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700645

Series : **a**

Question Booklet No.

ESE/25/RT/ELE/2025

ELECTRICAL ENGINEERING

Invigilator's Signature

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Time : 3 Hours **Maximum Marks : 200**

ROLL NO. | | | | | | |

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1. For a load flow solution, the quantities normally specified at a voltage controlled bus are

[A] P and Q

[B] P and $|V|$

[C] Q and $|V|$

[D] P and δ

2. A shunt fault is characterized by

[A] increase in current, frequency and p.f

[B] increase in current, reduction frequency and p.f

[C] increase in current, frequency and reduction in p.f

[D] decrease in current, frequency and reduction in p.f

3. The inertia constant H of a machine of 200 MVA is 2 p.u, its value corresponding to 400 MVA will be

[A] 4.0 p.u

[B] 2.0 p.u

[C] 1.0 p.u

[D] 0.5 p.u

4. Corona loss is less when the shape of the conductor is

[A] circular

[B] flat

[C] oval

[D] independent of the shape

5. Ferranti effect on long overhead transmission line is experienced when it is

[A] lightly loaded

[B] on full load at unity p.f

[C] on full load at 0.8 p.f lagging

[D] All of the above

6. Surge impedance loading of 50 miles long underground cable is 50 ohms. For 25 miles, it will be

[A] 25 ohms

[B] 50 ohms

[C] 100 ohms

[D] 200 ohms

7. The most economic load on the overhead line is

[A] greater than the natural load

[B] less than the natural load

[C] equal to the natural load

[D] None of the above

8. The voltages at the two ends of a line are 132 kV and its reactance is 100 ohms. The capacity of the line is

[A] 174.24 MW

[B] 217.8 MW

[C] 251.5 MW

[D] 500 MW

9. Three insulating materials with same maximum working stress and permittivities 2.5, 3.5, 4.5 are used in a single core cable. The location of the materials with respect to the core of the cable will be

[A] 2.5, 3.5, 4.5

[B] 3.5, 2.5, 4.5

[C] 4.5, 3.5, 2.5

[D] 4.5, 2.5, 3.5

10. Which power plant has minimum operating cost?

[A] Gas Turbine Power Plant

[B] Thermal Power Plant

[C] Nuclear Power Plant

[D] Hydroelectric Power Plant

11. Which of the following equipments is ***not*** used for voltage control?

[A] Tap changing transformers

[B] Series compensators

[C] Induction generators

[D] Synchronous phase modifiers

12. In power system analysis, which of the following is used to determine equal-area criterion?

[A] Steady state stability

[B] Transient stability

[C] Maximum reactive power limit

[D] Both steady state and transient stability

13. A 200 bus power system has 160 PQ bus. For achieving a load flow solution by N-R in polar coordinates, the minimum number of simultaneous equations to be solved is

[A] 359

[B] 334

[C] 357

[D] 345

14. The area under the load curve represents

[A] maximum demand

[B] load factor

[C] the average load on power system

[D] number of units generated

15. Which of the following elements of hydroelectric power plant mainly prevents the penstock from water hammer phenomenon?

[A] Surge tank

[B] Draft tubes

[C] Spillways

[D] Valves and Gates

16. Which of the following is an essential requirement for a peak load plant?

[A] Economical and speedy repair

[B] Capability of working continuously

[C] Low operating cost

[D] Capability of quick start

17. Monthly consumption of a consumer is 500 kWh. What will be the monthly bill at the following rate?

First 100 units ₹0.4/kWh

Next 100 units ₹0.5/kWh

Remaining units ₹0.6/kWh

[A] ₹250

[B] ₹256

[C] ₹270

[D] ₹230

18. What is the primary purpose of sag in overhead lines?

[A] To increase the line's electrical resistance

[B] To reduce the mechanical stress on the supports

[C] To improve the line's aesthetic appearance

[D] To minimize the cost of the conductor material

19. Which type of insulators are typically used at dead-ends or where the line changes direction?

[A] Pin insulators

[B] Suspension insulators

[C] Strain insulators

[D] Shackle insulators

20. What is the primary function of a cross-arm on a transmission tower?

[A] To reduce the overall height of the tower

[B] To provide a platform for maintenance personnel

[C] To support the conductors and maintain separation

[D] To protect the conductors from lightning strikes

21. A transmission line consists of 9 discs of suspension insulators in each string. What is the operating voltage of the transmission line?

[A] 11 kV

[B] 33 kV

[C] 66 kV

[D] 132 kV

22. A transmission line is said to be surge impedance loaded when

[A] reactive power generated equals reactive power consumed

[B] active power generated equals active power consumed

[C] voltage is at its nominal value

[D] current is at its maximum value

23. Which of the following is ***not*** a method of reactive power compensation?

[A] Shunt capacitors

[B] Series capacitors

[C] Shunt reactors

[D] Voltage regulators

24. What is the difference between unit commitment and economic dispatch?

[A] Unit commitment determines which units are online, while economic dispatch determines how much power each online unit generates

[B] Unit commitment determines how much power each online unit generates, while economic dispatch determines which units are online

[C] They are the same thing

[D] Unit commitment is a short-term problem, while economic dispatch is a long-term problem

25. In optimal power flow solution, the equality constraints are basically

[A] voltage equations

[B] power flow equations

[C] current flow equations

[D] Both [A] and [C]

26. Generally, Z bus matrix in power system analysis is

[A] null matrix

[B] full matrix

[C] unit matrix

[D] sparse matrix

27. The size of Y bus matrix (or bus admittance matrix) for a given n-bus power system is

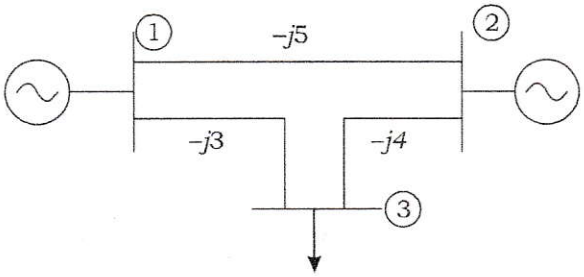
[A] $(n-1)\times(n-1)$

[B] $(n)\times(n-1)$

[C] $(n-2)\times(n-2)$

[D] $(n)\times(n)$

28. Identify the admittance matrix by inspection, for given power system with relevant per unit admittances are indicated on the diagram shown in the following figure :



[A] $\begin{bmatrix} -j8 & j5 & j3 \\ j5 & -j9 & j4 \\ j3 & j4 & -j7 \end{bmatrix}$

[B] $\begin{bmatrix} -j8 & -j5 & -j3 \\ -j5 & -j9 & -j4 \\ -j3 & -j4 & -j7 \end{bmatrix}$

[C] $\begin{bmatrix} j8 & -j5 & -j3 \\ -j5 & j9 & -j4 \\ -j3 & -j4 & j7 \end{bmatrix}$

[D] $\begin{bmatrix} j8 & j5 & j3 \\ j5 & j9 & j4 \\ j3 & j4 & j7 \end{bmatrix}$

29. Where the voltages are high and current to be interrupted is low, the breaker preferred is

[A] air blast Circuit Breaker (C.B)

[B] oil C.B

[C] vacuum C.B

[D] None of the above

30. What is the primary purpose of using a distance relay in transmission line protection?

[A] To detect faults based on voltage levels

[B] To detect faults based on current levels

[C] To detect faults based on frequency changes

[D] To detect faults based on impedance to the fault location

31. A three-phase semi converter with RLE-load will work as three-pulse converter (that means, it produces three pulses in output voltage in every one time period of supply voltage) when firing angle (α) is

