Electrical Engineering 2011

Q.1 to Q.25 carry one mark each

Q.1 Circuit turn- off time of an SCR is defined as the time

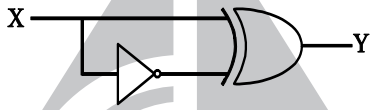
(A) taken by the SCR to turn off

(B) required for the SCR current to become zero

(C) for which the SCR is reverse biased by the commutation circuit

(D) for which the SCR is reverse biased to reduce its current below the holding current

Q.2 The output **Y** of the logic circuit given below is



(A) 1 (B) 0 (C) X (D) $\overline{X}$

Q.3 A dual trace oscilloscope is set to operate in the ALTernate mode. The control input of the multiplexer used in the y- circuit is fed with a signal having a frequency equal to

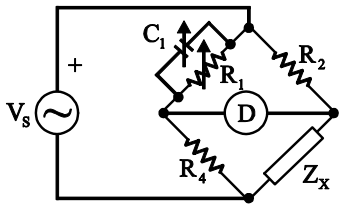
(A) the highest frequency that the multiplexer can operate properly

(B) twice the frequency of the time base (sweep) oscillator

(C) the frequency of the time base (sweep) oscillator

(D) half the frequency of the time base (sweep) oscilator

Q.4 The bridge circuit shown in the figure below is used for the measurement of an unknown element Z_X. The bridge circuit is best suited when Z_X is a



(A) low resistance (B) high resistance (C) low Q inductor (D) lossy capacitor

Q.5 An open loop system represented by the transfer function $G(s)=\frac{(s-1)}{(s+2)(s+3)}$ is

(A) stable and of the minimum phase type

(B) stable and of the non-minimum phase type

(C) unstable and of the minimum phase type

(D) unstable and of the non-minimum phase type

Q.6 For enhancing the power transmission in a long EHV transmission line, the most preferred method is to connect a

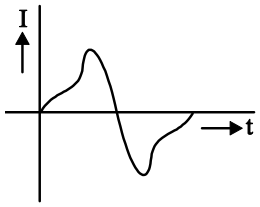
(A) series inductive compensator in the line (B) shunt inductive compensator at the receiving end

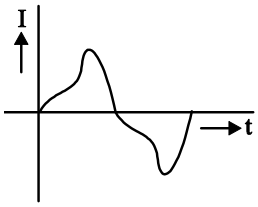
(C) series capacitive compensator in the line (D) shunt capacitive compensator at the sending end

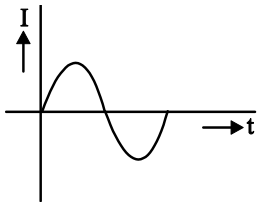
Q.7 A negative sequence relay is commonly used to protect

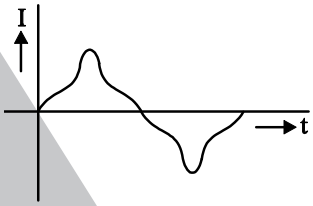
(A) an alternator (B) a transformer (C) a transmission line (D) a bus bar

Q.8 A single phase air core transformer, fed from a rated sinusoidal supply, is operating at no load. The steady state magnetizing current drawn by the transformer from the supply will have the wavefrom

(A) 

(B) 

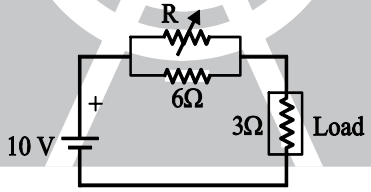
(C) 

(D) 

Q.9 Given two continuous time signals $x(t) = e^{-t}$ and $y(t) = e^{-2t}$ which exist for $t > 0$, the convolution $z(t) = x(t) * y(t)$ is

(A) $e^{-t} - e^{-2t}$ (B) e^{-3t} (C) e^{+t} (D) $e^{-t} + e^{-2t}$

Q.10 In the circuit given below, the value of R required for the transfer of maximum power to the load having a resistance of 3Ω is

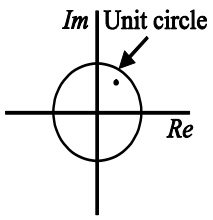


(A) zero (B) 3Ω (C) 6Ω (D) infinity

Q.11 The voltage applied to a circuit is $100\sqrt{2}\cos(100\pi t)$ volts and the circuit draws a current of $10\sqrt{2}\sin(100\pi t+\pi/4)$ amperes. Taking the voltage as the reference phasor, the phasor representation of the current in amperes is

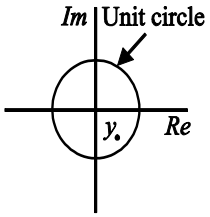
(A) $10\sqrt{2}\angle -\pi/4$ (B) $10\angle -\pi/4$ (C) $10\angle +\pi/4$ (D) $10\sqrt{2}\angle +\pi/4$

Q.12 A point z has been plotted in the complex plane, as shown in figure below.

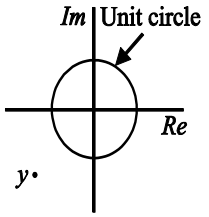


The plot of the complex number $y = \frac{1}{z}$ is

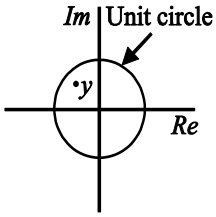
(A)



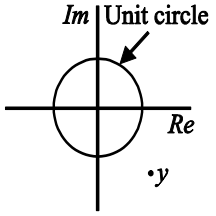
(B)



(C)



(D)



Q.13 A low-pass filter with a cut-off frequency of 30 Hz is cascaded with a high-pass filter with a cut-off frequency of 20 Hz. The resultant system of filters will function as

(A) an all-pass filter

(B) an all-stop filter

(C) a band stop (band-reject) filter

(D) a band-pass filter

Q.14 Consider the following statements :

(i) The compensating coil of a low power factor wattmeter compensates the effect of the impedance of the current coil.

