

TELANGANA UNIVERSITY
S.S.R. DEGREE COLLEGE, NIZAMABAD (C.C:5029)
V SEMESTER INTERNAL ASSESSMENT I EXAMINATIONS
PHYSICS (BASIC ELECTRONICS) QUESTION BANK

• Fill in the blanks :-

1. Four resistances of $2\ \Omega$, $4\ \Omega$, $2\ \Omega$ & $8\ \Omega$ are connected in parallel. The equivalent value $11/8\ \Omega$
2. Correct colour code equal to $68K\ \Omega \pm 10\%$ is Blue, Gray, Green, Silver
3. $V = IR$ is formula represents ohm's law
4. Resistivity of a wire depends on material
5. The relationship between resistance and temperature $R_T = R_0(1 + \alpha T)$
6. When capacitors connected in parallel, the total capacitance is $C = C_1 + C_2 + C_3 + \dots + C_n$
7. The capacity of a parallel plate capacitor $C = \frac{\epsilon_0 A}{d}$
8. The capacitance in series is $\frac{1}{C} = \frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} + \dots + \frac{1}{C_n}$
9. When the potential to which conductor is raised depends in amount of charge & size
10. The ratio of charge given to conductor to size its potential ($V = \frac{q}{c}$)
11. When the dielectric medium is K b/n plates, then capacitance C is $\frac{K \epsilon_0 A}{d}$
12. