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# **Network Analysis and Synthesis MCQ Test**

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Below is the **Network Analysis and Synthesis MCQ test** that checks your basic knowledge of Network Analysis and Synthesis. This **Network Analysis and Synthesis MCQ Test** contains 20 Multiple Choice Questions. You have to select the right answer to the question. Finally, you can also take the Online Quiz from the Take **Network Analysis and Synthesis MCQ Quiz** Button.

#### Q1. Which is a bilateral element?

- A. Capacitance
- B. Constant current source
- C. Constant voltage source
- **D.** None of the above

#### Q2. ..... is not a nonlinear element.

- A. Gas diode
- B. Heater coil
- C. Electric arc
- D. Tunnel diode

# Q3. The positive plate has spongy lead in a lead acid cell.

- A. True
- **B.** False

# Q4. What do you mean by Network Analysis?

- A. a method used to analyze, control and monitoring of business processes and workflows
- **B.** business
- C. software

• **D.** None of the above

#### Q5. A passive network is one which contains:

- A. Only variable resistance
- B. Only some sources of e.m.f. in it
- C. Only two sources of e.m.f. in it
- D. No source of e.m.f. in it

#### Q6. The number of independent equations to solve a network is equal to:

- A. The number of chords
- **B.** The number of brunches
- C. Sum of the number of branches and chords
- D. Sum of the number of branches, chords and nodes

#### Q7. Which of the following is not a nonlinear element?

- A. Gas diode
- B. Heater coil
- C. Tunnel diode
- D. Electric arc

# Q8. Millman's theorem yields:

- A. Equivalent resistance
- B. Equivalent voltage or current source
- C. Equivalent voltage source
- **D.** Equivalent impedance

# Q9. Kirchhoff's law is applicable to:

- A. Passive networks only
- B. A.C. circuits
- C. D.C. circuits
- D. Both (B) and (C)

#### Q10. The superposition theorem is applicable to:

- A. Linear, nonlinear and time variant responses
- B. Linear and nonlinear resistors only
- C. Linear responses only
- **D.** None of the above

## Q11. The terminals across the source are \_\_\_\_\_, if a current source is to be neglected.

- A. Open-circuited
- B. Short-circuited
- C. Replaced by a capacitor
- **D.** Replaced by a source resistance

#### Q12. Kirchhoff's current law is applicable to only:

- A. Junction in a network
- **B.** Closed loops in a network
- C. Electric circuits
- D. Electronic circuits

# Q13. Superposition theorem can be applied only to circuits having:

- A. Resistive elements
- B. Linear bilateral elements
- C. Nonlinear elements
- **D.** Passive elements

# Q14. Which of the following is the passive element?

- A. Capacitance
- **B.** Ideal current source
- C. Ideal voltage source
- **D.** All of the above

# Q15. A nonlinear network does not satisfy:

- A. Superposition condition
- **B.** Homogeneity condition
- C. Both homogeneity as well as superposition condition
- **D.** Homogeneity, superposition and associative condition

#### Q16. For maximum transfer of power, internal resistance of the source should be \_\_\_\_.

- A. Equal to load resistance
- **B.** Less than the load resistance
- C. Greater than the load resistance
- **D.** None of the above

#### Q17. A capacitor is generally a \_\_\_\_.

- A. Bilateral and active component
- B. Active, passive, linear and nonlinear component
- C. Linear and bilateral component
- **D.** Nonlinear and active component

#### Q18. For a voltage source:

- A. Terminal voltage is always lower than source e.m.f.
- B. Terminal voltage cannot be higher than source e.m.f.
- C. The source e.m.f. and terminal voltage are equal
- **D.** None of these

# Q19. The Characteristic Impedance of a low pass filter in attenuation Band is \_\_\_\_.

- A. purely imaginary
- **B.** zero
- C. complex quantity
- **D.** real value.

#### Q20. Which among the following is also regarded as 'Dual of Thevenin's Theorem'?

- A. Norton's Theorem
- **B.** Superposition Theorem
- C. Millman's Theorem

• **D.** Maximum Power Transfer Theorem

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