(ii) The compensating coil of a low power factor wattmeter compensates the effect of the impedance of the voltage coil current.

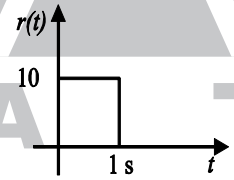
(A) (i) is true but (ii) is false

(B) (i) is false but (ii) is true

(C) both (i) and (ii) are true

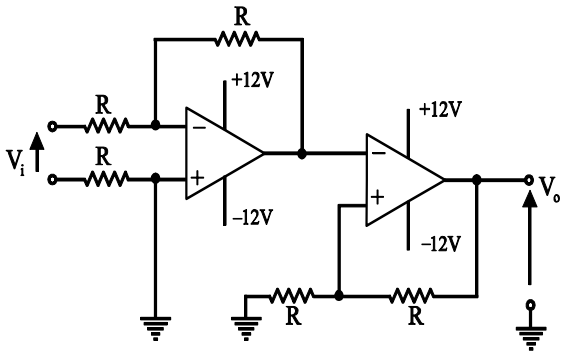
(D) both (i) and (ii) are false

Q.15 The steady state error of a unity feedback linear system for a unit step input 0.1. The steady state error of the same system, for a pulse input *r(y)* having a magnitude of 10 and a duration of one second, as shown in the figure is



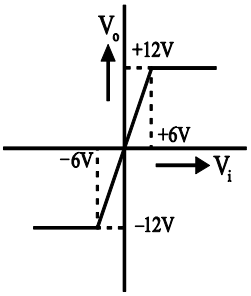
(A) 0 (B) 0.1 (C) 1 (D) 10

Q.16 For the circuit shown below,

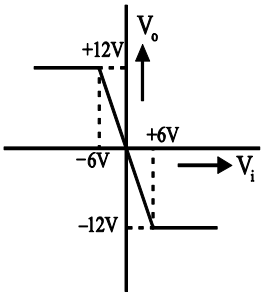


the **CORRECT** transfer characteristic is

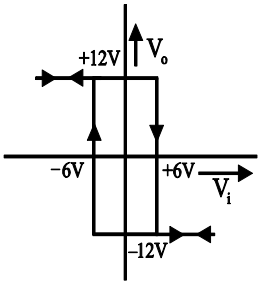
(A)



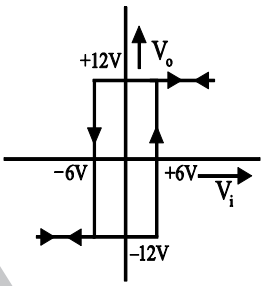
(B)



(C)



(D)



Q.17 The frequency response of a linear system $G(j\omega)$ is provide in the tabular from below

$\lvert G(j\omega)\rvert$	1.3	1.2	1.0	0.8	0.5	0.3
$G(j\omega)$	-130°	-140°	-150°	-160°	-180°	-200°

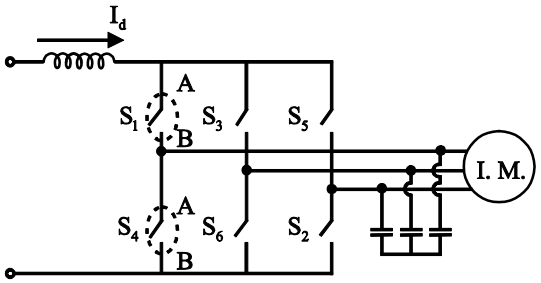
(A) 6 dB and 30° (B) 6 dB and -30° (C) -6 dB and 30° (D) -6 dB and -30°

Q.18 A three-phase, salient pole synchronous motor is connected to an infinite bus. It is operated at no load at normal excitation. The filed excitation of the motor is first reduced to zero and then increased in the reverse direction gradually. Then the armature current

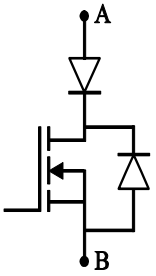
(A) increases continuously (B) first increases and then decreases steeply

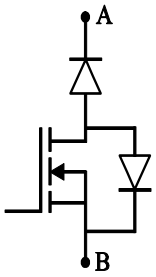
(C) first decreases and then increases steely (D) remains constant

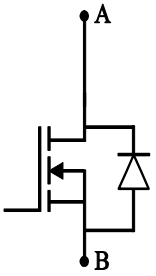
Q.19 A three-phase current source inverter used for the speed control of an induction motor is to be realized using MOSFET switches as shown below. Switches S_1 and S_6 are identical switches.

