NRL
GET

Previous Year Paper
Electrical 23 Sept 2021

NUMALIGARH REFINERY LIMITED

A GOVERNMENT OF INDIA ENTERPRISE

Participant ID	
Participant Name	
Test Center Name	iON Digital Zone iDZ Lahowal
Test Date	22/09/2021
Test Time	9:00 AM - 10:30 AM
Subject	GET-Electrical
Marks Obtained	75

Section : **GET-Electrical**

Q.1 Which of the following term is NOT related to DC machine?

Ans
- ✗ 1. Yoke
- ✗ 2. Armature
- ✓ 3. Damping winding
- ✗ 4. Brushes

Question Type : **MCQ**
Question ID : **308920747**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.2 What is the value of power of an energy signal?

Ans
- ✗ 1. 0.5
- ✗ 2. 1
- ✗ 3. infinite
- ✓ 4. 0

Question Type : **MCQ**
Question ID : **308920742**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.3 Which of the following loss is least significant, while calculating the efficiency of the DC machine?

Ans
- ✗ 1. Field copper loss
- ✗ 2. Iron loss
- ✗ 3. Armature copper loss
- ✓ 4. Mechanical loss

Question Type : **MCQ**
Question ID : **308920753**
Status : **Answered**
Chosen Option : **1**
Marks : **0**

Q.4 **In a DC machine, with the number poles being equal to 2, which of the following is possible?**

Ans

✗ 1. Electrical degrees = 8 × (mechanical degrees)

✓ 2. Electrical degrees = mechanical degrees

✗ 3. Electrical degrees = 2 × (mechanical degrees)

✗ 4. Electrical degrees = 4 × (mechanical degrees)

Question Type : **MCQ**
Question ID : **308920749**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.5 **If a transfer function of a system has only one root on positive real axis then its response will be _____.**

Ans

✗ 1. exponentially decaying

✗ 2. oscillatory

✓ 3. exponentially raising

✗ 4. damped oscillatory

Question Type : **MCQ**
Question ID : **308920738**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.6 **With which of the following is inductance of a transmission line is directly proportional?**

Ans

✗ 1. Diameter of the conductor

✗ 2. 1/line length

✗ 3. Current carried by the conductors

✓ 4. Spacing between the phase conductors

Question Type : **MCQ**
Question ID : **308920775**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.7 **Which of the following is(are) independent of circuit voltage?**

1. Current
2.Bandwidth
3.Quality factor
4.Resonant frequency

Ans

✗ 1. 2 and 3

✗ 2. 1,2 and 3

✗ 3. 1,2 and 4

✓ 4. 2,3 and 4

Question Type : **MCQ**
Question ID : **308920708**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.8 **A buck-boost converter with source voltage of 12 V delivers a load at 24 V with a duty ratio of _____.**

Ans

✗ 1. 0.33

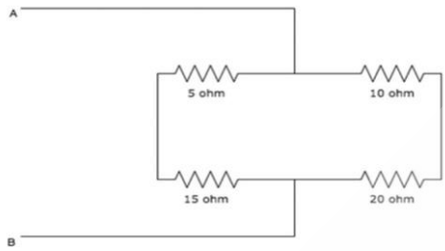
✓ 2. 0.67

✗ 3. 0.5

✗ 4. 0.86

Question Type : **MCQ**
Question ID : **308920721**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.9



In the given network, if the 10-ohm resistor is short circuited, then the equivalent resistance between A and B is equal to _____.

Ans

✗ 1. 20 ohm

✓ 2. 10 ohm

✗ 3. 15 ohm

✗ 4. 5 ohm

Question Type : **MCQ**
Question ID : **308920702**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.10 **A boost converter is supplying a load of 24 W at a voltage of 12 V. If the source voltage is 6V then the source current of converter under steady state is _____.**

Ans

✗ 1. 8 A

✓ 2. 4 A

✗ 3. 2 A

✗ 4. 1 A

Question Type : **MCQ**
Question ID : **308920716**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.11 **In a system, transients are caused due to _____.**

Ans

✔ 1. Storage elements

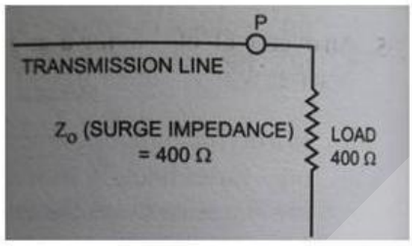
✗ 2. friction

✗ 3. Acting forces

✗ 4. coupling

Question Type : **MCQ**
Question ID : **308920732**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.12



With the details provided in the given circuit, calculate reflection coefficient?

Ans

✗ 1. 1

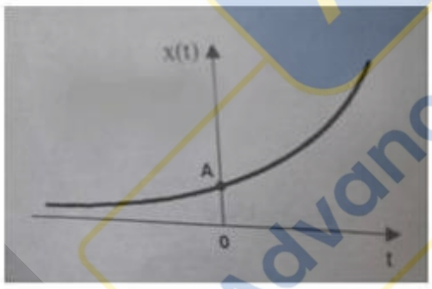
✔ 2. 0

✗ 3. −1

✗ 4. 0.5

Question Type : **MCQ**
Question ID : **308920771**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.13



Describe the signal shown in the figure.

Ans

✗ 1. Exponentially Rising sinusoid

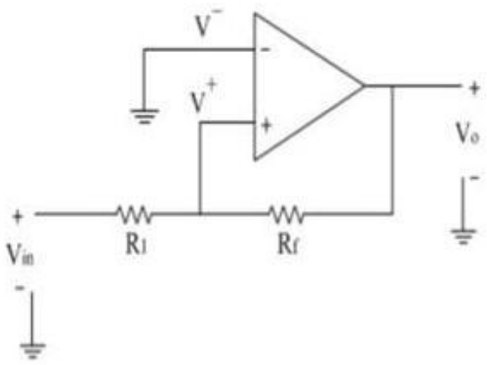
✗ 2. Exponentially decaying signal

✗ 3. Exponentially decaying sinusoid

✔ 4. Exponentially rising signal

Question Type : **MCQ**
Question ID : **308920740**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.14



What is the output of the given circuit?

Ans
- ✔ 1. Square or pulse wave
- ✘ 2. Sine wave
- ✘ 3. Sawtooth wave
- ✘ 4. Triangular wave

Question Type : **MCQ**
Question ID : **308920768**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Q.15 **A 400 kVA transformer is operating at 'f' Hz. If it is made to operate at 'f/4' Hz, then its operating kVA is equal to _____.**

Ans
- ✘ 1. 200 kVA
- ✘ 2. 1600 kVA
- ✔ 3. 100 kVA
- ✘ 4. 800 kVA

Question Type : **MCQ**
Question ID : **308920756**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.16 $\frac{\text{Impulse ratio of insulator}}{\text{Impulse ratio of lightning arrester}} =$ _____.

Ans
- ✔ 1. greater than 1
- ✘ 2. 1
- ✘ 3. less than 1
- ✘ 4. 0

Question Type : **MCQ**
Question ID : **308920772**
Status : **Answered**
Chosen Option : **3**
Marks : **0**

Q.17 **At standstill, in a three phase induction motor, the ratio of slip speed to speed at which stator magnetic field rotates is equal to _____.**

Ans

✔ 1. 1

✘ 2. 2

✘ 3. 0

✘ 4. 3

Question Type : **MCQ**
Question ID : **308920759**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.18 **An oscilloscope produces Lissajous pattern with 2 vertical tangencies and 3 horizontal tangencies when fed with two frequencies to vertical and horizontal inputs. If the vertical input frequency is 300 Hz, then the horizontal input frequency is _____.**

Ans

✘ 1. 300 Hz

✘ 2. 600 Hz

✔ 3. 200 Hz

✘ 4. 900 Hz

Question Type : **MCQ**
Question ID : **308920729**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.19 **Infinite magnitude and zero duration are the features of which of the following signal?**

Ans

✘ 1. Ramp signal

✘ 2. Step signal

✔ 3. Impulse signal

✘ 4. Parabolic signal

Question Type : **MCQ**
Question ID : **308920739**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.20 **For a short pitched synchronous machine, (distribution factor) × (pitch factor) is _____.**

Ans

✘ 1. always zero

✔ 2. always less than 1

✘ 3. always equal to 1

✘ 4. always greater than 1

Question Type : **MCQ**
Question ID : **308920758**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.21 **In measuring 51.1 W of power, a wattmeter reads 52.6 W. The absolute error is _____.**

Ans

✗ 1. 4.5 W

✗ 2. 3 W

✗ 3. 0.75 W

✓ 4. 1.5 W

Question Type : **MCQ**
Question ID : **308920727**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.22 **A 0 – 10 A ammeter has a guaranteed accuracy of 1% of its full-scale value. Find the error in percentage if the same instrument measures 2 A.**

Ans

✓ 1. 5%

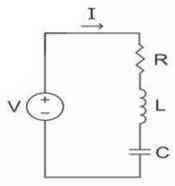
✗ 2. 0.5%

✗ 3. 1%

✗ 4. 2%

Question Type : **MCQ**
Question ID : **308920725**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.23



Find the current in the circuit, if the voltage applied is 200 V (RMS value), which supplies an active power of 600 watt and reactive power of 800 VAR.

Ans

✗ 1. 7.5 A

✗ 2. 3.75 A

✗ 3. 2.75 A

✓ 4. 5 A

Question Type : **MCQ**
Question ID : **308920707**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.24 **Unit of voltage can also be represented as _____.**

Ans

✗ 1. Joule / Second

✗ 2. Coulomb / Second

✓ 3. Joule/ Coulomb

✗ 4. Joule − Second

Question Type : **MCQ**
Question ID : **308920724**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.25 **The ratio of output to the input is _____ at resonance.**

Ans

✗ 1. zero

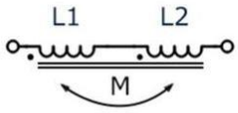
✓ 2. the maximum

✗ 3. the minimum

✗ 4. 50%

Question Type : **MCQ**
Question ID : **308920734**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.26



For the coupled coils shown in figure, calculate the total inductance if self-inductances are 800 micro henry and 200 micro henry respectively, coefficient of coupling between them is 0.5.