[A] $\alpha > 60°$

[B] $\alpha < 60°$

[C] $\alpha > 90°$

[D] $\alpha < 90°$

32. In a single-phase full converter circuit with RL load, with firing angle α and extinction angle β, the conduction angle γ is equal to

[A] $\gamma = \beta + \alpha$

[B] $\gamma = \beta - \alpha$

[C] $\gamma = \beta/\alpha$

[D] $\gamma = \alpha/\beta$

33. In a thyristor with terminals of anode (A), cathode (K), gate (G) and different junctions J_1, J_2 and J_3, when the thyristor is subjected to forward voltage without applying gate voltage, then the junctions

[A] J_1, J_2 and J_3 are forward biased

[B] J_1, J_2 and J_3 are reverse biased

[C] J_1 and J_3 are forward biased and J_2 is reverse biased

[D] J_1 and J_3 are reverse biased and J_2 is forward biased

34. Consider the following statements about a Silicon-Controlled Rectifier (SCR) :

(a) It is a four-layer, three-terminal device.

(b) It turns on during forward blocking mode and reverse blocking mode.

(c) It is in forward blocking and off stage when forward voltage is applied between anode and cathode.

(d) It conducts when forward voltage is applied between anode and cathode with sufficient gate voltage applied between gate and cathode.

Which of the following statements given above are ***correct***?

[A] *(a), (b), (c)* and *(d)*

[B] *(a), (b)* and *(c)* only

[C] *(a)* and *(d)* only

[D] *(a), (c)* and *(d)* only

35. A Buck-Boost converter works like a Buck converter for which of the following duty cycle settings?

[A] 0.4

[B] 0.5

[C] 0.6

[D] 0.8

36. Which among the following devices is most suited for high frequency applications?

[A] BJT

[B] MOSFET

[C] IGBT

[D] SCR

37. The main effect of source inductance on the performance of single-phase and three-phase full converters is

[A] reduce the ripples in the load current

[B] make discontinuous current as continuous

[C] reduce the output voltage

[D] increase the load voltage

38. To eliminate the 5th harmonic from the output voltage waveform of a single-pulse width modulation PWM inverter with the pulse width $2d$, the value of the pulse width ($2d$) must be equal to

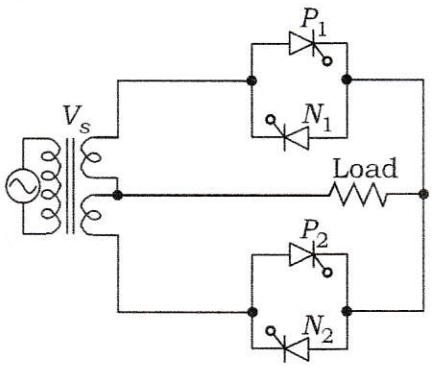
[A] 72°

[B] 36°

[C] 144°

[D] 108°

39. In the negative half cycle of supply voltage from $\omega t = \pi$ to 2π in the cycloconverter shown in the figure below



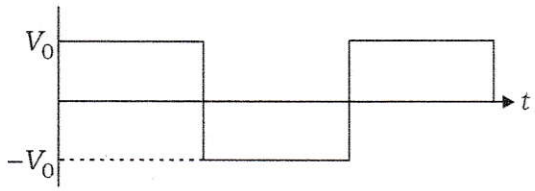
[A] P_1 and P_2 are forward biased

[B] N_1 and P_2 are forward biased

[C] P_1 and N_2 are forward biased

[D] P_2 and N_1 are forward biased

40. The output voltage waveform shown in the below figure is obtained by which of the following power electronic converters?



[A] AC-DC full bridge converter

[B] Boost converter

[C] Inverter

[D] AC voltage controller

41. The output voltage waveform of a single-phase square-wave inverter contains

[A] only even harmonics

[B] both odd and even harmonics

[C] only triple harmonics

[D] only odd harmonics

42. The relation between output voltage (V_o) and input voltage (V_{in}) in terms of duty ratio (D) for a boost converter is

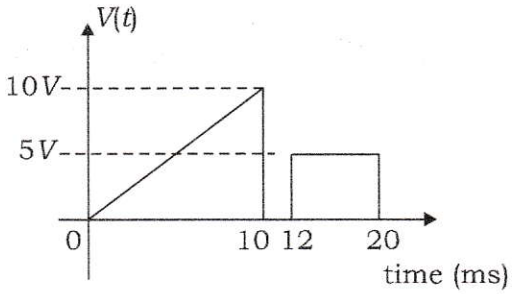
[A] $V_o = D * V_{in} / (1 - D)$

[B] $V_o = V_{in} / (1 - D)$

[C] $V_o = D * V_{in}$

[D] $V_o = (1 + D) * V_{in} / (1 - D)$

43. The following part of the periodic waveform is observed in the oscilloscope across the load. A Permanent Magnet Moving Coil (PMMC) voltmeter connected across the same load reads



[A] 4.5 V

[B] 12V

[C] 8.5 V

[D] 10V

44. The average power delivered to an impedance of $(2 + j3)$ ohms by a current $i = 5\cos(100\pi t + 100)$ A is

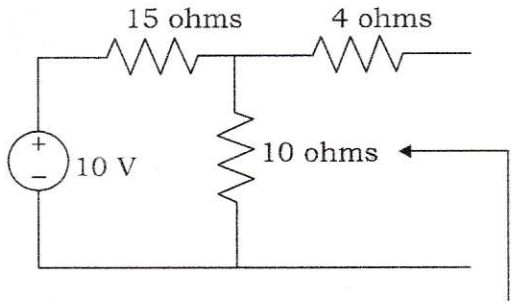
[A] 100 W

[B] 125 W

[C] 75 W

[D] 25 W

45. Norton equivalent current source and corresponding resistance respectively for the given circuit shown below is



[A] 0.4 A, 10 ohms

[B] 0.8 A, 6 ohms

[C] 0.4 A, 15 ohms

[D] 0.8 A, 4 ohms

46. Two capacitors C_1 = 0.005 μF and C_2 = 0.02 μF are connected in series. The effective capacitance value is

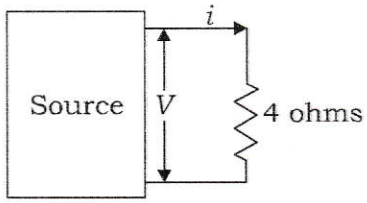
[A] 0.025 μF

[B] 4 nF

[C] 1.75 nF

[D] 8 μF

47. In the following figure, a 4 Ω resistor is connected across a source that has a load line $v + i = 100$. Then the current through the resistance is



[A] 20 A

[B] 50 A

[C] 80 A

[D] 100 A

48. If four resistors, each of resistance 20 Ω are connected in parallel, then equivalent resistance is

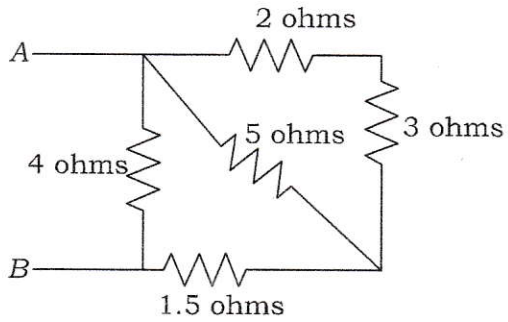
[A] 80 Ω

[B] 10 Ω

[C] 5 Ω

[D] 60 Ω

49. Calculate the equivalent resistance between A and B for the following network :



[A] 2.5 ohms

[B] 8 ohms

[C] 2 ohms

[D] 11.5 ohms

50. Determine the time period of $x(t) = 3\sin(200t + 5)$.

[A] $100/\pi$

[B] $\pi/100$

[C] $\pi/200$

[D] $20/\pi$

51. In a purely inductive load circuit, the average power dissipation and angle between voltage and current (θ) respectively are

[A] 0, 90°

[B] 1, 90°

[C] 1, 0°

[D] 0, 0°

52. A voltage $v(t) = 100\sin\omega t$ is applied to a circuit. The current flowing through the circuit is $i(t) = 10\sin(\omega t - 60°)$. Determine the average power delivered to the circuit.