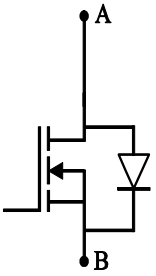


The proper configuration for realizing switches S_1 and S_6 is

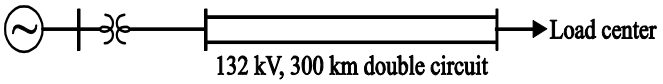
(A) 

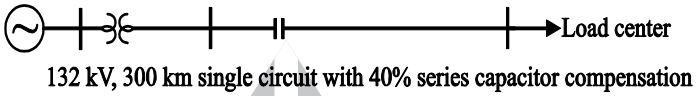
(B) 

(C) 

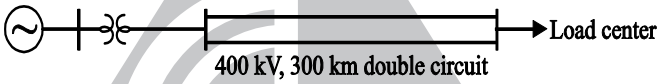
(D) 

Q.20 A nuclear power station of 500 MW capacity is located at 300 km away from a load center. Select the most suitable power evacuation transmission configuration among the following options

(A) 

(B) 

(C) 

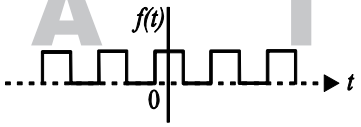
(D) 

Q.21 A 4-point starter is used to start and control the speed of a

(A) dc shunt motor with armature resistance control (B) dc shunt motor with field weakening control

(C) dc series motor (D) dc compound motor

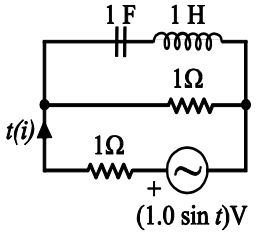
Q.22 The Fourier series expansion $f(t) = a_0 + \sum_{n-1}^{\infty} a_n \cos n\omega t + b_n \sin n\omega t$ of the periodic signal shown below will contain the following nonzero terms



(A) a_0 and $b_n, n = 1,3,5,...\infty$ (B) a_0 and $a_n, n = 1,2,3,...\infty$

(C) a_0, a_n and $b_n, n = 1,2,3,...\infty$ (D) a_0 and $a_n, n = 1,2,3,...\infty$

Q.23 The r.m.s. value of the current *i(t)* in the circuit shown below is



(A) $\frac{1}{2}$A (B) $\frac{1}{\sqrt{2}}$A (C) 1 A (D) $\sqrt{2}$A

Q.24 Root of the algebraic equation $x^3 + x^2 + x + 1 = 0$ are

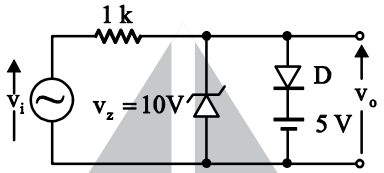
(A) $(+1, +j, -j)$ (B) $(+1, -1, +1)$ (C) $(0, 0, 0)$ (D) $(-1, +j, -j)$

Q.25 With K as a constant, the possible solution for the first order differential equation $\frac{dy}{dx} = e^{-3x}$ is

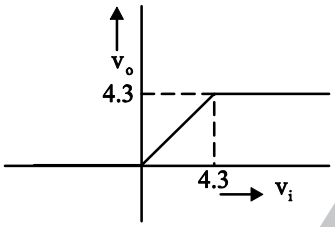
(A) $-\frac{1}{3}e^{-3x} + K$ (B) $-\frac{1}{3}e^{3x} + K$ (C) $-3e^{-3x} + K$ (D) $-3e^{-x} + K$

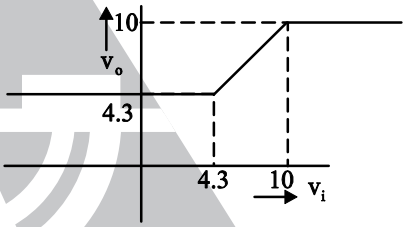
Q.26 to Q.55 carry two mark each

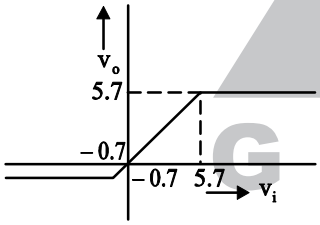
Q.26 A clipper circuit is shown below.

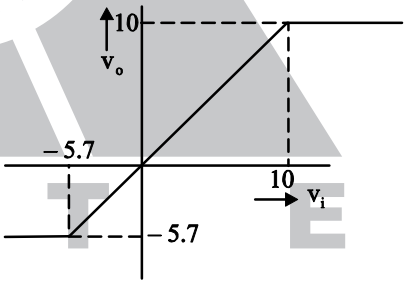


Assuming forward voltage drops of the diodes to be 0.7 V, the input-output transfer characteristics of the circuit is

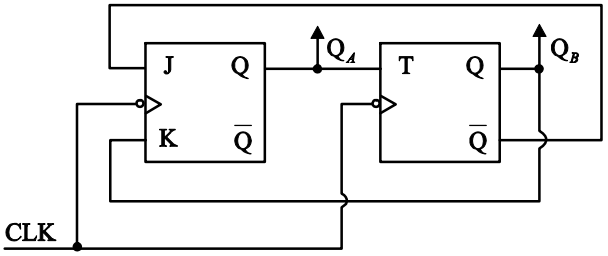
(A)


(B)


(C)


(D)


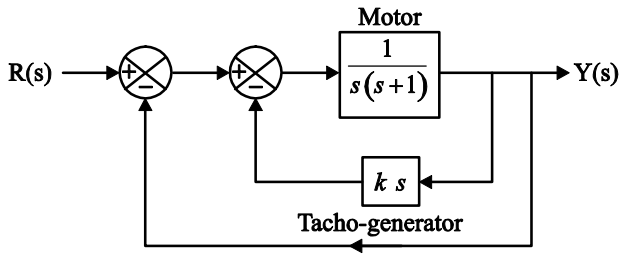
Q.**27** A two bit counter circuit is shown below.