Ans

✗ 1. 960 micro henry

✗ 2. 96 micro henry

✗ 3. 104 micro henry

✓ 4. 1020 micro henry

Question Type : **MCQ**
Question ID : **308920715**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.27 **In a three phase induction motor, the number of rotor slots are _____.**

Ans

✗ 1. equal to that of stator

✓ 2. less than that of stator

✗ 3. more than that of stator

✗ 4. equal to zero

Question Type : **MCQ**
Question ID : **308920761**
Status : **Answered**
Chosen Option : **3**
Marks : **0**

Q.28 A (0 – 100 V) MC voltmeter with internal resistance of 2 Ω is used to measure voltage up to 200 V. The additional resistance to be connected in series with voltmeter is _____.

Ans

✗ 1. $20\ \Omega$

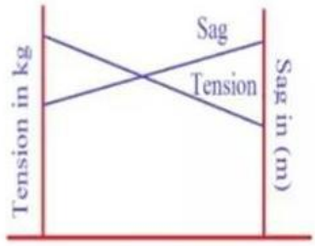
✗ 2. $200\ \Omega$

✓ 3. $2\ \Omega$

✗ 4. $2000\ \Omega$

Question Type : **MCQ**
Question ID : **308920730**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.29



For the stringing chart shown, the parameter that is considered on x-axis is _____.

Ans

✗ 1. Transmission voltage of the conductor

✓ 2. Temperature of the conductor

✗ 3. Size of the conductor

✗ 4. Current carrying capacity of the conductor

Question Type : **MCQ**
Question ID : **308920778**
Status : **Answered**
Chosen Option : **3**
Marks : **0**

Q.30 The transfer function of a control system is given by $\frac{(s+2)}{(s+4)(s-3)}$. This system is of type:

Ans

✗ 1. 3

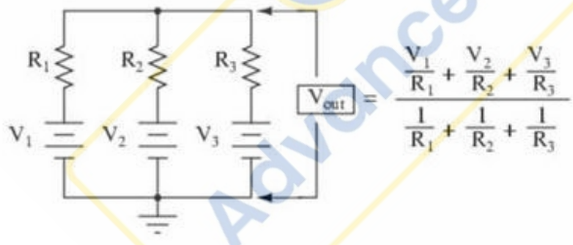
✗ 2. 4

✗ 3. 2

✓ 4. 0

Question Type : **MCQ**
Question ID : **308920737**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.31 Relate the given circuit and equation with the following network theorem.



Ans

✗ 1. Thevenin's theorem

✓ 2. Millman's theorem

✗ 3. Reciprocity theorem

✗ 4. Norton's theorem

Question Type : **MCQ**
Question ID : **308920704**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.32 In feedback amplifiers, $\frac{\text{feedback factor}}{\text{feedback ratio}} =$ _____.

Ans
✗ 1. Voltage gain with negative feedback
✓ 2. Open loop voltage gain
✗ 3. Voltage gain with positive feedback
✗ 4. Loop gain

Question Type : **MCQ**
Question ID : **308920766**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Q.33 For a transformer, maximum efficiency occurs at 80% of the full load, then $\frac{\text{iron loss at full load}}{\text{copper loss at full load}} =$ _____.

Ans
✗ 1. $\frac{9}{16}$
✗ 2. $\frac{3}{4}$
✓ 3. $\frac{16}{25}$
✗ 4. $\frac{16}{9}$

Question Type : **MCQ**
Question ID : **308920755**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.34 **The displacement factor of a full controlled rectifier supplying a constant DC to the load with a firing angle of 45° is _____.**

Ans
✓ 1. 0.707
✗ 2. 0.5
✗ 3. 0.86
✗ 4. 0.36

Question Type : **MCQ**
Question ID : **308920722**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.35 **A pure resistor is connected across 50 Hz AC supply, whose maximum power is 500 watt, then the average power of the circuit is equal to _____.**

Ans
✓ 1. 250 watt
✗ 2. 200 watt
✗ 3. 125 watt
✗ 4. 100 watt

Question Type : **MCQ**
Question ID : **308920706**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.36 Which of the following is an example of non-deterministic signal?

Ans

✗ 1. Exponential signal

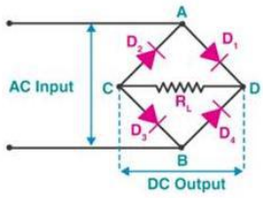
✓ 2. Noise coming from an oscillator

✗ 3. Step signal

✗ 4. Sinusoidal signal

Question Type : **MCQ**
Question ID : **308920741**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.37



For the circuit shown, if the diode between B and D is removed, then the output will be _____.

Ans

✗ 1. 0 volt

✗ 2. the same as input voltage

✓ 3. a half-wave rectified voltage

✗ 4. a full-wave rectified voltage

Question Type : **MCQ**
Question ID : **308920764**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.38 _____ terminal does not belong to power BJT.

Ans

✗ 1. Base

✗ 2. Collector

✗ 3. Emitter

✓ 4. Drain

Question Type : **MCQ**
Question ID : **308920717**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.39 For a transmission line, if open circuit and short circuit impedances are equal, then $\frac{\text{characteristic impedance}}{\text{open circuit impedance}} =$ _____.

Ans

✓ 1. 1

✗ 2. 0

✗ 3. infinite

✗ 4. -1

Question Type : **MCQ**
Question ID : **308920774**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.40 On multiplying a non-causal signal by X, it becomes causal. Then what is X here?

Ans
- ✔ 1. Unit step signal
- ✘ 2. Unit parabolic signal
- ✘ 3. Unit pulse signal
- ✘ 4. Unit triangular signal

Question Type : **MCQ**
Question ID : **308920743**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.41 Which of the following CANNOT be used for no-load application?