[A] 1000 W

[B] 250 W

[C] 500 W

[D] 100 W

53. In measurement of three-phase power using two-watt meter method, if the two-watt meter readings are equal, then the power factor of the circuit is

[A] zero

[B] 0.8 lagging

[C] 0.8 leading

[D] unity

54. In a delta-connected load, the relation between line voltage and the phase voltage is

[A] line voltage $= \sqrt{3}$ (phase voltage)

[B] line voltage $= \sqrt{2}$ (phase voltage)

[C] line voltage = phase voltage

[D] line voltage $= \sqrt[3]{2}$ (phase voltage)

55. In measurement of three-phase balanced load using two-watt meter method, the watt meter readings are W_1 = 500 and W_2 = 400, then the total reactive power of the load in VAR is

[A] $\sqrt{3} \times 400$

[B] $\sqrt{3} \times 900$

[C] $\sqrt{3} \times 500$

[D] $\sqrt{3} \times 100$

56. In a series resonance circuit, the impedance is

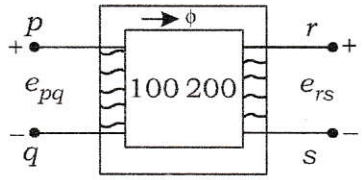
[A] inductive

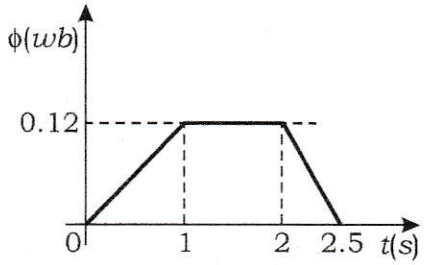
[B] purely resistive

[C] capacitive and inductive

[D] purely capacitive

57. The core of a two-winding transformer is subjected to a magnetic flux variation as indicated in the figure :





The maximum induced e.m.f in the secondary winding during t = 1 to 2 sec is

[A] 12 V

[B] 24 V

[C] 0 V

[D] 36 V

58. A 4-pole induction motor, supplied by a slightly unbalanced three-phase 50 Hz source, is rotating at slip value of 0.04. The electrical frequency in Hz of the induced negative sequence current in the rotor is

[A] 100

[B] 50

[C] 52

[D] 98

59. Distributed winding and short chording employed in AC machines will result in

[A] improvement in the waveform and reduction in harmonics

[B] reduction in e.m.f and increase in harmonics

[C] increase in both e.m.f and harmonics

[D] No significant effect in both e.m.f and harmonics

60. The direction of rotation of a 3-phase induction motor is clockwise when it is supplied with 3-phase sinusoidal voltage having phase sequence *A-B-C*. For counterclockwise rotation of the motor, the phase sequence of the power supply should be

[A] *B-C-A*

[B] *A-C-B*

[C] *C-A-B*

[D] *B-C-A* or *C-A-B*

61. In a transformer, zero voltage regulation at full load is

[A] not possible

[B] possible at unity power factor load

[C] possible at leading power factor load

[D] possible at lagging power factor load

62. What is the main purpose of laminating the armature core in a DC machine?

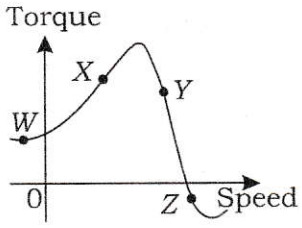
[A] To reduce eddy current losses

[B] To reduce hysteresis losses

[C] To increase the magnetic flux

[D] To increase the armature resistance

63. On the torque/speed characteristics of the induction motor shown in the below figure, four points of operation are marked as *W*, *X*, *Y* and *Z*. Which one of them represents the stable operating point during motoring operation at a slip less than 1?