If the state $Q_A Q_B$ of the counter at the clock time t_n is "10" then the state $Q_A Q_B$ of the counter at $t_n + 3$ (after three clock cycles) will be

(A) 00 (B) 01 (C) 10 (D) 11

Q.28 A two-loop position control system is shown below.



The gain k of the Tacho-generator influences mainly the

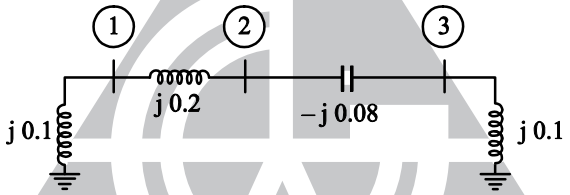
(A) peak overshoot

(B) natural frequency of oscillation

(C) phase shift of the closed loop transfer function at very low frequency $(\omega \to 0)$

(D) phase shift of the closed loop transfer function at very high frequency $(\omega \to \infty)$

Q.29 A three-bus network is shown in the figure below indicating the p.u. impedances of each element.



The Bus admittance matrix, Y-bus, of the network is

(A) $j\begin{bmatrix} 0.3 & -0.2 & 0 \\ -0.2 & 0.12 & 0.08 \\ 0 & 0.08 & 0.02 \end{bmatrix}$

(B) $j\begin{bmatrix} -15 & 5 & 0 \\ 5 & 7.5 & -12.5 \\ 0 & -12.5 & 2.5 \end{bmatrix}$

(C) $j\begin{bmatrix} 0.1 & 0.2 & 0 \\ 0.2 & 0.12 & -0.08 \\ 0 & -0.08 & 0.10 \end{bmatrix}$

(D) $j\begin{bmatrix} -10 & 5 & 0 \\ 5 & 7.5 & 12.5 \\ 0 & 12.5 & -10 \end{bmatrix}$

Q.30 A $4^{1/2}$ digit DMM has the error specification as: 0.2% of reading +10 counts. If a dc voltage of 100 V is read on its 200 V full scale, the maximum error that can be expected in the reading is

(A) ±0.1% (B) ±0.2% (C) ±0.3% (D) ±0.4%

Q.31 The direct axis and quadrature axis rectangular of a salient pole alternator are 1.2 p.u. and 1.0 p.u. respectively. The armature resistance is negligible. If this alternator is delivering rated kVA at upf and at rated voltage then its power angle is

(A) 30^0 (B) 45^0 (C) 60^0 (D) 90^0

Q.32 The response $h(t)$ of a linear time invariant system to an impulse $\delta(t)$, under initially relaxed condition is $h(t) = e^{-t} + e^{-2t}$. The response of this system for a unit step input $u(t)$ is

(A) $u(t)+e^{-t}+e^{-2t}$ (B) $\left(e^{-t}+e^{-2t}\right)u(t)$

(C) $\left(1.5-e^{-t}-0.5e^{-2t}\right)u(t)$ (D) $e^{-t}\delta(t)+e^{-2t}u(t)$

Q.33 A capacitor is made with a polymeric dielectric having an ε_r of 2.26 and a dielectric breakdown strength of 50 kV/cm. The permittivity of free space is 8.85 pF/m. If the rectangular palate of the capacitor have a width of 20cm and a length of 40 cm, then the maximum electric charge in the capacitor is

(A) 2μC (B) 4μC (C) 8μC (D) 10μC

Q.34 A three-phase 440V, 6 pole, 50Hz, squirrel cage induction motor is running at a slip of 5%. The speed of stator magnetic field with respect to rotor magnetic field and speed of rotor with respect to stator magnetic field are

(A) zero, –5 rpm (B) zero, 955 rpm

(C) 1000 rpm, – 5 rpm (D) 1000 rpm, 955 rpm

Q.35 The two vectors [1, 1, 1] and $\left[1, a, a^2\right]$ where $a = \left(-\frac{1}{2}+j\frac{\sqrt{3}}{2}\right)$, are

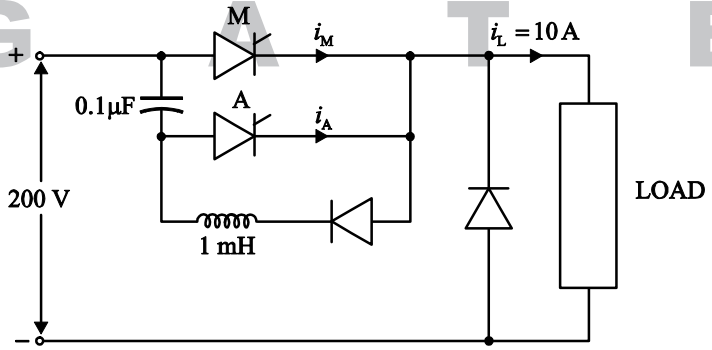
(A) orthonormal (B) orthogonal (C) parallel (D) collinear

Q.36 The matrix $[A]=\begin{bmatrix}2 & 1\\ 4 & -1\end{bmatrix}$ is decomposed into a product of a lower triangular matrix $[L]$ and an upper triangular matrix $[U]$. The properly decomposed $[L]$ and $[U]$ matrices respectively are

(A) $\begin{bmatrix}1 & 0\\ 4 & -1\end{bmatrix}$ and $\begin{bmatrix}1 & 1\\ 0 & -2\end{bmatrix}$ (B) $\begin{bmatrix}2 & 0\\ 4 & -1\end{bmatrix}$ and $\begin{bmatrix}1 & 1\\ 0 & 1\end{bmatrix}$

(C) $\begin{bmatrix}1 & 0\\ 4 & 1\end{bmatrix}$ and $\begin{bmatrix}2 & 1\\ 0 & -1\end{bmatrix}$ (D) $\begin{bmatrix}2 & 0\\ 4 & -3\end{bmatrix}$ and $\begin{bmatrix}1 & 0.5\\ 0 & 1\end{bmatrix}$

Q.37 A voltage commutated chopper circuit, operated at 500Hz, is shown below.

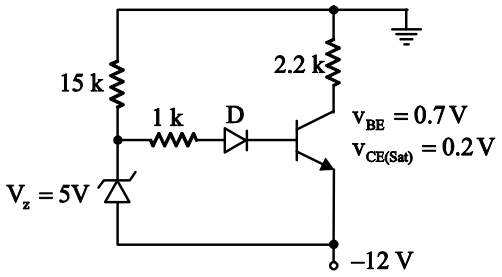


If the maximum value of load current is 10 A, then the maximum current through the main (M) and auxiliary (A) thyristors will be

(A) $i_{M\max}=12A$ and $i_{A\max}=10A$ (B) $i_{M\max}=12A$ and $i_{A\max}=2A$

(C) $i_{M\max}=10A$ and $i_{A\max}=12A$ (D) $i_{M\max}=10A$ and $i_{A\max}=8A$

Q.38 The transistor used in the circuit shown below has a β of 30 and I_{CBO} is negligible



If the forward voltage drop of diode is 0.7V, then the current through collector will be

(A) 168 mA (B) 108 mA (C) 20.54 mA (D) 5.36 mA

Q.39 A portion of the main program to call a subroutine SUB in an 8085 environment is given below.

```
        :
        :
        LXI   D, DISP
LP:     CALL  SUB
        :
        :
```

It is desired that control be returned to LP + DISP +3 when the RET instruction is executed in the subroutine. The set of instructions that precede that RET instruction in the subroutine are

(A)
```
POP  D
DAD  H
PUSH D
```

(B)
```
POP  H
DAD  D
INX  H
INX  H
INX  H
PUSH H
```

(C)
```
POP  H
DAD  D
PUSH H
```

(D)
```
XTHL
INX  D
INX  D
INX  D
XTHL
```

Q.40 The open loop transfer function $G(s)$ of a unity feedback control system is given as,

$$G(s) = \frac{k\left(s + \frac{2}{3}\right)}{s^2 + (s+2)}$$

From the root locus, it can be inferred that when k tends to positive infinity,

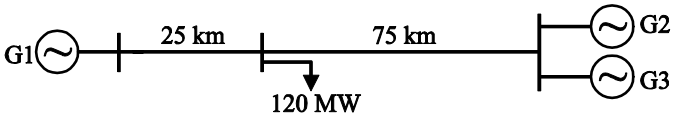
(A) three roots with nearly equal real parts exist on the left half of the s-plane

(B) one real root is found on the right half of the s-plane

(C) the root loci cross the $j\omega$ axis for a finite value of $k; k \neq 0$

(D) three real roots are found on the right half of the s-plane

Q.41 A load center of 120 MW derives power from two station connected by 220 kV transmission lines of 25 km as shown in the figure below. The three generators G1, G2 and G3 are of 100 MW capacity each and have identical fuel cost characteristics. The minimum loss generation schedule for supplying the 120 MW load is



(A) P1 =80 MW + losses, P2 = 20 MW, P3 = 20 MW

(B) P1 = 60 MW, P2 = 30 MW + losses, P3 = 30 MW

(C) P1 = 40 MW, P2 = 40 MW, P3 = 40 MW + losses

(D) P1 = 30 MW + losses, P2 = 45 MW, P3 = 45 MW

Q.42 A 220 V, DC shunt motor is operating at a speed of 1440 rmp. The armature resistance is $1.0\,\Omega$ and armature current is 10 A. If the excitation of the machine is reduced by 10 %, the extra resistance to be put in the armature circuit to maintain the same speed and torque will be

(A) $1.79\,\Omega$ (B) $2.1\,\Omega$ (C) $3.1\,\Omega$ (D) $18.9\,\Omega$

Q.43 A zero mean random signal is uniformly distributed between limits – a and + a and its mean square value is equal to its variance. Then the r.m.s value of the signal is

(A) $\frac{a}{\sqrt{3}}$ (B) $\frac{a}{\sqrt{2}}$ (C) $a\sqrt{2}$ (D) $a\sqrt{3}$

Q.44 Let the Laplace transform of a function $f(t)$ which exist for $t>0$ be $F_1(s)$ and the Laplace transform of its delayed version $f(t-\tau)$ be $F_2(s)$. Let $F_1^*(s)$ be the complex conjugate of $F_1(s)$ with the Laplace variable set as $s=\sigma+j\omega$. If $G(s)=\frac{F_2(s).F_1^*(s)}{|F_1(s)|^2}$, then the inverse. Laplace transform of $G(s)$ is

(A) an ideal impulse $\delta(t)$

(B) an ideal delayed impulse $\delta(t-\tau)$

(C) an ideal step function u(t)

(D) an ideal delayed step function $u(t-\tau)$

Q.45 A lossy capacitor C_x rated for operation at 5 kV, 50 Hz is represented by an equivalent circuit with an ideal capacitor C_p in parallel with a resistor R_p. The value of C_p is found to be 0.102 μF and the value of $R_P=1.25\,\text{M}\Omega$. Then the power loss and $\tan\delta$ of the lossy capacitor operating at the rated voltage, respectively, are

(A) 10 W and 0.0002 (B) 10 W and 0.0025 (C) 20 W and 0.025 (D) 20 W and 0.44

Q.46 The function $f(x)=2x-x^3+3$ has

(A) a maxima at $x=1$ and a minima at x = 5

(B) a maxima at $x=1$ and a minima at x = – 5

(C) only a maxima at $x=1$

(D) only a minima at $x=1$

Q.47 Solution of the variables x_1 and x_2 for the following equations is to be obtained by employing the Newton-Raphson iterative method.