Ans
- ✔ 1. DC series motor
- ✘ 2. DC shunt motor
- ✘ 3. 3-phase synchronous motor
- ✘ 4. 3-phase induction motor

Question Type : **MCQ**
Question ID : **308920752**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.42 For a signal x(t), t x(t) is referred as _____.

Ans
- ✘ 1. time differentiation
- ✔ 2. frequency differentiation
- ✘ 3. time integration
- ✘ 4. frequency integration

Question Type : **MCQ**
Question ID : **308920746**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.43

What does the given circuit symbol represent?

Ans
- ✘ 1. Circuit breaker
- ✔ 2. Double break isolator
- ✘ 3. Relay
- ✘ 4. Fuse

Question Type : **MCQ**
Question ID : **308920773**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.44 **Capacity factor = (_____) × utilization factor**

Ans

✗ 1. diversity factor

✓ 2. load factor

✗ 3. demand factor

✗ 4. penalty factor

Question Type : **MCQ**
Question ID : **308920779**
Status : **Answered**
Chosen Option : **1**
Marks : **0**

Q.45 **In a three phase induction motor, if the air gap is increased by 50%, then which of the following will happen?**

Ans

✗ 1. Core losses will be more

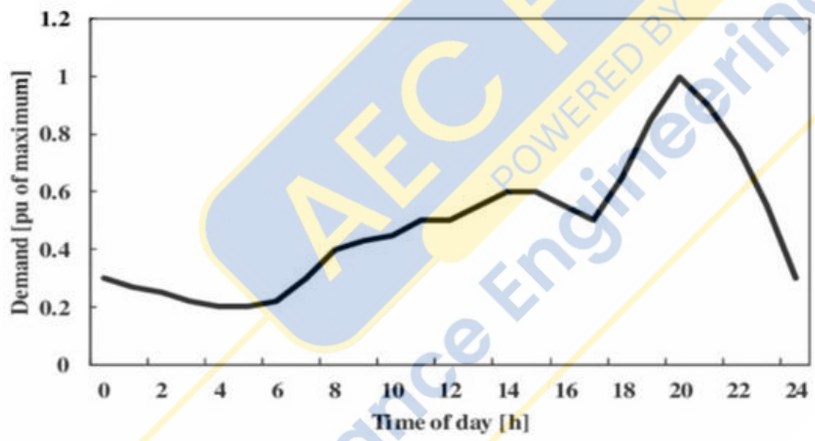
✓ 2. No-load power factor will be poor

✗ 3. Operating flux will reduce

✗ 4. Copper losses will reduce

Question Type : **MCQ**
Question ID : **308920760**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.46



In the load curve shown, the slope from 21 to 23 hours is _____.

Ans

✗ 1. 1

✗ 2. positive and greater than one

✗ 3. 0

✓ 4. negative

Question Type : **MCQ**
Question ID : **308920780**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.47 **Holding current of SCR is 5 mA, then its latching current will be approximately _____.**

Ans

✗ 1. 5 mA

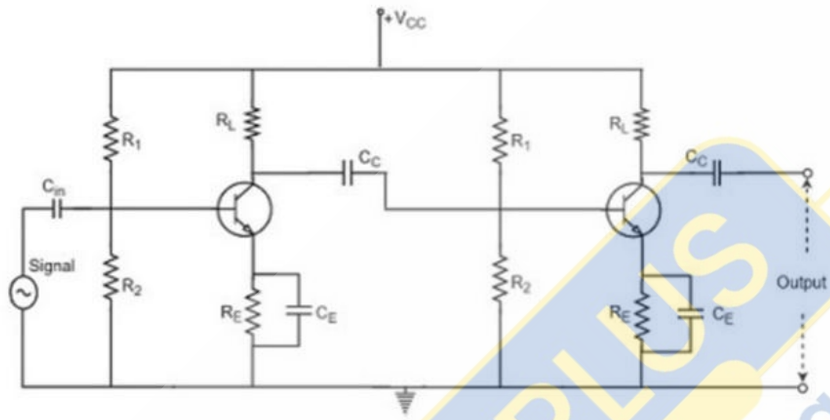
✗ 2. 20 mA

✓ 3. 10 mA

✗ 4. 25 mA

Question Type : **MCQ**
Question ID : **308920723**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.48



Which of the following does the given circuit represent?

Ans

✗ 1. Transformer coupled amplifier

✗ 2. Direct coupled amplifier

✓ 3. R-C coupled amplifier

✗ 4. L-C coupled amplifier

Question Type : **MCQ**
Question ID : **308920765**
Status : **Answered**
Chosen Option : **2**
Marks : **0**

Q.49 **Which of the following have same measuring unit?**

Ans

✗ 1. Polarization, electric charge

✗ 2. Polarization, electric field intensity

✗ 3. Polarization, electric flux

✓ 4. Polarization, electric flux density

Question Type : **MCQ**
Question ID : **308920710**
Status : **Answered**
Chosen Option : **2**
Marks : **0**

Q.50 **If the values of permittivity and conductivity of an insulating material are known, then which of the following can be calculated?**

Ans

✗ 1. Capacitive reactance of insulating material

✗ 2. Depreciation factor of insulating material

✓ 3. Dissipation factor of insulating material

✗ 4. Equivalent series resistance of insulating material

Question Type : **MCQ**
Question ID : **308920711**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.51 For a lap-wounded DC machine, $\frac{\text{number of poles}}{\text{number of brushes}} =$ _____.

