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**Previous Year Paper  
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**Notations :**

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

Question Paper Name :	Assistant Engineer Electrical 14th Jul 2024 Shift 2
Subject Name :	Assistant Engineer Electrical
Creation Date :	2024-07-14 17:55:14
Duration :	100
Total Marks :	100
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Change Font Color :	No
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## Assistant Engineer Electrical

Group Number :	1
Group Id :	1705274
Group Maximum Duration :	0
Group Minimum Duration :	100
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	100

## Section A

Section Id :	1705277
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions :	80
Number of Questions to be attempted :	80
Section Marks :	80
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	1705277
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 170527301 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following statement(s) are incorrect regarding the hysteresis loops of hard and soft magnetic materials.

- (i) Coercivity of hard material is greater than that of soft material
- (ii) Hysteresis loop area of hard magnetic material is less than that of soft magnetic material
- (iii) Retentivity of hard & soft magnetic materials is always equal

Options :

- 1. ✗ (i) only
- 2. ✗ (i) and (ii) only
- 3. ✗ (i), (ii) and (iii)
- 4. ✓ (ii) and (iii) only

Question Number : 2 Question Id : 170527302 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The ceramic material Steatite is composed of

Options :

- 1. ✗ Clay, Quartz, Feldspar
- 2. ✓ Clay, Talc, Magnesite
- 3. ✗ Clay, Quartz, Barium Carbonate
- 4. ✗ Talc, Magnesite, Quartz

Question Number : 3 Question Id : 170527303 Question Type : MCQ Option Shuffling : Yes

**Correct Marks : 1 Wrong Marks : 0**

The increasing order of Threshold wavelength of the following Photo Conducting materials is.  
{Where Ga As - Gallium Arsenide; In Sb - Indium Antimonide; Si - Silicon and Ge - Germanium}

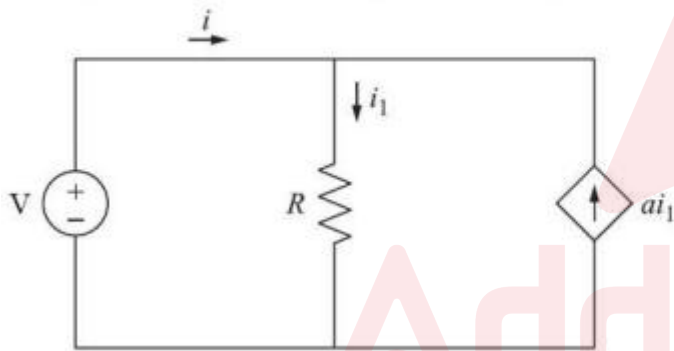
**Options :**

1. ✗ Ga As, In Sb, Si, Ge
2. ✗ In Sb, Ge, Si, Ga As
3. ✓ Ga As, Si, Ge, In Sb
4. ✗ Ge, Si, In Sb, Ga As

**Question Number : 4 Question Id : 170527304 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

The power delivered by the voltage source as a function of 'a' is



**Options :**

1. ✗  $\frac{V^2}{R}$
2. ✓  $\frac{(1-a)V^2}{R}$
3. ✗  $\frac{(1+a)V^2}{R}$
4. ✗  $-\frac{V^2}{R}$

**Question Number : 5 Question Id : 170527305 Question Type : MCQ Option Shuffling : Yes**

Correct Marks : 1 Wrong Marks : 0

A network has ' $n$ ' nodes and ' $i$ ' independent loops. The number of branches in the network is

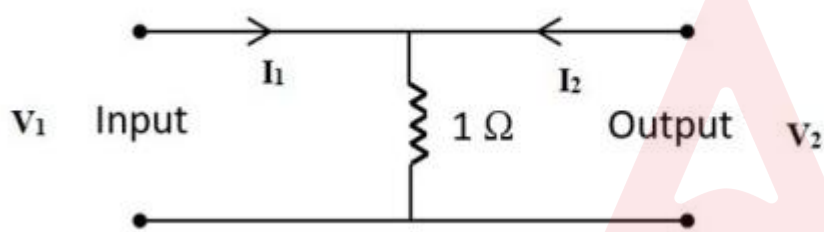
Options :

1. ✗  $n-1$
2. ✓  $i+n-1$
3. ✗  $n+1$
4. ✗  $i+n+1$

Question Number : 6 Question Id : 170527306 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The  $h$  parameters of the following circuit shown in the figure are



Options :

1. ✗  $h = \begin{bmatrix} 0 & 1 \\ 1 & -1 \end{bmatrix}$
2. ✗  $h = \begin{bmatrix} 0 & -1 \\ -1 & 1 \end{bmatrix}$
3. ✗  $h = \begin{bmatrix} 0 & -1 \\ 1 & 1 \end{bmatrix}$
4. ✓  $h = \begin{bmatrix} 0 & 1 \\ -1 & 1 \end{bmatrix}$

Question Number : 7 Question Id : 170527307 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following statements are wrong with respect to 3-phase systems (RYB in clock wise phase sequence)?

- (i) In a balanced delta system, line currents are  $30^\circ$  behind the respective phase currents
- (ii) In a balanced star system, line currents are  $30^\circ$  behind the respective phase currents
- (iii) In a balanced star system, line voltages are  $30^\circ$  ahead of the respective phase voltages
- (iv) In a balanced delta system, line voltages are  $30^\circ$  behind the respective phase voltages

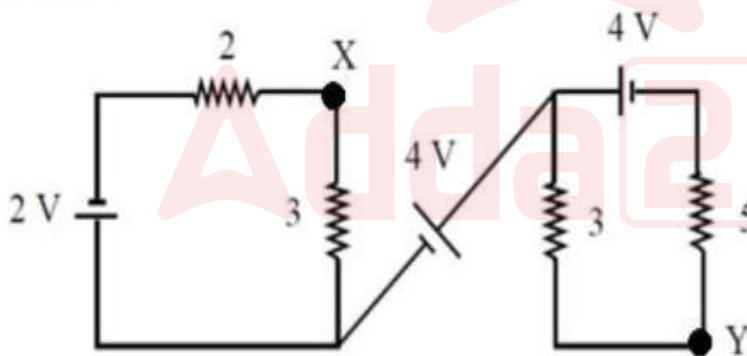
Options :

- 1. ✗ (i) and (ii) only
- 2. ✓ (ii) and (iv) only
- 3. ✗ (iii) and (iv) only
- 4. ✗ (i) and (iv) only

Question Number : 8 Question Id : 170527308 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

For the circuit shown in the figure the potential difference between points X and Y ( $V_{XY}$ ) is \_\_\_\_\_. (All resistance values are in Ohms.)



Options :

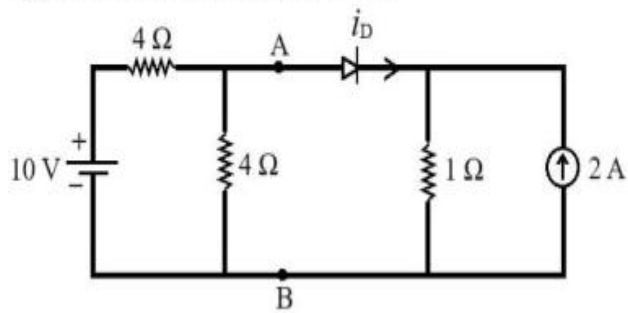
- 1. ✗ X is higher potential of 3.7 V with respect to point Y
- 2. ✓ X is lower potential of 3.7 V with respect to point Y
- 3. ✗ X is lower potential of 4.3 V with respect to point Y
- 4. ✗ X is higher potential of 4.3 V with respect to point Y

Question Number : 9 Question Id : 170527309 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0



Find the current  $i_D$  flowing through the diode and voltage  $V_{AB}$  in the circuit shown in figure. Assume diode is ideal



Options :

1. ✗ 0 A, 5 V
2. ✗ 1 A, 5 V
3. ✓ 1 A, 3 V
4. ✗ 3 A, 5 V

Question Number : 10 Question Id : 170527310 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Two identical coaxial circular coils carry the same current  $I$  amp but in opposite directions. The magnitude of the magnetic field  $B$  at a point on the axis midway between the coils is

Options :

1. ✓ Zero
2. ✗ The same as that produced by one coil
3. ✗ Twice that produced by one coil
4. ✗ Half that produced by one coil

Question Number : 11 Question Id : 170527311 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0



Match the following relations?

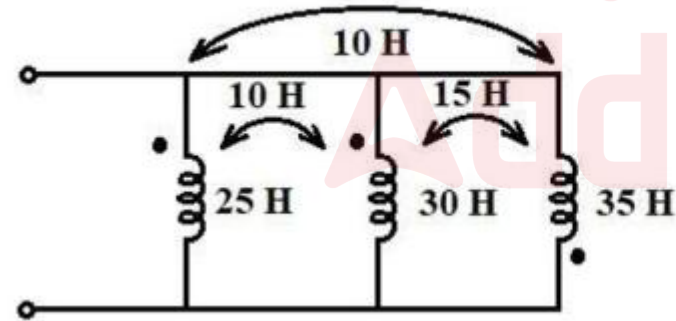
X	Electrostatic field	P	$\nabla \times E = 0$
Y	Magneto static field	Q	$\nabla \times E \neq 0$
Y	Gauss law in point form	R	$\nabla \times H \neq 0$
		S	$\nabla \times H = J$
		T	$\nabla \cdot D = \rho_v$
		U	$\nabla \cdot D = 0$

Options :

- ✗ X – P;      Y – R;      Z – T
- ✓ X – P;      Y – S;      Z – T
- ✗ X – Q;      Y – S;      Z – U
- ✗ X – Q;      Y – R;      Z – U

Question Number : 12 Question Id : 170527312 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

Find the equivalent inductance of the network shown in below figure.



Options :

- ✗  $\frac{60}{9} H$
- ✗  $\frac{9}{60} H$
- ✓  $\frac{50}{9} H$
- ✗  $\frac{9}{50} H$

**Question Number : 13 Question Id : 170527313 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

In a series RLC circuit with  $R = 230 \, \Omega$ , the voltage and the frequency of the main supply are 230 V and 50 Hz respectively. On taking out the capacitance from the circuit the current lags the voltage by  $30^\circ$ . On taking out the inductance from the circuit the current leads the voltage by  $30^\circ$ . The power dissipated in the RLC series circuit is

**Options :**

1. ✗ 305 W
2. ✗ 210 W
3. ✗ Zero
4. ✓ 230 W

**Question Number : 14 Question Id : 170527314 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

Point charges  $Q_1 = 1 \, \text{nC}$  and  $Q_2 = 2 \, \text{nC}$  are at a distance apart. Which of the following statement is incorrect?

**Options :**

1. ✗ The force on  $Q_1$  is repulsive
2. ✗ The force on  $Q_2$  is the same as the force magnitude on  $Q_1$
3. ✓ As the distance between them decreases, the force on  $Q_1$  increases linearly.
4. ✗ The force on  $Q_2$  is along the line joining them

**Question Number : 15 Question Id : 170527315 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

In a 3-phase, 400 V, 4-wire system, one incandescent lamp of rating 230 V, 100 W is connected between R phase-neutral and another incandescent lamp of rating 230 V, 200 W is connected between Y phase-neutral. If the neutral wire breaks, then

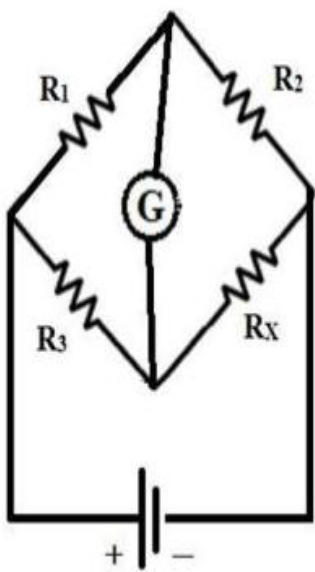
**Options :**

1. ✗ 200 W lamp will fuse first

2. ✓ 100 W lamp will fuse first
3. ✗ Both the lamps will glow
4. ✗ Both the lamps will fuse at a time

**Question Number : 16 Question Id : 170527316 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

In the figure shown below, the galvanometer  $G$  indicates zero current for  $R_1 = 50\Omega$ ,  $R_2 = 65\Omega$  and  $R_3 = 100\Omega$ . If  $R_1, R_2$  and  $R_3$  are known with  $\pm 0.5\%$  tolerances respectively. What is the upper & lower limit of the unknown resistor  $R_x$  respectively?



**Options :**

1. ✗ 65.675, 64.325
2. ✗ 65.65, 64.35
3. ✓ 131.95, 128.05
4. ✗ 131.30, 128.70

**Question Number : 17 Question Id : 170527317 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

An alternating current is measured by a rectifier and hot wire Ammeter and the readings are found to be 31 A and 33 A respectively. The form factor of the current wave is

**Options :**

1. ✓ 1.064
2. ✗ 1.11
3. ✗ 1.0
4. ✗ 0.9393

**Question Number : 18 Question Id : 170527318 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

To maximize the driving torque in an induction type instrument, flux produced by shunt coil and series coil should be

**Options :**

1. ✗ in phase with each other
2. ✗ displaced by  $45^\circ$  with respect to each other
3. ✓ in quadrature with each other
4. ✗ displaced by  $60^\circ$  with respect to each other

**Question Number : 19 Question Id : 170527319 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

Identify which of the following are correct?

- (i) Owens bridge is used for measurement of Inductance in terms of Capacitance
- (ii) Hay's bridge is used for measurement of inductance of coils having quality factor less than 10
- (iii) Campbell bridge is used for measurement of mutual inductance in terms of standard capacitance
- (iv) Anderson bridge is used for precise measuring of inductance compared to other bridges

**Options :**

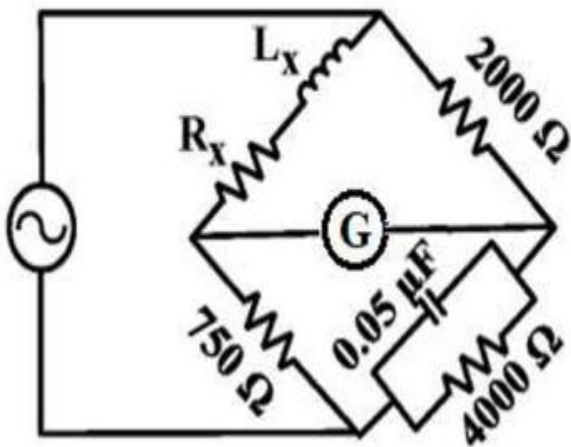
1. ✗ (i) and (ii) only
2. ✗ (ii) and (iii) only
3. ✗ (iii) and (iv) only

4. ✓ (i) and (iv) only

Question Number : 20 Question Id : 170527320 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Figure shown below indicates balanced Maxwell bridge. The values of  $R_x$  and  $L_x$  are



Options :

1. ✗ 75  $\Omega$ , 75 mH
2. ✗ 75  $\Omega$ , 150 mH
3. ✓ 375  $\Omega$ , 75 mH
4. ✗ 37.5  $\Omega$ , 75 mH

Question Number : 21 Question Id : 170527321 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following statements are correct with respect to measuring of power in a 3-phase balanced circuit by two wattmeter method?

- (i) Two Wattmeters reads equal power, if load power factor angle is  $0^\circ$ .
- (ii) One Wattmeter reading is negative, if load power factor angle is greater than  $60^\circ$ .
- (iii) Only one wattmeter reads total power, if load power factor angle is  $30^\circ$ .

Options :

1. ✓ (i) & (ii)
2. ✗ (ii) & (iii)
3. ✗ (iii) & (i)

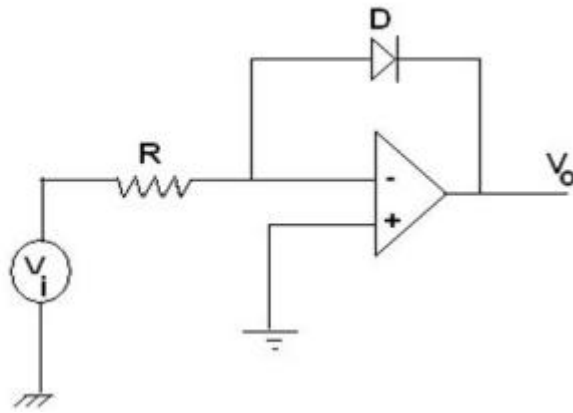


4. ✖ (i), (ii) & (iii)

Question Number : 22 Question Id : 170527322 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The circuit shown in the figure below can be used as a



Options :

1. ✖ Full wave rectifier
2. ✖ Voltage to frequency converter
3. ✔ Logarithmic amplifier
4. ✖ Frequency to voltage converter

Question Number : 23 Question Id : 170527323 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

In JK flip-flop, if the input of K is inverted from the input that of J, the resulting flip-flop is

Options :

1. ✖ SR flip-flop
2. ✖ JK flip-flop itself
3. ✔ D flip-flop
4. ✖ T flip-flop

Question Number : 24 Question Id : 170527324 Question Type : MCQ Option Shuffling : Yes

**Correct Marks : 1 Wrong Marks : 0**

The maximum length of machine language instruction for 8086 microprocessor is

**Options :**

1. ✗ 2 bytes
2. ✗ 4 bytes
3. ✓ 6 bytes
4. ✗ 5 bytes

**Question Number : 25 Question Id : 170527325 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

The signal  $x(t) = 3\cos^2 250\pi t$  is sampled at regular intervals of T seconds. The maximum value of T for which  $x(t)$  may be recovered from the sampled version without any distortion, is equal to

**Options :**

1. ✗ 1 ms
2. ✓ 2 ms
3. ✗ 4 ms
4. ✗ 0.5 ms

**Question Number : 26 Question Id : 170527326 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

A superheterodyne AM broadcast receiver has an IF of 455 kHz. If it is tuned to a frequency of 700 kHz, the image frequency is

**Options :**

1. ✓ 1610 kHz
2. ✗ 1155 kHz
3. ✗ 245 kHz
4. ✗ 210 kHz



Question Number : 27 Question Id : 170527327 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

When the temperature ( $^{\circ}\text{K}$ ) of a resistor is doubled, the r.m.s value of the noise voltage across it is

Options :

1. ✗ Doubled
2. ✗ Halved
3. ✗ Quadrupled
4. ✓ 1.414 times of its previous value

Question Number : 28 Question Id : 170527328 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Impulse response of a discrete time system is  $h(n) = u(n-2)$ . If the input signal to the system is  $x(n) = 2^n u(-n-1)$ , where  $u(n)$  is unit step signal, then its output is

Options :

1. ✗  $2^n u(-n+1) + u(n-2)$
2. ✓  $2^{n-1} u(-n+1) + u(n-2)$
3. ✗  $2^n u(-n-1) + u(n-2)$
4. ✗  $2^{n-1} u(-n-1) + u(n-2)$

Question Number : 29 Question Id : 170527329 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The value of  $\int_{-5}^5 (t^3 + 6t^2 + 2t + \sin \pi t) \delta(t-2) dt$ , is

(where  $\delta(t)$  is unit impulse function)

Options :

1. ✗ 0

2. ✖ 36

3. ✔ 24

4. ✖ 12

Question Number : 30 Question Id : 170527330 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

The Laplace transform of  $f(t) = 2\sqrt{\frac{t}{\pi}}$  is  $s^{-3/2}$ , The Laplace transform of  $g(t) = \sqrt{\frac{1}{\pi t}}$  is

Options :

1. ✖  $3s^{-5/2}$

2. ✖  $\frac{3s^{-5/2}}{2}$

3. ✔  $s^{-1/2}$

4. ✖  $3s^{3/2}$

Question Number : 31 Question Id : 170527331 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

The inverse z- transform of  $y(z) = \frac{5}{(1-0.2z^{-1})}$  is

Options :

1. ✔  $5(0.2)^k; k \geq 0$

2. ✖  $(0.2)^k; k \geq 0$

3. ✖  $5(0.2)^{k+1}; k \geq 0$

4. ✖  $5(0.2)^{k-1}; k \geq 0$

Question Number : 32 Question Id : 170527332 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

Which of the following statements, related to Fourier series of a non-sinusoidal periodic

waveform (with a period  $T$ ),  $f(t) = a_0 + \sum_{n=1}^{\infty} (a_n \cos n\omega_0 t + b_n \sin n\omega_0 t)$  are correct?