Equation (i) $10x_2\sin x_1-0.8=0$

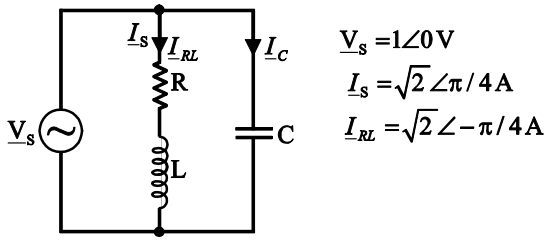
Equation (ii) $10x_2^2-10x_2\cos x_1-0.6=0$

Assuming the initial value $x_1 = 0.0$ and $x_2 = 1.0$, the Jacobian matrix is

(A) $\begin{bmatrix} 10 & -0.8 \\ 0 & -0.6 \end{bmatrix}$ (B) $\begin{bmatrix} 10 & 0 \\ 0 & 10 \end{bmatrix}$ (C) $\begin{bmatrix} 0 & -0.8 \\ 10 & -0.6 \end{bmatrix}$ (D) $\begin{bmatrix} 10 & 0 \\ 10 & -10 \end{bmatrix}$

Common Data Question 48 & 49

An RLC circuit with relevant data is given below.



Q.48 The current $\underline{I}_C$ in the figure above is

(A) $-j2\,A$ (B) $-j\frac{1}{\sqrt{2}}A$ (C) $+j\frac{1}{\sqrt{2}}A$ (D) $+j\,2A$

Q.49 The power dissipated in the resistor R is

(A) 0.5 W (B) 1 W (C) $\sqrt{2}$ W (D) 2 W

Common Data Question 50 & 51

The input voltage given to a converter is

$$v_i = 100\sqrt{2}\sin(100\pi t)\,V$$

The current drawn by the converter is

$$i_i = \left(10\sqrt{2}\sin(100\pi t - \pi/3) + 5\sqrt{2}\sin(300\pi t + \pi/4) + 2\sqrt{2}\sin(500\pi t - \pi/6)\right)A$$

Q.50 The active power drawn by the converter is

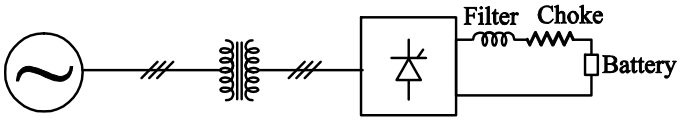
(A) 181 W (B) 500 W (C) 707 W (D) 887 W

Q.51 The input power factor of the converter is

(A) 0.31 (B) 0.44 (C) 0.5 (D) 0.71

Statement For Linked Answer Questions 52 & 53

A solar energy installation utilizes a three-phase bridge converter to feed energy into power system through a transformer of 400 V/400 V, as shown below.



The energy is collected in a bank of 400 V battery and is connected to converter through a large filter choke of resistance 10 Ω.

Q.52 The maximum current through the battery will be

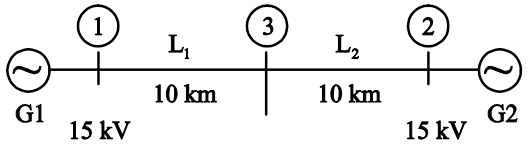
(A) 14 A (B) 40 A (C) 80 A (D) 94 A

Q.53 The kVA rating of the input transformer is

(A) 53.2 kVA (B) 46.0 kVA (C) 22.6 kVA (D) 19.6 kVA

Statement For Linked Answer Questions 54 & 55

The generator units G1 and G2 are connected by 15 kV line with a bus at the mid-point as shown below.

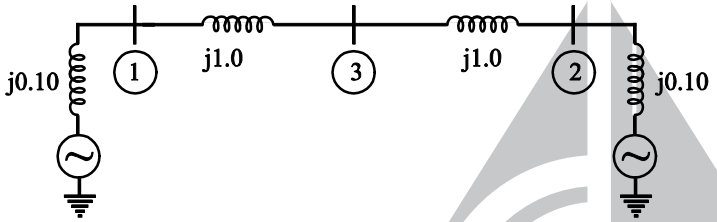


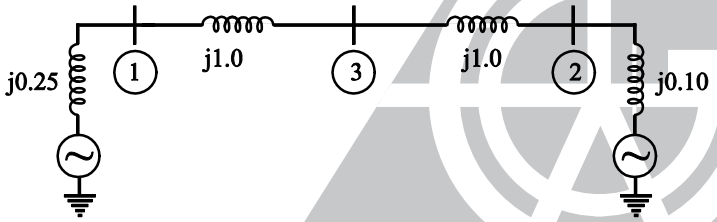
G1 = 250 MVA, 15 kV, positive sequence reactance X = 25% on its own base