Ans

✗ 1. 3

✗ 2. 2

✗ 3. 4

✓ 4. 1

Question Type : **MCQ**
Question ID : **308920748**
Status : **Answered**
Chosen Option : **2**
Marks : **0**

Q.52 A control system gives the response of $c(t) = e^{-t}$ for the input $r(t) = 1$. The transfer function of the system is _____.

Ans

✗ 1. $\frac{1}{s(s+1)}$

✗ 2. $s(s+1)$

✓ 3. $\frac{s}{(s+1)}$

✗ 4. $\frac{(s+1)}{s}$

Question Type : **MCQ**
Question ID : **308920736**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.53 **Which of the following is TRUE in case of pneumatic system?**

Ans

✗ 1. Output power is high.

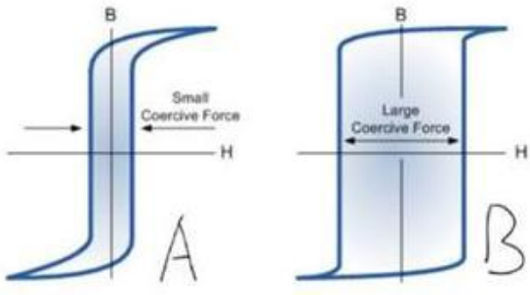
✗ 2. Working fluid acts as lubricant.

✓ 3. Actuator has poor accuracy.

✗ 4. Working fluid cannot be compressed.

Question Type : **MCQ**
Question ID : **308920735**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Q.54



Select the CORRECT statement with respect to the given graphs.

Ans
✗ 1. Graph A and B represent hard magnet
✗ 2. Graph A and B represent soft magnet
✗ 3. Graph B represents soft magnet, graph A represents hard magnet
✓ 4. Graph A represents soft magnet, graph B represents hard magnet

Question Type : **MCQ**
Question ID : **308920714**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.55 $\frac{\text{The value of total electric flux coming out of a closed surface}}{\text{The value of total charge enclosed by the same surface}} =$ _____.

Ans
✗ 1. Surface charge density
✗ 2. Infinite
✓ 3. 1
✗ 4. 0

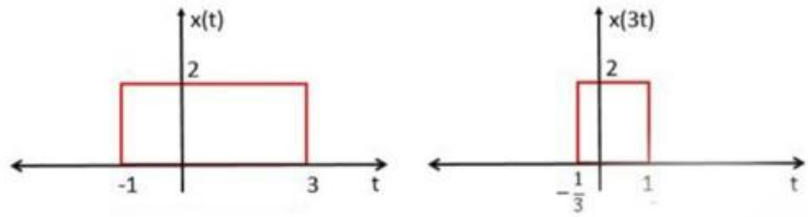
Question Type : **MCQ**
Question ID : **308920709**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.56 **In a full bridge diode rectifier, if a diode is removed then the remaining circuit produces a voltage similar to _____ voltage.**

Ans
✗ 1. zero
✗ 2. source
✓ 3. half rectified
✗ 4. full rectified

Question Type : **MCQ**
Question ID : **308920719**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.57



In the graph shown, what happened from x(t) to x(3t)?

Ans

✗ 1. Right side time shifting

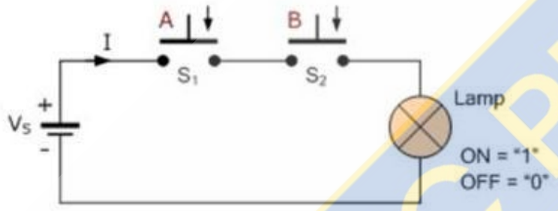
✗ 2. Time reversal

✗ 3. Left side time shifting

✓ 4. Time scaling

Question Type : **MCQ**
Question ID : **308920745**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.58



The given circuit can be used to represent which of the following logic gates?

Ans

✗ 1. NNAND

✓ 2. AND

✗ 3. NOR

✗ 4. OR

Question Type : **MCQ**
Question ID : **308920770**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.59 Which of the following power plant has low operating cost and high initial cost?

Ans

✗ 1. Gas power plant

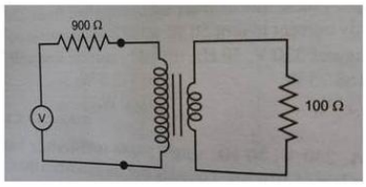
✗ 2. Thermal power plant

✓ 3. Hydroelectric power plant

✗ 4. Nuclear power plant

Question Type : **MCQ**
Question ID : **308920762**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.60



For the transformer circuit shown, if the turns ratio is 3 : 1, then the power transferred to the load is _____.

Ans
✗ 1. 500 watt
✗ 2. minimum
✓ 3. maximum
✗ 4. zero

Question Type : **MCQ**
Question ID : **308920754**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.61 Which of the following does the given graph represent?