- (i) It can be expressed in Fourier series if sampling conditions are satisfied and its amplitude spectrum is discrete
- (ii) If  $f(t) = -f(-t)$  with rotational symmetry then Fourier series contain only odd sine terms
- (iii) If  $f(t) = f(-t)$  and  $f(t) = -f\left(t \pm \frac{T}{2}\right)$  then Fourier series contains only odd cosine terms
- (iv) Fourier series of an even function have a constant, cosine terms and continuous amplitude spectrum

**Options :**

- 1. ✗ (i) and (ii) only
- 2. ✗ (iii) and (iv) only
- 3. ✗ (i) and (iv) only
- 4. ✓ (ii) and (iii) only

**Question Number : 33 Question Id : 170527333 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

The open loop transfer function of a closed loop control system is

$$G(s) = \frac{K}{s(s+4)(s^2+4s+20)}, \text{ the angle of departure at the pole } (-2+j4) \text{ is}$$

**Options :**

- 1. ✓ -90 degrees
- 2. ✗ +90 degrees
- 3. ✗ -74.7 degrees
- 4. ✗ +74.7 degrees

**Question Number : 34 Question Id : 170527334 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

In which of the following cases, a control system is not stable?

Options :

1. ✗ Gain margin and Phase margin are positive
2. ✓ Damping ratio is less than zero
3. ✗ All poles are in the LHS of S-plane
4. ✗ Phase crossover frequency greater than Gain crossover frequency

Question Number : 35 Question Id : 170527335 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

A system has  $G(s) = \frac{K}{s(s+1)}$ , the value of  $K$  for the gain crossover frequency to be 10 rad/sec,

is approximately

Options :

1. ✗ 1
2. ✗ 10
3. ✗ 1000
4. ✓ 100

Question Number : 36 Question Id : 170527336 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

A system has open loop transfer function  $G(s) = \frac{(s+2)}{(s+1)(s-1)}$ . Number of encirclements of Nyquist plot around  $(-1+j0)$  are

Options :

1. ✗ 1 clockwise
2. ✗ 2 clockwise
3. ✓ 1 counterclockwise
4. ✗ zero

Question Number : 37 Question Id : 170527337 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not true?

Options :

1. ✓ State model of a system is unique
2. ✗ State space model is applicable for multi-input multi-output, non-linear and time variant systems
3. ✗ Transfer function is applicable only for linear time invariant systems
4. ✗ In state model, initial conditions are taken into consideration

Question Number : 38 Question Id : 170527338 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The open loop transfer function of a unity feedback control system is

$$G(s) = \frac{30}{s(s+1)(s+T)}$$

Where T is a variable parameter. The closed loop system will

be stable for all the values of

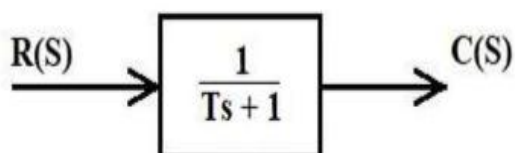
Options :

1. ✗  $T > 0$
2. ✗  $0 < T < 3$
3. ✓  $T > 5$
4. ✗  $3 < T < 5$

Question Number : 39 Question Id : 170527339 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The steady state error for the first order system, shown in figure below for unit ramp-input is



Options :

1. ✓ T

2. ✖ 2T

3. ✖ 0

4. ✖  $\infty$

**Question Number : 40 Question Id : 170527340 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

Statement (I): The phase lead compensation is used to increase rise time and decrease overshoot of a System.

Statement (II): Phase-lag compensation will improve relative stability of a system.

Which of the following are correct from the above statements?

**Options :**

1. ✖ Both statements (I) and (II) are correct

2. ✔ Only Statement (II) is correct

3. ✖ Both statements (I) and (II) are not correct

4. ✖ Only Statement (I) is correct

**Question Number : 41 Question Id : 170527341 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

A 250 V D.C shunt motor takes a current of 41 A and runs at 800 r.p.m on full load. The armature and field resistances are  $0.2 \Omega$  and  $250 \Omega$  respectively. During stalling of the motor, a resistance of  $2 \Omega$  is placed in series with the armature, then the ratio of stalling torque to full load torque is around

**Options :**

1. ✖ 1.42

2. ✔ 2.84

3. ✖ 1.25

4. ✖ 3.13

**Question Number : 42 Question Id : 170527342 Question Type : MCQ Option Shuffling : Yes**



**Correct Marks : 1 Wrong Marks : 0**

The self-excited D.C generators fail to build up the voltage at no-load. Identify the correct reasons from the following.

- (i) Absence of residual magnetism
- (ii) Field resistance is less than critical field resistance
- (iii) Speed of the armature is more than critical speed
- (iv) Field resistance is more than critical field resistance
- (v) Speed of the armature is less than critical speed

**Options :**

- 1. ✗ (i), (ii) and (iii) only
- 2. ✗ (i), (iii) and (iv) only
- 3. ✓ (i), (iv) and (v) only
- 4. ✗ (i), (ii) and (v) only

**Question Number : 43 Question Id : 170527343 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

A 11000/2200V, 100 kVA, single phase two-winding transformer is to be used as an auto-transformer by connecting the two windings in series. Which of the following are not the possible values of voltage ratios and kVA outputs of an auto transformer?

**Options :**

- 1. ✗ 2200/13200 V ; 120 kVA
- 2. ✗ 11000/13200 V ; 600 kVA
- 3. ✗ 13200/2200 V ; 120 kVA
- 4. ✓ 2200/13200 V ; 600 kVA

**Question Number : 44 Question Id : 170527344 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**



Which of the following statements are not correct?

- (i)  $\Delta$ -Y Connected 3-phase transformer is used in the beginning of H.V transmission lines
- (ii) Open delta connection is not possible with Y-Y connected 3-phase transformer
- (iii) Y- $\Delta$  connection is used in 3-phase distribution transformers
- (iv) Oscillatory neutral problems are not present in Y-Y connected 3-phase transformer

Options :

- 1. ✗ (i) and (ii) only
- 2. ✗ (ii) and (iii) only
- 3. ✓ (iii) and (iv) only
- 4. ✗ (i) and (iv) only

Question Number : 45 Question Id : 170527345 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

A  $10\ \Omega$  resistive load is to be impedance matched by a transformer to a source with  $6250\ \Omega$  of internal resistance. The ratio of primary to secondary turns of transformer should be

Options :

- 1. ✗ 10
- 2. ✗ 15
- 3. ✗ 20
- 4. ✓ 25

Question Number : 46 Question Id : 170527346 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

A short shunt D.C. compound generator supplies a load current of 100 A at 250 V. The generator has the following winding resistances: shunt field =  $130\ \Omega$ , armature resistance =  $0.1\ \Omega$  and series field resistance =  $0.1\ \Omega$ . Find the EMF generated if the brush drop is 1 volt per brush

Options :

- 1. ✗ 270.2 V

2. ✗ 260.2 V

3. ✗ 262.2 V

4. ✓ 272.2 V

**Question Number : 47 Question Id : 170527347 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

Identify the incorrect statements among the following

- (i) In a round rotor synchronous motor, reactive power is maximum at a load angle of  $90^\circ$
- (ii) Damper winding is provided in a poly phase synchronous motor in order to provide a starting torque
- (iii) In a slip test on a salient pole synchronous machine, the e.m.f induced in the field winding is zero for  $X_q$  (quadrature reactance)
- (iv) Synchronous condenser is an over excited synchronous motor driving a mechanical load

**Options :**

1. ✗ (i), (ii) and (iii) only

2. ✗ (iii) and (iv) only

3. ✗ (ii), (iii) and (iv) only

4. ✓ (i), (iii) and (iv) only

**Question Number : 48 Question Id : 170527348 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

The time period of rotor current of a 3- $\phi$ , 4-pole, 50 Hz, induction motor is 200 ms.

Then slip speed of the motor is

**Options :**

1. ✓ 150 rpm

2. ✗ 1350 rpm

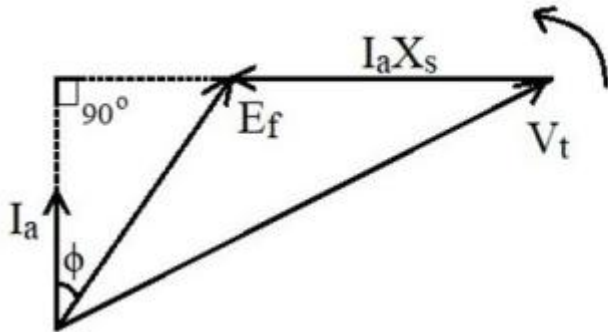
3. ✗ 75 rpm

4. ✖ 1425 rpm

Question Number : 49 Question Id : 170527349 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

With usual notations, the following phasor diagram corresponds to



Options :

1. ✔ Under excited alternator
2. ✖ Under excited synchronous motor
3. ✖ Over excited alternator
4. ✖ Over excited synchronous motor

Question Number : 50 Question Id : 170527350 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following statements are correct with respect to 3-phase Induction machines?

- (i) Cogging and crawling are less prominent in slip ring induction machines
- (ii) Induction harmonic torque can be reduced by skewing
- (iii) Synchronous harmonic torques can be avoided by a proper combination of stator and rotor slots

Options :

1. ✖ (i) and (ii) only
2. ✖ (ii) and (iii) only
3. ✖ (i) and (iii) only

4. ✓ (i), (ii) and (iii)

**Question Number : 51 Question Id : 170527351 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

A 3-phase transformer bank consisting of three 1- $\phi$  transformers is used to step down the voltage of a 3-phase, 6600 V transmission line. If the primary line current is 20 A, the output kVA of Y/ $\Delta$  connection is \_\_\_\_\_, if the turns ratio is 12.

**Options :**

1. ✓  $132\sqrt{3}$

2. ✗  $66\sqrt{3}$

3. ✗  $\frac{132}{\sqrt{3}}$

4. ✗  $\frac{66}{\sqrt{3}}$

**Question Number : 52 Question Id : 170527352 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

A 3-phase, 4 pole, 50 Hz Induction motor has full load rated speed of 1425 rpm and takes 6 times its rated current under blocked rotor test from the mains. When started using auto transformer starter with 50% of normal voltage applied to the induction motor, then starting torque as a percentage of rated torque is

**Options :**

1. ✗ 90%

2. ✗ 75%

3. ✓ 45%

4. ✗ 30%

**Question Number : 53 Question Id : 170527353 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

If six identical machines are connected to the same bus-bar, each having an  $H$  of 5 MJ/MVA and rated at 60 MVA, then the inertia constant (in MJ/MVA) of the equivalent machine is (consider the system base is equal to the combined rating of the machine i.e., 360 MVA)

Options :

1. ✓ 5
2. ✗ 10
3. ✗ 15
4. ✗ 20

Question Number : 54 Question Id : 170527354 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

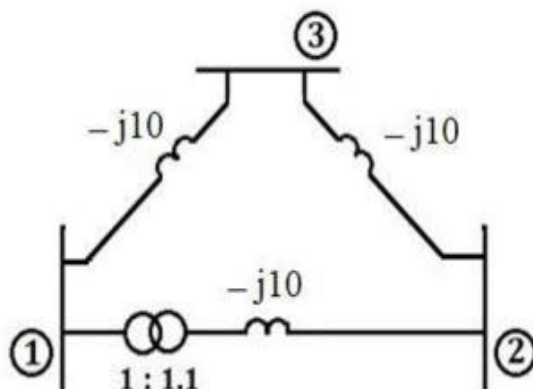
The Jacobian Matrix of Newton–Raphson (Polar) form provides the information pertaining to

Options :

1. ✗ Real Power Flow
2. ✗ Reactive Power Flow
3. ✗ Losses
4. ✓ Sensitivity information

Question Number : 55 Question Id : 170527355 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

Form the  $Y_{BUS}$  for the system shown below. All values shown are per unit line admittances.





Options :

1. ✖ 
$$\begin{pmatrix} -j12.1 & j11 & j10 \\ j11 & -j10 & j10 \\ j10 & j10 & -j20 \end{pmatrix}$$

2. ✔ 
$$\begin{pmatrix} -j22.1 & j11 & j10 \\ j11 & -j20 & j10 \\ j10 & j10 & -j20 \end{pmatrix}$$

3. ✖ 
$$\begin{pmatrix} -j20 & j11 & j10 \\ j11 & -j20 & j10 \\ j10 & j10 & -j22.1 \end{pmatrix}$$

4. ✖ 
$$\begin{pmatrix} -j20 & j11 & j10 \\ j11 & -j10 & j10 \\ j10 & j10 & -j12.1 \end{pmatrix}$$

Question Number : 56 Question Id : 170527356 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The lossless transmission line has a surge impedance loading of 2000 MW. For series capacitive compensation of 25%, the surge impedance loading of the compensated line will be around

Options :

1. ✖ 2560 MW

2. ✖ 1780 MW

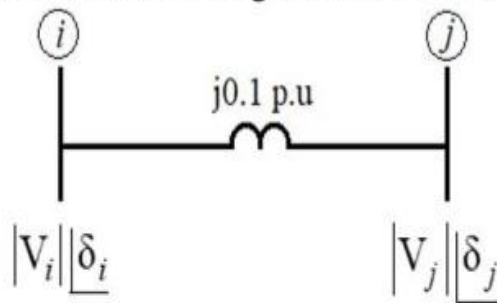
3. ✖ 1520 MW

4. ✔ 2310 MW

Question Number : 57 Question Id : 170527357 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

A transmission line with per unit line reactance of  $j0.1$  is connected between nodes  $i$  and  $j$  in a power system with bus voltages as shown in the figure below



Identify the incorrect statements.

- I. If  $|V_i| > |V_j|$ , then reactive power flows from node  $i$  to  $j$
- II. If  $|V_i| = |V_j|$ , then the net reactive power consumed by the line is drawn equally from both sides of nodes and is greater than zero
- III. If  $|V_i| = |V_j|$ , then the net reactive power consumed by the line is equal to zero

Options :

1. ✓ only III
2. ✗ only II
3. ✗ only I
4. ✗ both II and III

Question Number : 58 Question Id : 170527358 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The relationship between positive, negative and zero sequence impedances of synchronous machine and overhead transmission line are respectively

Options :

1. ✗  $Z_1 > Z_2 > Z_0$  ;  $Z_1 = Z_2 \gg Z_0$
2. ✗  $Z_1 > Z_2 = Z_0$  ;  $Z_1 = Z_2 = Z_0$
3. ✓  $Z_1 = Z_2 \gg Z_0$  ;  $Z_1 = Z_2 \ll Z_0$
4. ✗  $Z_1 = Z_2 \ll Z_0$  ;  $Z_1 > Z_2 > Z_0$



Question Number : 59 Question Id : 170527359 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Incremental fuel costs (\$/MWh) for a plant consisting of two units are given by  $IC_1 = 0.008P_1 + 8$  and  $IC_2 = 0.0096P_2 + 6.4$ . Assume that both units are operating at all times and they have maximum and minimum loading limits of 625 and 100 MW respectively. The economic loading of generators for a plant demand of 800 MW, are (in MW)

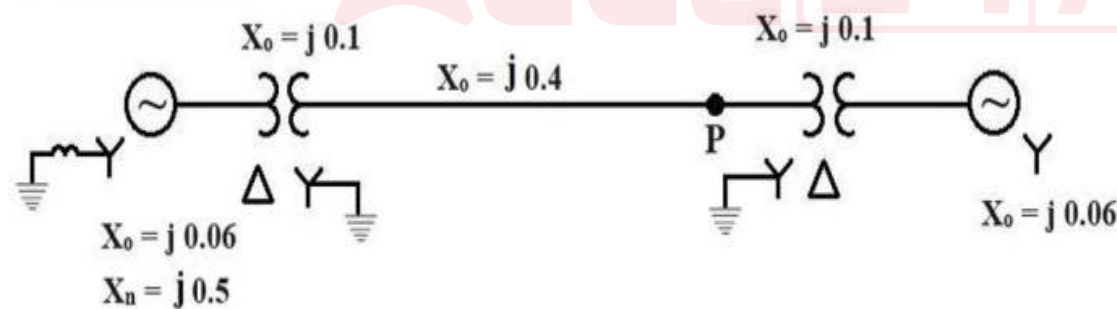
Options :

1. ✗  $P_1 \approx 445$  ;  $P_2 \approx 355$
2. ✗  $P_1 \approx 355$  ;  $P_2 \approx 445$
3. ✓  $P_1 \approx 345$  ;  $P_2 \approx 455$
4. ✗  $P_1 \approx 455$  ;  $P_2 \approx 345$

Question Number : 60 Question Id : 170527360 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

A single line diagram of a power system with all per unit zero sequence reactances of the elements on a common system base are shown in below figure. The Thevenin's equivalent zero sequence reactance of the zero-sequence network seen between points 'P' to reference is



Options :

1. ✗  $j0.833$
2. ✗  $-j0.833$
3. ✓  $j0.0833$

$$-j0.0833$$

4. ✖

Question Number : 61 Question Id : 170527361 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The reverse power protection is applied for

Options :

1. ✖ Over speed
2. ✖ Excitation failure
3. ✔ Turbine failure
4. ✖ Stator earth fault

Question Number : 62 Question Id : 170527362 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The instantaneous dc-link voltage when valve 1 & valve 2 are conducting and valve 3 is triggered in a 6-pulse HVDC converter with overlap angle  $\mu > 0^\circ$  will be

(Where  $e_a$ ,  $e_b$ ,  $e_c$  are instantaneous source phase voltages)

Options :

1. ✖  $\sqrt{3}e_c$
2. ✖  $\frac{3}{2}e_c$
3. ✖  $-\sqrt{3}e_c$
4. ✔  $-\frac{3}{2}e_c$

Question Number : 63 Question Id : 170527363 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The yearly duration curve of a certain plant is considered as a straight line from 140 MW to 30 MW. Power is supplied with one generating unit of 80 MW capacity and two units of 50 MW capacity each. The plant capacity factor of the plant is

**Options :**

1. ✗ 0.607
2. ✓ 0.472
3. ✗ 0.388
4. ✗ 0.632

**Question Number : 64 Question Id : 170527364 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

An industrial consumer has load of 1500 kW at 0.8 p.f lag for 12 hours and 1000 kW at u.p.f for 12 hours during the day. The daily load factor is

**Options :**

1. ✓ 0.833
2. ✗ 0.666
3. ✗ 1.5
4. ✗ 0.8

**Question Number : 65 Question Id : 170527365 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

A hydel powerplant supplied by a river with a discharge of  $3000 \text{ m}^3/\text{sec}$  at a head of 30 m, with a plant efficiency of 79% develops a power of

**Options :**

1. ✓ 697.5 MW
2. ✗ 345.2 MW
3. ✗ 823.7 MW
4. ✗ 423.1 MW

**Question Number : 66 Question Id : 170527366 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following turbine has highest specific speed?

**Options :**

1. ✗ Pelton turbine
2. ✓ Kaplan turbine
3. ✗ Francis turbine
4. ✗ Impulse turbine

**Question Number : 67 Question Id : 170527367 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following statements are correct with respect to I-V characteristics of solar PV cells?

- I. At constant temperature, the maximum power available from PV cell is directly proportional to irradiation
- II. At constant irradiation, the maximum power available from PV cell is directly proportional to temperature.

