MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

B.Tech I YEAR II SEMESTER (MR15) I Mid QUESTION BANK

ECAS

(Common for EEE)

MODULE-I

MULTIPLE CHOICE QUESTIONS:

1.In applying the superposition theorem in AC **[ ]**

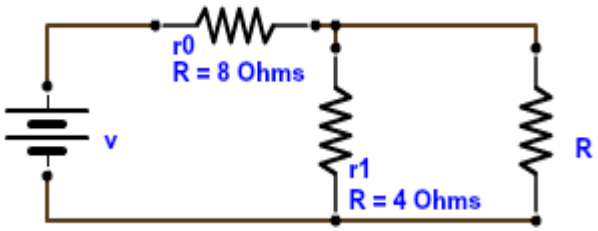
A)the sources are considered one at a time with all others replaced by their internal resistance

B)the sources are considered one at a time with all others replaced by their internal impedance

C) all sources are considered simultaneous

D) all sources are considered independently

2.Consider the following circuit; What should be the value or R in the circuit, so that it absorbs maximum power from the source? [ ]



(A) 8/3 Ω(B) 3/8Ω (C) 4Ω(D) 8Ω

3. The maximum power that can be transferred to the load rL from the voltage source in the circuit is [ ]

(A)r_s(B) 10 watts(C) 0.25 watt(D) rs+rL

4. In Thevenin's equivalent of a circuit, the Theveninvoltage (Vth) is [ ]
(A) Short-circuit terminal voltage.
(B) open -circuit terminal voltage.
(C) Total voltage available in the circuit.
(D) EMF of the battery nearest to the terminal

5. Kirchhoff s current law states that [ ]

(a) net current flow at the junction is positive
(b) Hebraic sum of the currents meeting at the junction is zero
(c) nocurreht can leave the junction without some current entering it.
(d) total sum of currents meeting at the junction is zero

6.Kirchhoffs current law is applicable to only[ ]

(a) junction in a network
(b) closed loops in a network
(c) electric circuits
(d) electronic circuits

7. For maximum transfer of power, internal resistance of the source should be____[ ]

(A) Equal to load resistance (B) Less than that of the load
(C) More than that of the load (D) Zero

8.Thevenin's theorem can be applied to network containing [ ]
(A) Passive elements only (B) Active elements only

(C) Linear elements only (D) All of these

9. Which of the following theorems helps in simplifying computations when the load across a circuit is varying? [ ]
(A) Superposition (B) Norton's (C) Thevenin's (D) Maximum power transfer

10.When maximum power transfer takes place, the efficiency of power transfer of the circuit is
(A) 100% (B) 75% (C) 50% (D) 25% [ ]

11. The superposition theorem requires as many circuits to be solved as there are: [ ]
(A) Nodes (B) Sources (C) Nodes and Sources (D) Nodes, Sources and Mesh

12.An ideal voltage source should have: [ ]
(A) Zero source resistance
(B) Infinite source resistance
(C) Terminal voltage is proportional to current
(D) Open-circuit voltage nearly equal to voltage of the load current

13. Superposition theorem can be applied only to circuits having [ ]
(A) Resistive Elements (B) Passive Elements
(C) Non-Linear Elements (D) Linear Bilateral Elements

14.A passive element in a circuit is one which [ ]

(A)Receives energy (B) Supplies energy (C) both supplies and receives energy (D) none

15. The concept on which Superposition theorem is based is[ ]

(A) Reciprocity (B) Duality(C) Non-Linearity (D) Linearity

16. Thevenin resistance Rth is found [ ]

(A) by removing voltage sources and replace with their internal resistances
(B) by short-circuiting the given two terminals
(C) between any two open terminals
(D) between same open terminals as for Eth

17. Any number of voltage sources in parallel may be replaced by a single voltage source whose voltage is the algebraic sum of individual source voltages and source resistance is the parallel combination of individualsource resistances".The above statement is associated with
(A) Thevenin'sTheorem [ ]
(B) Millman'sTheorem
(C) Maximum Power Transfer Theorem
(D) None Of The Above

18.In any linear bilateral network, if a source of e.m.f. E in any branch produces a current I in any otherbranch, then same e.m.f. acting in the second branch would produce the same current in thefirst branch".The above statement is associated with [ ]
(a) compensation theorem (b) superposition theorem
(c) reciprocity theorem (d) none of the above