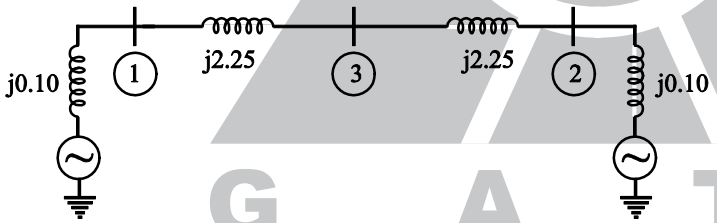
G2 = 100 MVA, 15 kV, positive sequence reactance X = 10% on its own base

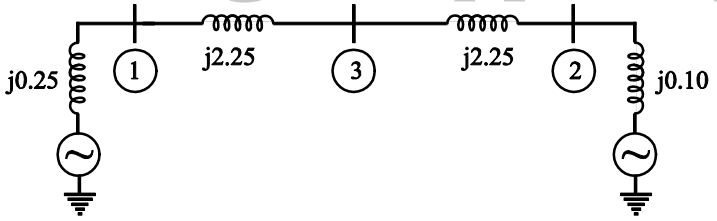
L_1 and L_2 = 10 km, positive sequence reactance X = 0.225 Ω / km

Q.54 For the above system, the positive sequence diagram with the p.u value on the 100 MVA common base is

(A)


(B)


(C)


(D)


Q.55 In the above system, the three phase fault MVA at the bus 3 is

(A) 82.55 MVA (B) 85.11 MVA (C) 170.91 MVA (D) 181.82 MVA

Q.56 to Q.60 carry one mark each

General Aptitude (GA) Questions

Q.56 Choose the most appropriate word from the options given below to complete the following sentence :

It was her view that the country's problem had been _____ by foreign technocrats, so that to invite them to come back would be counter-productive.

(A) identified (B) ascertained (C) exacerbated (D) analysed

Q.57 The question below consists of a pair of related words followed by four pairs of words. Select the pair the best expresses the relation in the original pair :

Gladiator : Arena

(A) dancer : stage (B) commuter : train (C) teacher : classroom (D) lawyer : courtroom

Q.58 Choose the word from the options given below that is most nearly opposite in meaning to the given word:

Frequency

(A) periodicity (B) rarity (C) gradualness (D) persistency

Q.59 There are two candidates P and Q in an election. During the campaign, 40% of the voters promised to vote for P, and rest for Q. However, on the day of election 15% of the voters went back on their promise to vote for P and instead voted for Q.25% of the voters went back on their promise to vote for Q and instead voted for P. suppose, P Suppose, P lost by 2 votes, then what was the total number of voters ?

(A) 100 (B) 110 (C) 90 (D) 95

Q.60 Choose the most appropriate word from the options given below to complete the following sentence :

Under ethical guidelines recently adopted by the Indian Medical Association, human genes are to be manipulated only to correct diseases for which _____ treatments are unsatisfactory.

(A) similar (B) most (C) uncommon (D) availabel

Q.61 to Q.65 carry two marks each

Q.61 Three friends R, S and T shares toffee form a bowl. R took 1/3rd of the toffees, but returned four to the bowl. S took 1/4th of what was left but turned three toffees to the bowl. T took half of the remained but the bowl. If the bowl had 17 toffees left, how many toffees were originally there in the bowl ?

(A) 38 (B) 31 (C) 48 (D) 41

Q.62 The horse has played a little known but very important role in the field of medicine. Horses were injected with toxins of diseases until their blood built up immunities. Then a serum was made from their blood. Serums to fight with diphtheria and tetanus were developed this way.

It can be inferred from the passage, that horses were

(A) given immunity to diseases

(B) generally quite immune to diseases

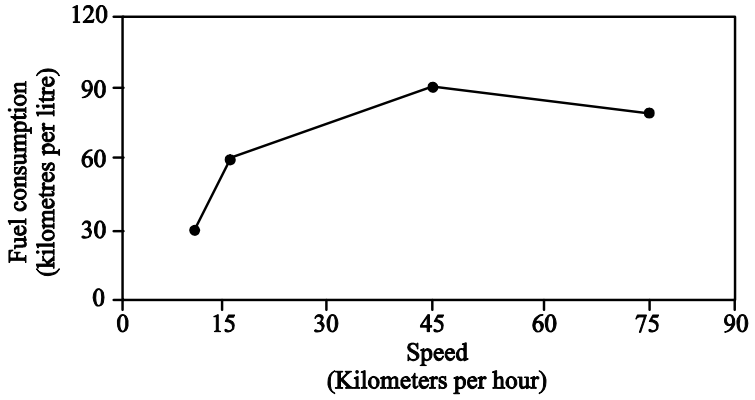
(C) given medicines to fight toxins

(D) given diphtheria and tetanus serums

Q.63 Given that $f(y) = |y| / y$, and q is any non-zero real number, the value of $|f(q) - f(-q)|$ is

(A) 0 (B) -1 (C) 1 (D) 2

Q.64 The fuel consumed by a motorcycle during a journey while traveling at various speeds in indicated in the graph below.