Ans
✗ 1. Ideal current source
✓ 2. Ideal voltage source
✗ 3. Practical voltage source
✗ 4. Practical current source

Question Type : **MCQ**
Question ID : **308920701**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.62 **'n' capacitors of different capacitances are connected in series, out of 'n' capacitances maximum capacitance is 100 pF and minimum capacitance is 10 pF, then identify the CORRECT statement.**

Ans
✓ 1. Total capacitance is less than 10 pF
✗ 2. Total capacitance is equal to 100 pF
✗ 3. Total capacitance is greater than 100 pF
✗ 4. Total capacitance is equal to ZERO

Question Type : **MCQ**
Question ID : **308920712**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.63 **In the measurement of three-phase power by using two-wattmeter method, the readings are 50 W and 25 W. The power factor of the system is _____.**

Ans

✗ 1. 0.57

✓ 2. 0.86

✗ 3. 0.95

✗ 4. 1

Question Type : **MCQ**
Question ID : **308920726**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.64 **Which of the following is NOT a circuit element of an oscillator?**

Ans

✗ 1. Tank circuit

✗ 2. Feedback circuit

✓ 3. Rectifier circuit

✗ 4. Amplifier circuit

Question Type : **MCQ**
Question ID : **308920767**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.65 **What is common between half and full adder?**

Ans

✗ 1. Number of inputs

✗ 2. Number of EX-OR gates required

✓ 3. Number of outputs

✗ 4. Number of AND gates required

Question Type : **MCQ**
Question ID : **308920769**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.66 **Identify the odd man out, considering speed and load torque.**

Ans

✓ 1. Differentially compound motor

✗ 2. Cumulatively compound motor

✗ 3. Permanent magnet motor

✗ 4. Series motor

Question Type : **MCQ**
Question ID : **308920751**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Q.67 **String efficiency is a function of which of the following?**

Ans

✗ 1. Size of the conductor

✗ 2. Size of the tower

✓ 3. Number of discs in a string

✗ 4. Size of the insulator

Question Type : **MCQ**
Question ID : **308920776**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.68 **In a two-port network, if the voltages at both ports are made as dependent variables, then which of the following parameters can be found?**

Ans

✓ 1. Impedance parameters

✗ 2. ABCD Parameters

✗ 3. Hybrid parameters

✗ 4. Admittance parameters

Question Type : **MCQ**
Question ID : **308920705**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.69 In an alternator, if the pitch of the coil is $\frac{6}{7}$ fraction of full pitch, then which of the following harmonic is eliminated from the induced EMF in a phase?

Ans

✓ 1. 7th

✗ 2. 5th

✗ 3. 3rd

✗ 4. 9th

Question Type : **MCQ**
Question ID : **308920757**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.70 **Resolution of a moving coil voltmeter is 50 mV and it is capable of reading up to 1/5th of a scale division. The number of uniform scale divisions on the instrument if the full-scale reading is 100 V is _____.**

Ans

✓ 1. 40

✗ 2. 60

✗ 3. 30

✗ 4. 50

Question Type : **MCQ**
Question ID : **308920728**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.71 **To which of the following power plants are the terms 'fire point' and 'flash point' related?**

Ans

✗ 1. Hydroelectric power plant

✗ 2. Solar Power Plant

✓ 3. Diesel power plant

✗ 4. Nuclear power plant

Question Type : **MCQ**
Question ID : **308920763**
Status : **Answered**
Chosen Option : **2**
Marks : **0**

Q.72 **Which of the following converter is called as "Joule Thief".**

Ans

✗ 1. Semi converter

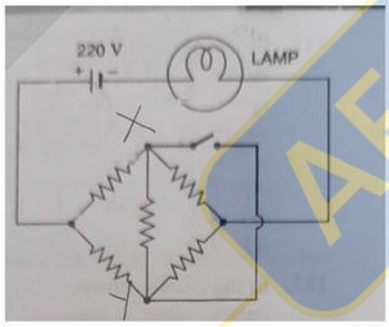
✓ 2. Boost converter

✗ 3. Full-bridge converter

✗ 4. Buck converter

Question Type : **MCQ**
Question ID : **308920720**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.73 For the circuit shown, if the resistance of each resistor is 10 ohm, potential at X is _____.



Ans

✗ 1. 1 volt

✗ 2. the same as the voltage drop across any resistor

✓ 3. the same as that of Y

✗ 4. 0 volt

Question Type : **MCQ**
Question ID : **308920703**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.74 **Which of the following has both magnitude and direction?**

Ans

✗ 1. Magnetic flux density

✗ 2. Magnetic potential

✓ 3. Magnetic field intensity

✗ 4. Susceptibility

Question Type : **MCQ**
Question ID : **308920713**
Status : **Answered**
Chosen Option : **1**
Marks : **0**

Q.75 **In power diode, the n- layer in between n+ layer and p+ layer is called as _____ layer.**

Ans

✓ 1. Drift

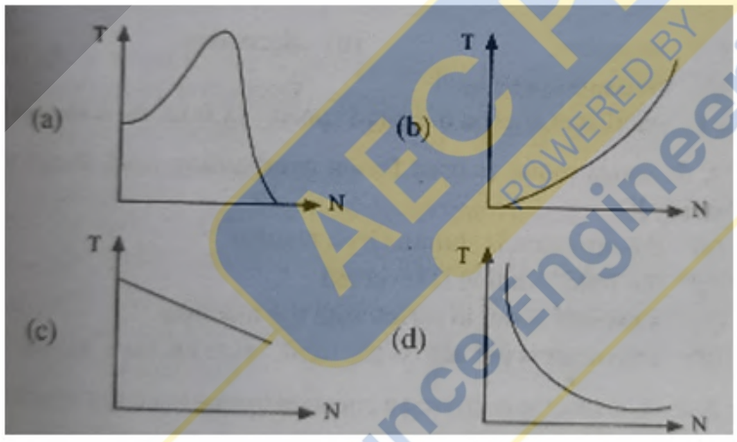
✗ 2. Collector

✗ 3. Injection

✗ 4. Base

Question Type : **MCQ**
Question ID : **308920718**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.76



Which of the shown graph is related to DC series motor?