19.Two resistors each of 4Ω and 12Ω are connected in parallel and the parallel combination is connected in series with a 2 Ω resistor. If this circuit is connected across a 100V supply , the total current drawn is
(A) 50A (B) 25A (C)20A (D)2A [ ]

20.The energy stored in an inductor of inductance L henry is represented by [ ]

(A)i^2L (B)iL^2 (C)L^2/i (D) $(1/2)\ Li^2$

21.Kirchhoff s law is applicable to [ ]
(A) Passive Networks Only (B) A.C. Circuits Only
(C) D.C. Circuits Only (D) Both A.C. As Well D.C.

22.Which of these is not an expression for the energy stored in a capacitor? [ ]
(A) $1/2CV^2$ (B) $C\int vdv$ (C) $\int pdt$ (D) QV^2

23.Which of the elements in the following is not bilateral? [ ]

(A) Resistor (B) Inductor (C) Capacitor (D) Transistor

24.A node in a network is defined as a [ ]
(A) Closed path (B) Junction point of two or more branches

(C) Group of interconnected elements (D) All of these

25. Kirchhoff s voltage law applies to circuits with [ ]
(a) nonlinear elements only
(b) linear elements only
(c) linear, non-linear, active and passive elements
(d) linear, non-linear, active, passive, time varying as wells as time-in-variant elements

26. The circuit whose properties are same in either direction is known as [ ]
(A) Unilateral Circuit (B) Bilateral Circuit
(C) Irreversible Circuit (D) Reversible Circuit

27.Two resistances R_1 and R_2 give combined resistance of 4.5 ohms when in series and 1 ohm when in parallel. The resistances are [ ]

(A) 3 ohms and 6 ohms (B) 3 ohms and 9 ohms

(C) 1.5 ohms and 3 ohms (D) 1.5 ohms and 0.5 ohms

28. The circuit has resistors, capacitors and semi-conductor diodes. The circuit will be known As [ ]

(A) Non-Linear Circuit (B) Linear Circuit

(C) Bilateral Circuit (D) None Of The Above

29.The Potential Difference between Two terminals of Resistor is 10V, Current flowing is 5A, What is the value of Resistance [ ]

A) 2Ω B) 1.5 Ω

C) 1.5 Ω D) None Of These

30.Four resistors each of 20Ω are connected in parallel, the total resistance is [ ]

A) 80Ω B) 5Ω

C) 5Ω D) None Of These

31.Millman's theorem yields [ ]

(A) Equivalent Resistance (B) Equivalent Impedance

(C) Equivalent Voltage Source D) Equivalent Voltage Or Current Source

32.Two resistors each of 4Ω and 12Ω are connected in parallel and the parallel combination is connected in series with a 2 Ω resistor. What is the Equivalent Resistance?

A) 50Ω B) 5Ω [ ]

C) 20Ω D) 2Ω

33.The unit of resistance is [ ]

a) ohms b) Volts

c) Amperes d) Tesla

34. Circuit is defined as [ ]

A) Interconnection OfCircuit Elements With Closed Path

B) Interconnection OfCircuit Elements With Out Any Closed Path

C) Interconnection Of With Out Circuit Elements

D)NoneOf These

35.In Series Connection of elements _____ Parameter is Same [ ]

A) Current B)Voltage

C) Power D)None Of These

36.In parallel Connection of elements _____ Parameter is Same [ ]

A) Current B)Voltage

C) Power D)NoneOf These

37. A Loop in a Circuit is defined as a [ ]

A) Closed Path B) Junction Point Of Two Or More Branches

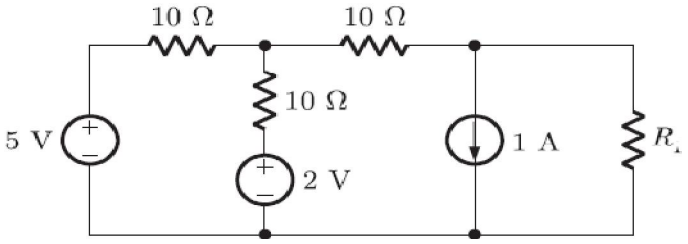
C) Inter Connected Elements D) All Of These

38.KCL is applicable at [ ]