**Options :**

1. ✗ Both statements I and II are correct
2. ✗ Both statements I and II are incorrect
3. ✓ Statement I is correct but statement II is incorrect
4. ✗ Statement I is incorrect but statement II is correct

**Question Number : 68 Question Id : 170527368 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

A single-phase full bridge diode rectifier with a large output filter capacitance feeds a resistive load. Then the input current is

**Options :**

1. ✗ Purely sinusoidal and in-phase with the voltage

2. ✗ Purely sinusoidal and power factor is less than one
3. ✓ Peak and distorted with power factor less than one
4. ✗ Peak and distorted but with power factor equal to one

**Question Number : 69 Question Id : 170527369 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

Identify the wrong statements from the following

- i. IGBT is a voltage-controlled device
- ii. Power MOSFET is a current controlled device
- iii. Turn OFF time of an IGBT is less than that of the Power MOSFET
- iv. IGBT has high input impedance

**Options :**

1. ✗ i and ii only
2. ✓ ii and iii only
3. ✗ iii and iv only
4. ✗ iv and i only

**Question Number : 70 Question Id : 170527370 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

In a dc-dc switch-mode converters, which of the following statements are true

- (i) In the PWM switching at a constant switching frequency, the switch duty ratio is inversely proportional to amplitude of the control signal
- (ii) In control of converters, the switching frequency of the converter is same as the frequency of the repetitive wave form (saw tooth)
- (iii) In steady state operation of a converter, the integral of the inductor voltage over one time period should be greater than zero
- (iv) The average current through a capacitor operating in periodic steady state is zero

**Options :**

1. ✗ (i) and (ii) only



2. ✗ (ii) and (iii) only
3. ✓ (ii) and (iv) only
4. ✗ (iii) and (iv) only

**Question Number : 71 Question Id : 170527371 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

MOSFETs are connected in parallel very easily because

**Options :**

1. ✗ Conductivity modulation is absent
2. ✗ Its on-state voltage drop is very low
3. ✗ Its Gate-drive circuits are simple
4. ✓ It has positive temperature coefficient of on-state resistance

**Question Number : 72 Question Id : 170527372 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

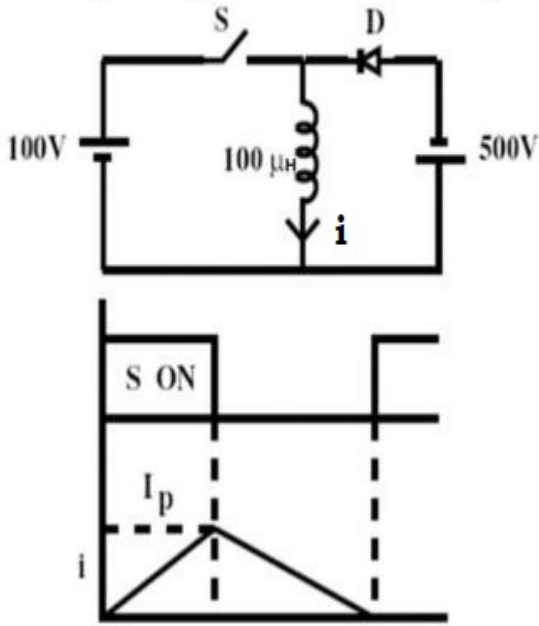
A large Amp Hour capacity battery of 120V is charged through a resistor  $7\ \Omega$  via single phase half wave uncontrolled rectifier (single diode) fed by the AC supply of 240V(peak), 50Hz. The peak inverse voltage of the diode and circuit turn-off time are respectively

**Options :**

1. ✗ 360 V, 6.66 ms
2. ✗ 240 V, 13.33 ms
3. ✓ 360 V, 13.33 ms
4. ✗ 120 V, 6.66 ms

**Question Number : 73 Question Id : 170527373 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

The given figure shows a buck-boost converter switched at 10 kHz and current 'i' is at the edge of continuous conduction. The on-time of switch and the peak current flowing through the inductor are respectively



Options :

1. ✗ 83.3 μs, 0.48 A
2. ✗ 250 μs, 0.48 A
3. ✗ 250 μs, 83.3 A
4. ✓ 83.3 μs, 83.3 A

**Question Number : 74 Question Id : 170527374 Question Type : MCQ Option Shuffling : Yes Correct Marks : 1 Wrong Marks : 0**

228V, 40A separately excited DC motor has a nominal speed of 1500 rpm and armature resistance of  $0.2 \Omega$ . If three phase fully controlled rectifier is used to drive this machine, it is found that the motor operates at rated torque and speed at  $\alpha = 0^\circ$ . If the load has linear characteristic with zero torque at zero speed, then angle  $\alpha$  to reduce the speed to half of rated speed is

Options :

1. ✓  $60^\circ$
2. ✗  $26^\circ$
3. ✗  $30^\circ$



4. ✗  $80^\circ$

**Question Number : 75 Question Id : 170527375 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

A Single-phase Full-bridge Inverter delivers power to a series connected RLC load with  $R=3\ \Omega$ ,  $X_L=6\ \Omega$ ,  $X_C=10\ \Omega$ ,  $V_{dc}=400\text{ V}$  and  $f_o=50\text{ Hz}$ . Thyristors (SCRs) are considered as its switching devices, then switches are turned-off by

**Options :**

1. ✗ Forced-Commutation
2. ✓ Load-Commutation
3. ✗ External Pulse-Commutation
4. ✗ Line-Commutation

**Question Number : 76 Question Id : 170527376 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

Heat addition during the constant pressure process is equal to \_\_\_\_\_

**Options :**

1. ✗ Change in Entropy
2. ✓ Change in Enthalpy
3. ✗ Change in Internal Energy
4. ✗ Change in Workdone

**Question Number : 77 Question Id : 170527377 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

Which of the following thermodynamic cycle is used in steam powerplants?

**Options :**

1. ✗ Ericsson cycle
2. ✓ Rankine cycle

3. ✖ Otto cycle
4. ✖ Diesel cycle

**Question Number : 78 Question Id : 170527378 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

The heat conduction in gases is due to

**Options :**

1. ✖ Vibration of molecules
2. ✖ Movement of free electrons
3. ✔ Collision of molecules
4. ✖ Movement of molecules

**Question Number : 79 Question Id : 170527379 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

The ratio of heat flow  $Q_1/Q_2$  from two walls of same thickness having their thermal conductivities as  $k_1 = 2k_2$  is

**Options :**

1. ✖ 0.25
2. ✖ 0.5
3. ✖ 1.0
4. ✔ 2.0

**Question Number : 80 Question Id : 170527380 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

Log mean temperature difference (LMTD) of a heat exchanger is given by

**Options :**

1. ✖ 
$$\frac{(\Delta T_2 - \Delta T_1)}{\ln\left(\frac{\Delta T_1}{\Delta T_2}\right)}$$

2. ✓ 
$$\frac{(\Delta T_2 - \Delta T_1)}{\ln\left(\frac{\Delta T_2}{\Delta T_1}\right)}$$

3. ✗ 
$$\ln\left(\frac{\Delta T_2 - \Delta T_1}{\Delta T_2 / \Delta T_1}\right)$$