The distances covered during four laps of the journey are listed in the table below

Lap	Distance (Kilometres)	Average Speed (Kilometres per hour)
P	15	15
Q	75	45
R	40	75
S	10	10

From the given data, we can conclude that the fuel consumed per kilometers was least during the lap

(A) P (B) Q (C) R (D) S

Q.62 The sum of n terms of the series 4+44+444+…… is

(A) $(4/81)\left[10^{n+1}-9n-1\right]$ (B) $(4/81)\left[10^{n-1}-9n-1\right]$

(C) $(4/81)\left[10^{n+1}-9n-10\right]$ (D) $(4/81)\left[10^{n}-9n-10\right]$

END OF THE QUESTION PAPER

ANSWERS

1.	**C**	**2.**	**A**	**3.**	*	**4.**	**C**	**5.**	**B**	**6.**	**C**	**7.**	**A**	**8.**	**C**
9.	**A**	**10.**	**C**	**11.**	**B**	**12.**	**D**	**13.**	**D**	**14.**	**A**	**15.**	**A**	**16.**	**D**
17.	**A**	**18.**	**C**	**19.**	**C**	**20**	*	**21.**	**A**	**22.**	**B**	**23.**	**B**	**24.**	**D**
25.	**A**	**26.**	**C**	**27.**	**C**	**28.**	**A**	**29.**	**B**	**30.**	**C**	**31.**	**B**	**32.**	**C**
33.	**C**	**34.**	*	**35.**	**B**	**36.**	**D**	**37.**	**A**	**38.**	**B**	**39.**	**B**	**40.**	**A**
41.	**A**	**42.**	**B**	**43.**	**A**	**44.**	**B**	**45.**	**C**	**46.**	**C**	**47.**	**B**	**48.**	**A**
49.	**B**	**50.**	**B**	**51.**	**B**	**52.**	*	**53.**	*	**54.**	**A**	**55.**	**D**	**56.**	**C**
57.	**D**	**58.**	**B**	**59.**	**A**	**60.**	**D**	**61.**	**C**	**62.**	**B**	**63.**	**D**	**64.**	**B**
65.	**C**														

Gate Academy

steps to success...

GATE 2011 EE (Electrical Engineering) Answer Key

Set – A				Set – B				Set – C				Set – D			
1.	D	34.	B	1.	C	34.	*	1.	C	34.	C	1.	D	34.	A
2.	A	35.	B	2.	A	35.	B	2.	D	35.	C	2.	B	35.	C
3.	B	36.	A	3.	*	36.	D	3.	A	36.	B	3.	C	36.	C
4.	B	37.	D	4.	C	37.	A	4.	D	37.	C	4.	A	37.	B
5.	A	38.	B	5.	B	38.	B	5.	A	38.	C	5.	C	38.	C
6.	C	39.	*	6.	C	39.	B	6.	A	39.	A	6.	A	39.	C
7.	*	40.	C	7.	A	40.	A	7.	*	40.	B	7.	C	40.	B
8.	A	41.	C	8.	C	41.	A	8.	C	41.	C	8.	B	41.	A
9.	A	42.	B	9.	A	42.	B	9.	A	42.	B	9.	C	42.	B
10.	A	43.	C	10.	C	43.	A	10.	B	43.	C	10.	*	43.	A
11.	D	44.	B	11.	B	44.	B	11.	B	44.	C	11.	A	44.	A
12.	D	45.	A	12.	D	45.	C	12.	D	45.	*	12.	C	45.	B
13.	C	46.	C	13.	D	46.	C	13.	C	46.	B	13.	A	46.	A
14.	D	47.	C	14.	A	47.	B	14.	A	47.	D	14.	D	47.	B
15.	B	48.	B	15.	A	48.	A	15.	A	48.	B	15.	B	48.	B
16.	C	49.	B	16.	D	49.	B	16.	*	49.	A	16.	B	49.	B
17.	A	50.	B	17.	A	50.	B	17.	C	50.	B	17.	A	50.	A
18.	*	51.	A	18.	C	51.	B	18.	B	51.	B	18.	C	51.	B
19.	A	52.	A	19.	C	52.	*	19.	C	52.	A	19.	*	52.	*
20.	C	53.	D	20.	*	53.	*	20.	A	53.	D	20.	A	53.	*
21.	B	54.	*	21.	A	54.	A	21.	C	54.	*	21.	A	54.	A
22.	C	55.	*	22.	B	55.	D	22.	A	55.	*	22.	A	55.	D
23.	*	56.	D	23.	B	56.	C	23.	C	56.	B	23.	D	56.	D
24.	A	57.	D	24.	D	57.	D	24.	B	57.	A	24.	C	57.	C
25.	C	58.	A	25.	A	58.	B	25.	D	58.	D	25.	D	58.	D
26.	B	59.	C	26.	C	59.	A	26.	A	59.	C	26.	B	59.	B
27.	C	60.	B	27.	C	60.	D	27.	B	60.	D	27.	D	60.	A
28.	C	61.	C	28.	A	61.	C	28.	B	61.	D	28.	*	61.	C
29.	B	62.	B	29.	B	62.	B	29.	A	62.	B	29.	C	62.	C
30.	A	63.	B	30.	C	63.	D	30.	A	63.	C	30.	C	63.	B
31.	B	64.	C	31.	B	64.	B	31.	B	64.	C	31.	B	64.	D
32.	A	65.	D	32.	C	65.	C	32.	A	65.	B	32.	C	65.	B
33.	A			33.	C			33.	B			33.	B		

HEAD OFFICE: GATE ACADEMY A/114-115 Bhilai (C.G) 0788-4034176 + 91-9713113156 + 91- 9302697686
BRANCH OFFICE: Bangalore (Karnataka) +91-9731885449 +91-9916939408
www.gateacademy.co.in