A) A Junction B) Resistor

C) Loop D) All Of These

39. In the circuit shown below, the value of *RL* such that the power transferred to *RL* is maximum is [ ]



(A) 5 Ω (B) 10 Ω (C) 15 Ω (D) 20 Ω

40.Super-Position Theorem is applicable for a [ ]

A) Linear Bilateral Network B) Non- Linear Bilateral Network

C) Linear Unilateral Network D)AllThe Above

41.The Two Basic Components of aThevenin Equivalent in Ac Circuit Are [ ]

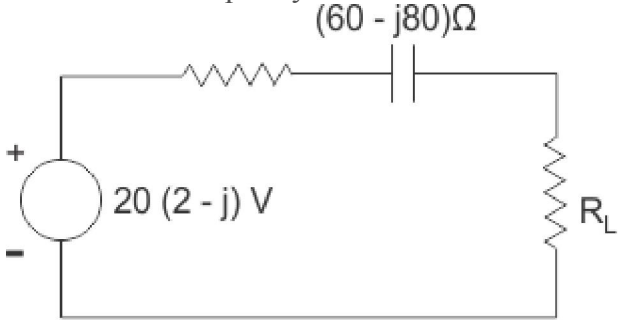
(A)The Equivalent Voltage Source And The Equivalent Series Impedance

(B) The Equivalent Voltage Source And The Equivalent Series Resistance

(C) The Equivalent Voltage Source And The Equivalent Parallel Impedance

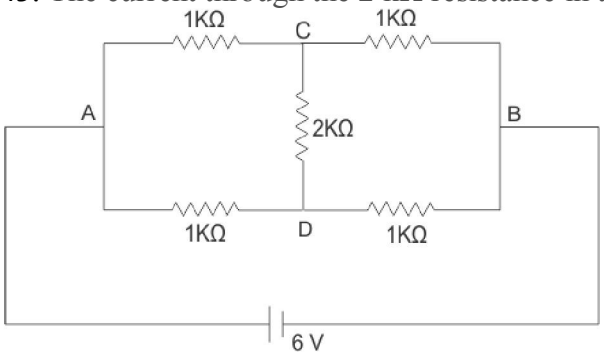
(D) The Equivalent Voltage Source And The Equivalent Parallel Resistance

42.Thevenin's equivalent of a network is shown in the given figure. For maximum power transfer to the variable & purely resistive load R_L its resistance should be [ ]



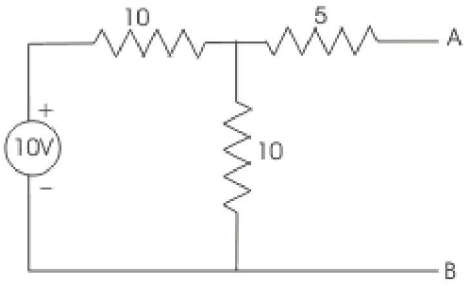
(A) 60 Ω (B) 80 Ω (C) 100 Ω (D) ∞

43. The current through the 2 kΩ resistance in the circuit shown is [ ]



(A) 0 mA (B) 1 mA (C) 2 mA (D) 6 mA

44. For the circuit given in the figure, the Thevenin'svoltage and resistance as seen at AB are represented by [ ]



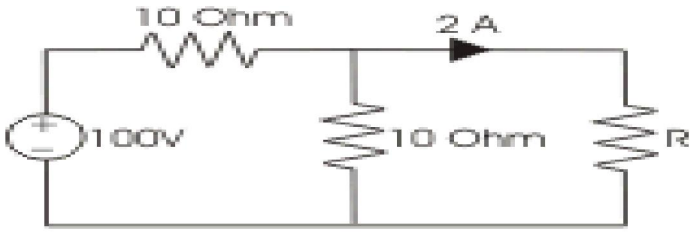
(A) 5 V, 10 Ω (B)10 V, 10 Ω (C) 5 V, 5 Ω (D) 54 V, 15 Ω

45. Thevenin's Voltage is [ ]

a) Open circuit voltage b) Short Circuit Voltage

c) Closed Circuit voltage d) None of these

46. In given figure, the value of resistance R in Ω is [ ]



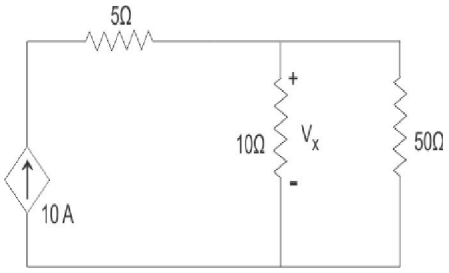
(A) 10 Ω (B) 20 Ω (C) 30 Ω (D) 40 Ω

47. Which of the following theorem can be applied to any network, which is linear (or) non linear active (or) passive, time variant (or) time in variant ? [ ]

(A) Superposition theorem (B) Norton's theorem

(C) Thevenin's theorem (D) Tellegen's theorem

48. Find V_x from the given circuit [ ]



(A) 42.2 V (B) 83.3 V (C) 97.3 V (D)12.2V

49. An inductor stores _____ energy [ ]

a)Electrical energy b) Magnetic energy

c) mechanical energy d) All

50. An capacitor stores _____ energy [ ]

a)Electrical energy b) Magnetic energy

c) mechanical energy d) All

ANSWERS

1.B 2.A 3.A 4.B 5.D 6.A 7.A 8.D 9.D 10.C 11.D 12.A 13.D 14.A 15.D 16.A 17.B 18.C 19.C 20.D 21.D 22.A 23.D 24.B 25.D 26.B 27.C 28.A 29.A 30.C 31.D 32.B 33.A 34.A 35.A 36.B 37.A 38.A 39.C 40.A 41.A 42.A 43.A 44.A 45.A 46.A 47.D 48.A 49.B 50.A

MODULE-II

1. In a three-phase system, the voltages are separated by [ ]
A) 90° B)120° C) 60° D)180°

2. i) In star connection line current is equal to phase current. [ ]

ii) In delta connection line voltage is equal to phase voltage. For a given phase connected to the particular line which of the statement is true ?

A)Only I B)Only II C)Both I & II D)None

3. A star connected load has three equal impedance each of (40 + j30) Ω If the line current is 5 A then value of line voltage is [ ]

A)250 V B)250 /√3 V. C)250 √3 D)200 V.

4.For a 3 - Φ load balanced condition, each phase has the same value of_____[ ]

A)impedance. B)Resistance.

C)power factor. D)All of these

5. A balanced three Phase Y-connected load has one phase voltage $V_B = 277 \angle 45°$ V. The phase sequence is RYB. The line to line voltage $V_{RY}$is [ ]

A)480∠ 45° V B)480∠ -45° V C)339∠ 45° V D)339∠- 45° V

6.Phase voltages of a star connected alternator are $E_R = 240\angle 0°$ V, $E_Y = 240\angle -120°$ V and $E_B = 240 \angle + 120°$ V. What is the phase sequence of the system? [ ]

A)RYB. B)RBY. C)YBR. D)BYR

7.A balanced 3 - Φ star connected load is fed from a 208 V, 3 - Φ supply. Each load has resistance of 35 Ω. The total power is [ ]

A)411.3 W. B)618 W. C)1236 W D)none of these

8.In two wattmeter method of power measurement if the total power is measured by one wattmeter only then power factor of the system is [ ]

A)0 B)0.5 C)1 D)none

9.The most common type of ac motor is the [ ]

A)three-phase induction motor B) single-phase induction motor

C)two-phase induction motor D)two-phase squirrel-cage motor

10.In a three-phase system balanced, the neutral current is [ ]

A)two-thirds of maximum B)one-third of maximum

C)at maximum D)Zero

11. In a Y-connected circuit, the magnitude of each line current is [ ]

A)zero B)three times the corresponding phase current

C)equal to the corresponding phase current D)one-third the phase current

12.Polyphase generators produce simultaneous multiple sinusoidal voltages that are separated by [ ]

A)certain constant frequencies B)certain constant phase angles

C)certain constant voltages D)certain constant currents

13. In a Y-Y source/load configuration, the [ ]

A)phase current, the line current, and the load current are all equal in each phase

B)phase current and the line current are in phase, and both are 120° out of phase with the load current
C)phase current, the line current, and the load current are 120° out of phase
D)line current and the load current are in phase, and both are out of phase with the phase current

14.In a three-phase system, the voltages are separated by [ ]

A)45° B)120° C) 90° D)180°

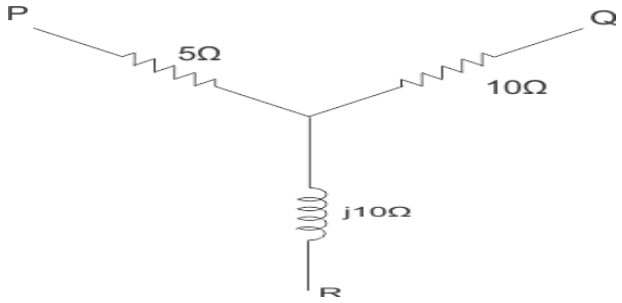
15. In a certain three-wire Y-connected generator, the phase voltages are 2 kV. The magnitudes of the line voltages are [ ]

A)6,000 V B)666V C)2,000 V D)3,464 V

16. In a certain Y-Y system, the source phase currents each have a magnitude of 9 A. The magnitude of each load current for a balanced load condition is [ ]

A)9A B)3A C)27A D)12A

17.The delta equation of given star connected impedance ZQR is equal to [ ]



(A)40 Ω (B) (20 + j10) Ω (C) (5 + j10 / 3) Ω(D) (10 + j30) Ω

18. Power factor of the following circuit will be unity [ ]
(a) inductance (b) capacitance
(c) resistance (d) both (a) and (b)

19. The formula for Apparent power is [ ]
(A) VI (B) VICosØ (C) VISinØ (D) VItanØ

20. The formula for Real power is [ ]
(A) VI (B) VICosØ (C) VISinØ (D) VITanØ

21. The formula for Reactive power is [ ]
(A) VI (B) VICosØ (C) VISinØ (D) VITanØ

22. The Apparent power is also called as [ ]
(A) Real power (B) Reactive power (C) Complex power (D) none

23.The unit for Power is ____ [ ]
(A) Watts (B) Volts (C) Ampere (D) Ohms

24. The units for Real Power is [ ]
(A) KW (B) KVAR (C) KVA (D) No units

25. The units for Reactive Power is [ ]
(A) KW (B) KVAR (C) KVA (D) No units

26. The units for Apparent Power is [ ]
(A) KW (B) KVAR (C) KVA (D) No units

27. The formula for three phase instantaneous power is [ ]
(A) 3VICosØ (B)VIcosØ (C) VIsinØ (D) none

28. The formula for single phase real power is [ ]
(A) 3VICosØ (B)VIcosØ (C) VIsinØ (D) none

29. The formula for single phase reactive power is [ ]
(A) 3VICosØ (B)VIcosØ (C) VIsinØ (D) none

30. The units for power factor are [ ]
(A) KW (B) KVAR (C) KVA (D) No units

31.The range of power factor lagging and leading in terms of signs is [ ]
(A) [0 0] (B) [-1 1] (C) [0 1] (D) [1 1]

32.The capacitor loads have _____power factor [ ]
(A) Lagging (B) Leading (C) Unity (D) Zero

33. The inductive loads have _____power factor [ ]

(A) Lagging (B) Leading (C) Unity (D) Zero

34. The resistive loads have _____power factor [ ]

(A) Lagging (B) Leading (C) Unity (D) Zero

35. The power factor of a D.C. circuit is always [ ]

(A) Less Than Unity (B) Unity

(C) Greater Than Unity (D) Zero

36. A phasor is [ ]

(A) a line which represents the magnitude and phase of an alternating quantity

(B) a line representing the magnitude and direction of an alternating quantity

(C) a coloured tag or band for distinction between different phases of a 3phase Supply

(D) None

37. In a three-phase system, when the loads are perfectly balanced, the neutral current is[ ]

(A) Zero (B) 1/3 of maximum (C) 1/5 of maximum (D) 2/3 of maximum

38.In a delta-connected circuit, the magnitude of each line voltage is [ ]

(A)three times the corresponding phase current

(B) one-third the phase current

(C) equal to the corresponding phase voltage

(D) zero

39.If in a Y-connected ac generator, each phase voltage has a magnitude of 90 V_{RMS}, what is the magnitude of each line voltage? [ ]

(A) 156V (B) 0V (C) 160V (D)140V

40.A Circuit of zero lagging power factor behaves as [ ]

a) An inductive circuit
b) A capacitive circuit
c) R-L circuit
d) R-C circuit

41.The power factor of an ac circuit is equal to [ ]

a) Cosine of the phase angle
b) Sine of the phase angle
c) Tangent of the phase angle
d) Cotangent of the phase angle

42. In an ac circuit i x sin (Phi) is called the __ component of the current [ ]

a) Watless
b) Reactive
c) Quadrature

d) All the above

43. In a two watt meter method the reading of W_1 = 3 kW and W_2 = 2 kW. But W_2 reading was taken after reversing the current soil of the wattmeter. The net power in the circuit is _____. [ ]

A) 1KW (B) 2KW (C) 3KW (D) 5KW

44.The formula for power factor is [ ]

(A) R/Z (B)P/S (C)cosØ (D) All

45.The formula for three phase active power is [ ]

(A) $\sqrt{3}$ VIcosØ (B)$\sqrt{3}$VIsinØ (C)$\sqrt{3}$VItanØ (D) $\sqrt{3}$VI

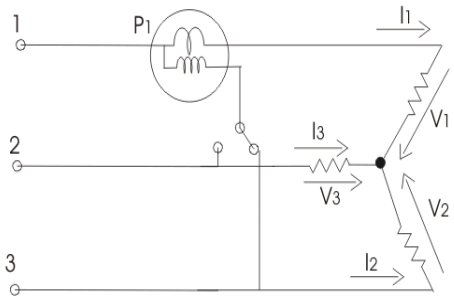
46. The formula for three phase reactive power is [ ]

(A) $\sqrt{3}$ VIcosØ (B)$\sqrt{3}$VIsinØ (C)$\sqrt{3}$VItanØ (D) $\sqrt{3}$VI

47. The formula for three phase True power is [ ]

(A) $\sqrt{3}$ VIcosØ (B)$\sqrt{3}$VIsinØ (C)$\sqrt{3}$VItanØ (D) $\sqrt{3}$VI

48. The following represents measurement of power by _____ method [ ]



(A) Single wattmeter method

(B) Two wattmeter method

(C) Three wattmeter method

(D) None of the above

49. Wattmeter measures _____ [ ]

(A)Voltage (B) current (C) Both voltage and current

(D) Resistance

50. Wattmeter consists of _____ and _____ coils [ ]

(A)Pressure &current coil (B) resistance&reactance coil

(C)Both A & B **(D)None**

ANSWERS

1.B 2.C 3.C 4.D 5.B 6.A 7.C 8.B 9.A 10.D 11.C 12.B 13.A 14.B 15.D 16.B 17.D 18.C 19.A 20.B 21.C 22.C 23.A 24.A 25.B 26.C 27.A 28.B 29.C 30.D 31.B 32.B 33.A 34.C 35.D 36.B 37.A 38.C 39.A 40.A 41.A 42.D 43.A 44.D 45.A 46.B 47.D 48.A 49.C 50.A

MODULE-III

1. Two Two-port networks are connected in cascade. The combination is to the represented as a single two – port network, by multiplying the individual [ ]

(a) z-parameter matrices

(b) h-parameter matrices

(c) y-parameter matrices

(d) ABCD parameter

2. The short-circuit admittance matrix of a two-port network is____. The two – port network is

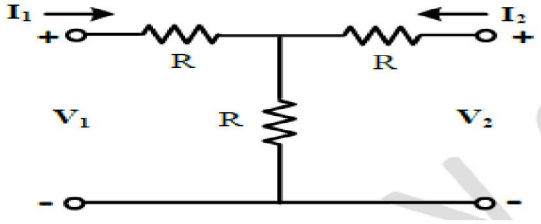
$$\begin{bmatrix} 0 & -1/2 \\ 1/2 & 0 \end{bmatrix}$$

[ ]

(A) Non – Reciprocal And Passive (B) Non – Reciprocal And Active

(C) Reciprocal And Passive (D) Reciprocal And Active

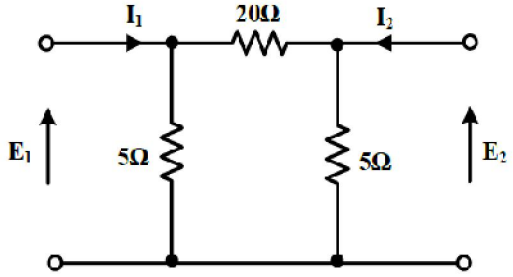
3. A 2-port network is shown in the figure. The parameter h21 for this network can be given by