4. ✗ 
$$\ln\left(\frac{\Delta T_1 - \Delta T_2}{\Delta T_2 / \Delta T_1}\right)$$

## Section B

Section Id :	1705278
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	20
Number of Questions to be attempted :	20
Section Marks :	20
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	1705278
Question Shuffling Allowed :	Yes

Question Number : 81 Question Id : 170527381 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The present ages (in years) of two persons A and B are in the ratio 3:5 respectively. After 7 years the ratio of their ages will be in the ratio 11:16. Then the sum of their present ages is

Options :

1. ✗ 32

2. ✓ 40

3. ✗ 48

4. ✗ 57

Question Number : 82 Question Id : 170527382 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

'p' and 'v' are two positive quantities such that 'p' is inversely proportional to 'v'. If 'p' increases by 10%, then 'v' decreases by

Options :

1. ✗ 5%

2. ✗ 20%

3. ✓  $9\frac{1}{11}\%$

4. ✗  $10\frac{1}{11}\%$

Question Number : 83 Question Id : 170527383 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Choose the correct alternative for the missing term that will continue the same pattern in the given number series

1, 3, 6, 11, 18, 29, .....

Options :

1. ✗ 43

2. ✗ 39

3. ✓ 42

4. ✗ 45

Question Number : 84 Question Id : 170527384 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

APRIL : 64 :: JULY : \_\_\_\_\_?

Options :

1. ✗ 512

2. ✗ 729

3. ✓ 343

4. ✗ 216

**Question Number : 85 Question Id : 170527385 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

The study of Heavenly bodies is Known as \_\_\_\_\_

**Options :**

1. ✗ Astrophysics

2. ✗ Astronautics

3. ✗ Astrology

4. ✓ Astronomy

**Question Number : 86 Question Id : 170527386 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

Which of the following political parties contested in 2024 General elections is not a national-level party according to Election Commission of India?

**Options :**

1. ✗ National People's Party

2. ✗ Bahujan Samaj Party

3. ✓ All India Trinamool Congress Party

4. ✗ Aam Aadmi Party

**Question Number : 87 Question Id : 170527387 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

The non-cooperation movement, which was launched on 5<sup>th</sup> September 1920 by Mahatma Gandhi, was called off in February 1922 in the wake of

**Options :**

1. ✓ Chauri Chaura Incident

2. ✖ Khilafat Movement
3. ✖ Jallianwala Bagh Massacre
4. ✖ Rowlat Act

**Question Number : 88 Question Id : 170527388 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

Sodium Hydrogen Carbonate is the chemical name of the compound

**Options :**

1. ✖ Common salt
2. ✔ Baking soda
3. ✖ Bleaching powder
4. ✖ Washing soda

**Question Number : 89 Question Id : 170527389 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

Choose the appropriate antonym for the word underlined.

He was very quiet and reticent by nature.

**Options :**

1. ✖ soft-spoken
2. ✖ calm
3. ✔ talkative
4. ✖ violent

**Question Number : 90 Question Id : 170527390 Question Type : MCQ Option Shuffling : Yes**  
**Correct Marks : 1 Wrong Marks : 0**

Fill in the blank with the suitable form of the words given.

He is extremely \_\_\_\_\_ as far as his daughter's safety is concerned.



Options :

1. ✗ protector
2. ✓ protective
3. ✗ protected
4. ✗ protractible

Question Number : 91 Question Id : 170527391 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with an appropriate *preposition* from the options:  
My voice echoed \_\_\_\_\_ the walls of the castle.

Options :

1. ✓ with
2. ✗ from
3. ✗ in
4. ✗ for

Question Number : 92 Question Id : 170527392 Question Type : MCQ Option Shuffling : Yes  
Correct Marks : 1 Wrong Marks : 0

Fill in the blanks with suitable phrasal verbs from the options.

The trainee couldn't tolerate the bossy atmosphere in the company. He declared that he wouldn't \_\_\_\_\_ that anymore.

Options :

1. ✗ fall out of
2. ✓ put up with
3. ✗ look after
4. ✗ put out

Question Number : 93 Question Id : 170527393 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Who is considered the father of Telangana poetry?

Options :

1. ✖ Annamayya
2. ✖ Pothana
3. ✔ Kaloji Narayana Rao
4. ✖ Tyagaraja

Question Number : 94 Question Id : 170527394 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

Who was the architect of the public library movement in India?

Options :

1. ✖ Gadicharala Harisarvothama Rao
2. ✖ Veldhurtu Manikyala Rao
3. ✔ Iyyanki Venkata Ramanayya
4. ✖ Burgula Raganatha Rao

Question Number : 95 Question Id : 170527395 Question Type : MCQ Option Shuffling : Yes

Correct Marks : 1 Wrong Marks : 0

The historical structure of Bhongir Fort is known for its

Options :

1. ✔ Hilltop location
2. ✖ Underwater architecture
3. ✖ Cave carvings
4. ✖ Suspension bridges

Question Number : 96

Question Id : 170527396

Question Type : MCQ

Option Shuffling : Yes

Correct Marks : 1

Wrong Marks : 0

Pembarthi located in Telangana is well known for which of the following?

Options :

1. ✖ Cement industries

2. ✖ Iron ore

3. ✖ Paintings

4. ✔ Metal crafts

Question Number : 97

Question Id : 170527397





Question Type : MCQ

Option Shuffling : Yes

Correct Marks : 1

Wrong Marks : 0

Match the following icons with their meaning in Windows operating system.

P		i	Help
Q		ii	Information
R		iii	Warning
S		iv	Error

Options :

1. ✖ P-ii, Q-i, R-iv, S-iii

2. ✖ P-iv, Q-ii, R-iii, S-i

3. ✔ P-iv, Q-iii, R-ii, S-i

4. ✖ P-ii, Q-iii, R-i, S-iv

Question Number : 98

Question Id : 170527398

Question Type : MCQ

Option Shuffling : Yes

Correct Marks : 1

Wrong Marks : 0

Functions in MS Excel must begin with

Options :

1. ✖ F()

2. ✓ =

3. ✗ <

4. ✗ \$

**Question Number : 99 Question Id : 170527399 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

Ctrl, shift and alt are called

**Options :**

1. ✗ Adjustment keys
2. ✗ Function keys
3. ✓ Modifier keys
4. ✗ Alphanumeric keys

**Question Number : 100 Question Id : 170527400 Question Type : MCQ Option Shuffling : Yes**

**Correct Marks : 1 Wrong Marks : 0**

A new presentation in MS Power Point can be created by all the following methods except

**Options :**

1. ✗ Clicking the New button in standard toolbar
2. ✗ Clicking File->new
3. ✓ Clicking File->open
4. ✗ Pressing Ctrl+N