[A] *X*

[B] *Y*

[C] *W*

[D] *Z*

64. In a capacitor start single-phase induction motor, when capacitor is short circuited, then

[A] motor will not run

[B] motor will run at very high speed in same direction

[C] motor will run at very high speed in reverse direction

[D] motor will run at very low speed in reverse direction

65. The type of single-phase induction motor having the highest power factor at full load is

[A] shaded pole type

[B] capacitor-start type

[C] split-phase type

[D] capacitor-run type

66. The synchronous speed for the seventh space harmonic m.m.f wave of a 3-phase, 8-pole, 50 Hz induction machine is

[A] 107.14 r.p.m.

[B] 750 r.p.m.

[C] 1500 r.p.m.

[D] 525.15 r.p.m.

67. For a linear electromagnetic circuit, which of the following statements is ***true***?

[A] Field energy is equal to the co-energy

[B] Field energy is greater than the co-energy

[C] Field energy is lesser than the co-energy

[D] Co-energy is zero

68. Autotransformers are particularly economical, when

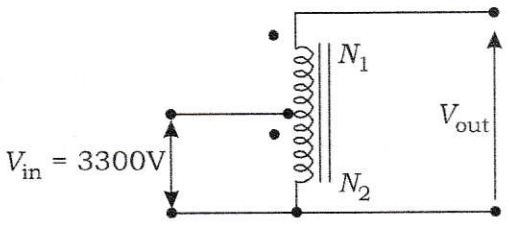
[A] voltage ratio is very high

[B] voltage ratio is higher than 2 in smaller range

[C] voltage ratio is less than 2

[D] Can be used in any voltage ratio

69. A 23 kVA, 3300/230 V single-phase transformer is connected as an autotransformer shown in the figure. The nominal rating of the autotransformer will be



[A] 50.0 kVA

[B] 717.4 kVA

[C] 53.5 kVA

[D] 353 kVA

70. It is desired to measure the parameters of 230 V/115 V, 2 kVA, single-phase transformer. The following wattmeters are available in a laboratory :

W1 : 250 V, 10 A, Low Power Factor

W2 : 250 V, 5 A, High Power Factor

W3 : 150 V, 10 A, High Power Factor

W4 : 150 V, 5 A, High Power Factor

The Wattmeter used in open circuit test of the transformer will be

[A] W1

[B] W2

[C] W3

[D] W4

71. Consider a feedback control system with loop transfer function

$$G(s)H(s) = \frac{K(1+0.5s)}{(1+s)(1+2s)}$$

The type of the closed loop system is

[A] type one

[B] type two

[C] type three

[D] type zero

72. The point of intersection of the asymptotes of the root loci with the real axis for the following is

$$G(s)H(s) = \frac{K}{s(s+1)(s+3)}$$

[A] 4

[B] −1.33

[C] 1.33

[D] 5

73. The transfer function $Y(s)/U(s)$ of a system described by the state equations $dx/dt = -2x + 2u$ and $y(t) = 0.5x$ is

[A] $0.5/(s-2)$

[B] $1/(s+2)$

[C] $1/(s-2)$

[D] $0.5/(s+2)$

74. A linear system at rest is subject to an input signal $r(t) = 1 - e^{-t}$. The response of the system for $t > 0$ is given by $c(t) = 1 - e^{-2t}$. The transfer function of the system is

[A] $(s+2)/(s+1)$

[B] $(s+1)/(s+2)$

[C] $2(s+1)/(s+2)$

[D] $(s+1)/2(s+2)$

75. Feedback control system is basically

[A] band pass filter

[B] band stop filter

[C] high pass filter

[D] low pass filter

76. Nyquist plot of the given open-loop transfer function $G(s)H(s)$ consists of number of encirclements $N = 1$ and one right-hand pole ($P = 1$), then the closed-loop system is