[ ]

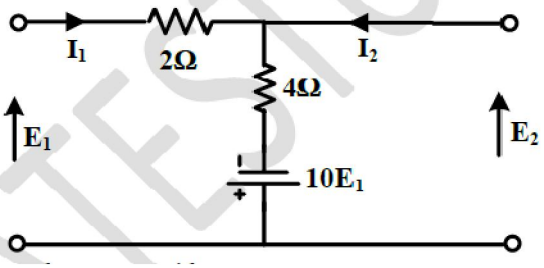
(A) -1/2 (B) +1/2 (C) -3/2 (D) +3/2

4. The admittance parameter Y12 in the 2-port network in figure is [ ]



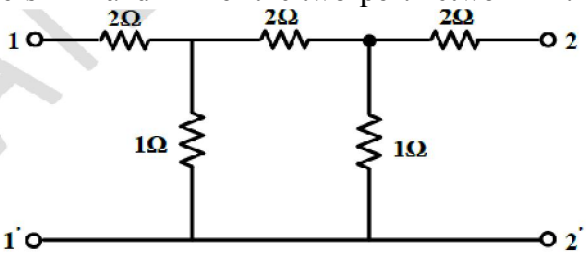
(A) -0.2 Mho (B) 0.1 Mho (C) -0.05 Mho (D) 0.05 Mho

5. The Z parameters Z11 and Z21 for the 2-port network in the figure are [ ]



(A) $Z11 = -6/\ 11\ \Omega$, $Z21 = 16/11\ \Omega$ (B) $Z11 = 6/11\ \Omega$, $Z21 = 4/11\ \Omega$
(C) $Z11 = 6/11\ \Omega$, $Z21 = -16/\ 11\ \Omega$ (D) $Z11 = 4/11\ \Omega$, $Z21 = 4/\ 11\ \Omega$

6.The impedance parameters Z11 and Z12 of the two-port network in the figure are [ ]



(A) $Z11 = 2.75\Omega\ and Z12 = 0.25\ \Omega$ (B) $Z11 = 3\ \Omega\ and Z12 = 0.5\Omega$
(C) $Z11 = 3\ \Omega\ and Z12 = 0.25\Omega$ (D) $Z11 = 2.25\Omega\ and Z12 = 0.5\ \Omega$

7. Z parameters is also called as [ ]
A)Open circuit parameters (B) Short circuit parameters
(C)Transmission parameters (D) Admittance parameters

8. Y parameters is also called as [ ]
A)Open circuit parameters (B) impedance circuit parameters
(C)Transmission parameters (D) Admittance parameters

9. ABCD parameters is also called as [ ]
A)Open circuit parameters (B) Short circuit parameters
(C)Transmission parameters (D) Admittance parameters

10. The other name for short circuit parameters is [ ]
A)Open circuit parameters (B) impedance parameters
(C)Transmission parameters (D) Admittance parameters

11.The condition for reciprocal for Y-parameters is [ ]
(A) $Y_{21}=Y_{12}$ (B) $Y_{11}=Y_{22}$ (C) AD-BC=1 (D) None

12. The condition for symmetricity for Y-parameters is[ ]
(A) $Y_{21}=Y_{12}$ (B) $Y_{11}=Y_{22}$ (C) AD-BC=1 (D) None

13. The condition for reciprocal for Z-parameters is [ ]
(A) $Z_{21}=Z_{12}$ (B) $Z_{11}=Z_{22}$ (C) AD-BC=1 (D) None

14. The condition for symmetricity for Z-parameters is [ ]
(A) $Z_{21}=Z_{12}$ (B) $Z_{11}=Z_{22}$ (C) AD-BC=1 (D) None

15. The condition for reciprocal for ABCD -parameters is [ ]
(A) $Z_{21}=Z_{12}$ (B) $Z_{11}=Z_{22}$ (C) AD-BC=1 (D) None

