coming home with me?"

- Ans
- ☐ 1. Mother asked me if she was coming home with her.
 - ☐ 2. Mother asked me you are coming home with me.

 3.

Mother asked me if I was coming home with her.

 4.

Mother asked me that I was coming home with her.

Q.8 Select the synonym of the given word.

Question ID : 569090959

Chosen Option : 3

BOLD

Ans  1. Proud

 2. Rude

 3. Brave

 4. Timid

Q.9 Select the most appropriate idiom to fill in the blank.

Question ID : 569090960

Chosen Option : --

The dog had a serious accident. It was _____ dead.

Ans  1. beside itself

 2. as good as

 3. in and out

 4. in the air