[A] always stable

[B] unstable with one closed-loop right hand pole

[C] unstable with two closed-loop right hand poles

[D] unstable with three closed-loop right hand poles

77. If the characteristic equation of a closed-loop system is $s^2 + 2s + 2 = 0$, then the system is

[A] overdamped

[B] critically damped

[C] underdamped

[D] undamped

78. If root loci plots of a particular control system do not intersect the imaginary axis at any point, then the gain margin of the system will be

[A] 0

[B] 0.707

[C] 1

[D] infinite

79. When the number of poles is equal to the number of zeroes, how many branches of root locus tend towards infinity?

[A] 1

[B] 2

[C] 0

[D] Equal to number of poles

80. In an open-loop transfer function, the highest power of s in the denominator standard polynomial is

[A] type of the system

[B] number of differentiators in the system

[C] number of integrators in the system

[D] order of the system

81. What is the ***correct*** sequence of the following types of ammeters and voltmeters with increasing accuracy?

(a) Moving iron

(b) Moving-coil permanent magnet

(c) Induction

Select the ***correct*** answer using the code given below :

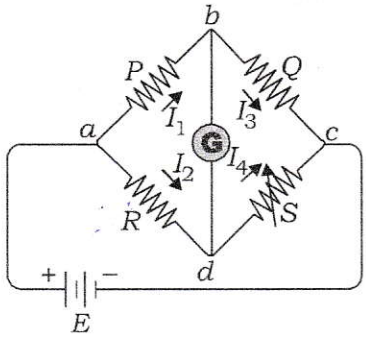
[A] *(a), (c), (b)*

[B] *(a), (b), (c)*

[C] *(c), (a), (b)*

[D] *(b), (a), (c)*

82. In the following Wheatstone bridge $P = 100\ \Omega$; $Q = 20\ \Omega$; $R = 250\ \Omega$, $S = 50\ \Omega$ and input voltage $E = 200$ V, then the current flowing through the galvanometer is



[A] 2 A

[B] zero

[C] 4 A

[D] 1.5 A

83. A (0–100) V voltmeter has an accuracy of 1 percent at full-scale reading. What will be the limiting error in percentage if it reads 25 V?

[A] 1 percent

[B] 2 percent

[C] 0.5 percent

[D] 4 percent

84. Which of the following is ***not*** essential for the working of an indicating instrument?

[A] Deflecting torque

[B] Damping torque

[C] Controlling torque

[D] Braking torque

85. The simplest type of bridge used for the measurement of medium resistances is

[A] Kelvin

[B] Schering

[C] Anderson

[D] Wheatstone

86. A current $i = 5 + 10\sin(314t + 45°)$ is passed through a centre-zero PMMC, hotwire and moving iron instrument. The respective readings are

[A] $-5, 15, \sqrt{125}$

[B] $5, \sqrt{75}, \sqrt{75}$

[C] $-5, \sqrt{125}, 19.14$

[D] 5, 10, 10

87. For the signal $x(t) = p - qe^{-rt}$, what is the steady state value and the initial value?

[A] p, q

[B] $-q, p$

[C] $p, p - q$

[D] $q, p - q$

88. A time domain energy signal is defined as $x(t)$ with energy equal to 10 J, then the energy of the signal $2x(5t - 6)$ is equal to

[A] 8 J

[B] 40 J

[C] 20 J

[D] 60 J

89. For a periodic signal $v(t) = 30\sin 100t + 10\cos 300t + 6\sin(500t + \pi/4)$, the fundamental frequency in rad/s is

[A] 300

[B] 100

[C] 500

[D] 1500

90. The impulse responses of two systems $h_1(t)$ and $h_2(t)$ are connected in a cascade. Then the overall impulse response of the cascaded system is