16. The condition for reciprocal for h -parameters is [ ]
(A) $h_{21}=h_{12}$ (B)) $h_{12}=-h_{21}$ (C) AD-BC=1 (D) None
17. The condition for symmetricity for ABCD-parameters is [ ]
(A)) AD-BC=0 (B) A=B (C) AD-BC=1 (D) A=D
18. The other names for ABCD parameters is [ ]
A) Transmission parameters (B) Generalised circuit parameters
(C)Chain &cascade (D) ALL
19. A two-port network is an electrical network contains _____ [ ]
(A) 3 ports (B) 4-ports (C) 2-ports (D) 6-ports
20. The matrix belongs to Impedance parameters is [ ]
(A) $\begin{bmatrix} V_1 \\ V_2 \end{bmatrix} = \begin{bmatrix} z_{11} & z_{12} \\ z_{21} & z_{22} \end{bmatrix} \begin{bmatrix} I_1 \\ I_2 \end{bmatrix}$ (B) $\begin{bmatrix} I_1 \\ I_2 \end{bmatrix} = \begin{bmatrix} y_{11} & y_{12} \\ y_{21} & y_{22} \end{bmatrix} \begin{bmatrix} V_1 \\ V_2 \end{bmatrix}$

(C) $\begin{bmatrix} V_1 \\ I_2 \end{bmatrix} = \begin{bmatrix} h_{11} & h_{12} \\ h_{21} & h_{22} \end{bmatrix} \begin{bmatrix} I_1 \\ V_2 \end{bmatrix}$ (D) All

21. Which equation belongs to Z-parameters [ ]
(A) $V1 = Z_{11} I_1 + Z_{12} I_1$, $\mathbf{V2} = Z_{21} I_1 + Z_{22} I_2$
(B) $I1 = Y_{11}V_1 + Y_{12}V_2$, $\mathbf{I2} = Y_{21}V_1 + Y_{22}V_2$
(C) $V1=h_{11}I_1+h_{12}V_2$, $I_2=h_{21}I_1+h_{22}V_2$
(D) $\mathbf{V1} = AV_2 - BI_2$, $\mathbf{I1} = CV_2 - DI_2$
22. Which equation belongs to Y-parameters [ ]
A) $V1 = Z_{11} I_1 + Z_{12} I_1$, $\mathbf{V2} = Z_{21} I_1 + Z_{22} I_2$
(B) $I1 = Y_{11}V_1 + Y_{12}V_2$, $\mathbf{I2} = Y_{21}V_1 + Y_{22}V_2$
(C) $V1=h_{11}I_1+h_{12}V_2$, $I_2=h_{21}I_1+h_{22}V_2$
(D) $\mathbf{V1} = AV_2 - BI_2$, $\mathbf{I1} = CV_2 - DI_2$
23. Which equation belongs to h-parameters [ ]
(A) $V1 = Z_{11} I_1 + Z_{12} I_1$, $\mathbf{V2} = Z_{21} I_1 + Z_{22} I_2$
(B) $I1 = Y_{11}V_1 + Y_{12}V_2$, $\mathbf{I2} = Y_{21}V_1 + Y_{22}V_2$
(C) $V1=h_{11}I_1+h_{12}V_2$, $I_2=h_{21}I_1+h_{22}V_2$
(D) $\mathbf{V1} = AV_2 - BI_2$, $\mathbf{I1} = CV_2 - DI_2$

24. Which equation belongs to ABCD-parameters [ ]
A) $V1 = Z_{11} I_1 + Z_{12} I_1$, $\mathbf{V2} = Z_{21} I_1 + Z_{22} I_2$
(B) $I1 = Y_{11}V_1 + Y_{12}V_2$, $\mathbf{I2} = Y_{21}V_1 + Y_{22}V_2$
(C) $V1=h_{11}I_1+h_{12}V_2$, $I_2=h_{21}I_1+h_{22}V_2$
(D) $\mathbf{V1} = AV_2 - BI_2$, $\mathbf{I1} = CV_2 - DI_2$
25. In Z-parameters $\boldsymbol{Z}12$ and $\boldsymbol{Z21}$ are _____ [ ]
(A) reverse impedance (B)Driving impedeance
(C) Transfer impedance (D) None

ANSWERS
1.D 2.B 3.A 4.C 5.C 6.A 7.A 8.D 9.C 10.D 11.A 12.B 13.A 14.B 15.C 16.A 17.D 18.D 19.C 20.A 21.A 22.B 23.C 24.D 25.C