Ans

✗ 1. a

✗ 2. b

✓ 3. d

✗ 4. c

Question Type : **MCQ**
Question ID : **308920750**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.77 **What is the value of x(t) = sgn(t) at t = 0?**

Ans

✔ 1. 0

✘ 2. Infinite

✘ 3. -1

✘ 4. 1

Question Type : **MCQ**
Question ID : **308920744**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.78 $\frac{\text{Diameter of n–layered stranded conductor}}{\text{Diameter of each strand}} =$ _____.

Ans

✘ 1. 3n + 1

✘ 2. 3n – 1

✔ 3. 2n + 1

✘ 4. 2n – 1

Question Type : **MCQ**
Question ID : **308920777**
Status : **Answered**
Chosen Option : **1**
Marks : **0**

Q.79 A (0 – 5 A) MC ammeter with internal resistance of 0.2 Ω is used to measure current up to 20 A. The additional resistance to be connected in parallel with ammeter is _____.

Ans

✔ 1. $0.067\ \Omega$

✘ 2. $67\ \Omega$

✘ 3. $6.7\ \Omega$

✘ 4. $0.67\ \Omega$

Question Type : **MCQ**
Question ID : **308920731**
Status : **Answered**
Chosen Option : **1**
Marks : **1**

Q.80 **In torque–current analogy, moment of inertia in mechanical system is analogous to _____ in electrical system.**

Ans

✔ 1. capacitance

✘ 2. current

✘ 3. resistance

✘ 4. inductance

Question Type : **MCQ**
Question ID : **308920733**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Section : **General Knowledge and Current Affairs**

Q.1 _____ is a major festival in Arunachal Pradesh as it marks the Tibetan New Year.

Ans
✔ 1. Losar
✘ 2. Saga Dawa
✘ 3. Moatsu Mong
✘ 4. Kongali Bihu

Question Type : **MCQ**
Question ID : **308920786**
Status : **Answered**
Chosen Option : **3**
Marks : **0**

Q.2 Who has written 'A passage to India'?

Ans
✘ 1. Charles Darwin
✘ 2. Thomas Hardy
✔ 3. E.M.Forster
✘ 4. William Shakespeare

Question Type : **MCQ**
Question ID : **308920783**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.3 First South Asian Games were held in the year _____.

Ans
✘ 1. 1975
✘ 2. 1999
✔ 3. 1984
✘ 4. 1965

Question Type : **MCQ**
Question ID : **308920785**
Status : **Answered**
Chosen Option : **1**
Marks : **0**

Q.4 AMRUT (Atal Mission for Rejuvenation and Urban Transformation) comes under:

Ans
✔ 1. Ministry of Housing and Urban Affairs
✘ 2. Ministry of Corporate Affairs
✘ 3. Ministry of Rural development
✘ 4. Ministry of Urban development affairs

Question Type : **MCQ**
Question ID : **308920787**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Q.5 **Har Gobind Khorana, was awarded the Nobel Prize in _____ in the year 1968.**

Ans
✗ 1. Economic Sciences
✓ 2. Medicine
✗ 3. Physics
✗ 4. Literature

Question Type : **MCQ**
Question ID : **308920782**
Status : **Answered**
Chosen Option : **2**
Marks : **1**

Q.6 **Among the Indian Mountain ranges which one is considered the oldest?**

Ans
✗ 1. Karakoram Range
✗ 2. The Purvanchal Range
✓ 3. The Aravalli Range
✗ 4. The Himalaya Range

Question Type : **MCQ**
Question ID : **308920781**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.7 **Which among the following part of the Indian constitution deals with 'Emergency provisions'?**

Ans
✗ 1. Part XX
✗ 2. Part XIV
✓ 3. Part XVIII
✗ 4. Part XVI

Question Type : **MCQ**
Question ID : **308920784**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Section : **English**

Q.1 **The question below consist of a set of labelled sentences. Out of four options given, select the most logical order of the sentences which form a paragraph.**

The Jungle Book is a 2016 American adventure film directed and produced by Jon Favreau.

P. Neel Sethi plays Mowgli, an orphaned human boy who, guided by his animal guardians, sets out on a journey of self-discovery while evading the threatening Shere Khan.
Q. Based on Rudyard Kipling's eponymous collective works, the film is a live-action/CGI adaptation of Walt Disney's 1967 animated film of the same name.
R. Justin Marks wrote the book and it is produced by Walt Disney Pictures.
S. The film includes voice and motion capture performances from Bill Murray, Ben Kingsley, Idris Elba, Lupita Nyong'o, Scarlett Johansson, Giancarlo Esposito, and Christopher Walken.

The film required extensive use of computer-generated imagery to portray the animals and settings.