[A] product of $h_1(t)$ and $h_2(t)$

[B] sum of $h_1(t)$ and $h_2(t)$

[C] convolution of $h_1(t)$ and $h_2(t)$

[D] subtraction of $h_1(t)$ and $h_2(t)$

91. The average value of the waveform representing $x(t) = 2\cos(400t) - 3\sin(500t)$ is

[A] $\frac{2}{\pi}$

[B] $-\left(\frac{2}{\pi}\right)$

[C] $\frac{20}{\pi}$

[D] 0

92. The Gaussian surface for a line charge will be

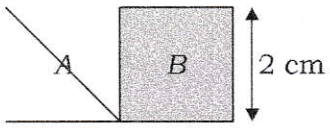
[A] sphere

[B] cylinder

[C] cube

[D] cuboid

93. A parallel plate capacitor filled with two dielectrics is shown in the figure below. If the electric field in the region A is 24 kV/cm with $\varepsilon_r = 1$, the electric field in the region B when $\varepsilon_r = 4$, in kV/cm, is



[A] 32

[B] 16

[C] 8

[D] 24

94. The minimum number of 2-input NAND gates required to implement a 2-input XOR gate is

[A] 2

[B] 3

[C] 4

[D] 6

95. The number of comparators required for a 3-bit comparator type ADC is

[A] 8

[B] 7

[C] 6

[D] 4

96. When a bipolar junction transistor is operating in the saturation mode, which one of the following statements is ***true*** about the state of its Collector-Base (CB) and the Base-Emitter (BE) junctions?

[A] The CB junction is forward biased, and the BE junction is reverse biased

[B] The CB junction is reverse biased and the BE junction is forward biased

[C] Both CB and BE junctions are forward biased

[D] Both CB and BE junctions are reverse biased

97. If input supply frequency is 50 Hz for a single-phase full wave rectifier, then the ripple frequency of output voltage is equal to

[A] 50 Hz

[B] 100 Hz

[C] 150 Hz

[D] 250 Hz

98. A circuit that removes positive or negative parts of waveform is called

[A] clamper

[B] diode clamp

[C] limiter

[D] clipper

99. Which of the following electrical characteristics is ***not*** exhibited by an ideal op-amp?

[A] Infinite voltage gain

[B] Infinite bandwidth

[C] Infinite output resistance

[D] Infinite slew rate

100. The output voltage (V_o) equation of an ideal op-amp, when V_1 and V_2 are the two input voltages and M is the gain, is

[A] $V_o = V_1 - V_2$

[B] $V_o = M \times (V_1 - V_2)$

[C] $V_o = M \times (V_1 + V_2)$

[D] $V_o = M \times V_1 \times V_2$

SPACE FOR ROUGH WORK

PROVISIONAL ANSWER KEY OF

ARUNACHAL ENGINEERING SERVICE

(RECRUITMENT TEST) EXAMINATION-2025

ELECTRICAL ENGINEERING

SET- A

Q NO.	ANS
1	B
2	B
3	C
4	A
5	A
6	B
7	A
8	A
9	C
10	D
11	C
12	B
13	A
14	D
15	A
16	D
17	C
18	B
19	C
20	C
21	D
22	A
23	D
24	A
25	B

Q NO.	ANS
26	B
27	D
28	A
29	C
30	D
31	A
32	B
33	C
34	D
35	A
36	B
37	C
38	A
39	B
40	C
41	D
42	B
43	A
44	D
45	A
46	B
47	A
48	C
49	C
50	B

Q NO.	ANS
51	A
52	B
53	D
54	C
55	D
56	B
57	C
58	D
59	A
60	B
61	C
62	A
63	B
64	A
65	D
66	A
67	A
68	C
69	D
70	D
71	D
72	B
73	B
74	C
75	D

Q NO.	ANS
76	A
77	C
78	D
79	C
80	D
81	C
82	B
83	D
84	D
85	D
86	B
87	C
88	A
89	B
90	C
91	D
92	B
93	D
94	C
95	B
96	C
97	B
98	D
99	C
100	B