Ans
✗ 1. SRPQ
✗ 2. SRQP
✓ 3. RQPS
✗ 4. PQRS

Question Type : **MCQ**
Question ID : **308920790**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.2 **Four words are given, out of which only one word is spelt incorrectly. Choose the INCORRECT spelt word**

Ans
✗ 1. HELPLESSNESS
✗ 2. HAPHAZARD
✓ 3. FEABLE
✗ 4. FEDERATION

Question Type : **MCQ**
Question ID : **308920793**
Status : **Answered**
Chosen Option : **1**
Marks : **0**

Q.3 **Select the most appropriate meaning of the given phrase.**

Have your cake and eat it, too.

Ans
✗ 1. To celebrate one's victory.
✓ 2. To do two things that are contradictory to do simultaneously.
✗ 3. To have gotten something one longed for.
✗ 4. To get a promotion.

Question Type : **MCQ**
Question ID : **308920794**
Status : **Answered**
Chosen Option : **4**
Marks : **0**

Q.4 **Fill in the blank with the most appropriate choice.**

No country, no state, has ever survived in history on the basis of evil and _____.

Ans

✗ 1. benevolence

✗ 2. fortune

✗ 3. boon

✓ 4. immorality

Question Type : **MCQ**
Question ID : **308920789**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.5 **Select the word that is SYNONYM (similar in meaning) to the word given below.**

Petite

Ans

✓ 1. Dainty

✗ 2. Important

✗ 3. Massive

✗ 4. Vicious

Question Type : **MCQ**
Question ID : **308920791**
Status : **Answered**
Chosen Option : **3**
Marks : **0**

Q.6 **Select the word that is ANTONYM (opposite in meaning) to the word given below.**

Staunch

Ans

✗ 1. Delightful

✗ 2. Ardent

✗ 3. Tough

✓ 4. Undependable

Question Type : **MCQ**
Question ID : **308920792**
Status : **Answered**
Chosen Option : **3**
Marks : **0**

Q.7 **Select the word segment that substitutes (replaces) the bracketed word segment correctly and completes the sentence meaningfully. Select the option 'no correction required' if the sentence is correct as given.**

(Children who attending the camp will learn) how to identify dangerous situations and act accordingly.

Ans

✗ 1. No correction required.

✗ 2. Children who will be attend the camp will learn

✗ 3. Children who attend the camp will be learnt on

✓ 4. Children who attend the camp will learn

Question Type : **MCQ**
Question ID : **308920788**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Section : **Reasoning & Numerical Ability**

Q.1 **A company MNC has got an opening for the position of a Civil Engineer. The candidate must**

1. Be a postgraduate with at least 80 per cent marks.
2. Have scored above 75% in B.Tech.
3. Have experience of at least 2 years working as an associate engineer.
4. Not be more than 40 years of age as on 5/07/21.

The following exceptions apply:
A. If a candidate meets all other criteria except 3 above, but has done his post-graduation from any of the IIT's, he will be referred to the Chairman.
B. A candidate who has got less than 75% marks in graduation, but has work experience of over 5 years as an associate Engineer will be referred to the CEO.

Satish has completed his MTech in civil engineering and has scored 83% marks. He also scored 76% marks in his B tech. He has been working as an associate engineer in a reputed company for the past 3 years and he was born on 10 June 1980.

What decision should be taken about Satish?

Ans
✗ 1. Must be selected.
✗ 2. Must be referred to the Chairman.
✓ 3. Must be rejected.
✗ 4. Must be referred to the CEO.

Question Type : **MCQ**
Question ID : **308920795**
Status : **Answered**
Chosen Option : **3**
Marks : **1**

Q.2 **Find the missing term in the following number series.**

546, 553, _____, 541, 522

Ans
✗ 1. 587
✗ 2. 538
✗ 3. 567
✓ 4. 534

Question Type : **MCQ**
Question ID : **308920796**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.3 **Find the missing term in the following series.**

S2Q, O3M, K5I, G7E, _____

Ans
✓ 1. C11A
✗ 2. C9A
✗ 3. D11A
✗ 4. D9B

Question Type : **MCQ**
Question ID : **308920797**
Status : **Answered**
Chosen Option : **2**
Marks : **0**

Q.4 **Sumit was walking in X direction. He then takes a right and walks for 40 m. He then turns 45 degrees right and walks for 10 m. Then he turns 90 degrees towards right and walked for 30 m. If the final direction is South East, then find the value of X.**

Ans
- ✗ 1. East
- ✗ 2. South
- ✗ 3. North
- ✓ 4. West

Question Type : **MCQ**
Question ID : **308920799**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.5 **In this question, a statement has been followed by two arguments numbered I and II. You have to decide which of the arguments is strong.**

Statement: Should the level of IIT Joint Entrance Examination be lowered?

Arguments:
I. Yes. Many students attempt suicide for not getting selected.
II. No. Only deserving students should get a chance to study in such a college.

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

Question Type : **MCQ**
Question ID : **308920800**
Status : **Answered**
Chosen Option : **4**
Marks : **1**

Q.6 **Out of the given options, three are similar in a certain manner. However, one option is NOT like the other three. Select the option which is different from the rest.**

Ans
- ✓ 1. SmOOth
- ✗ 2. AmbEr
- ✗ 3. IrOny
- ✗ 4. pUrIty

Question Type : **MCQ**
Question ID : **308920798**
Status : **Answered**
Chosen Option : **1**
Marks : **1**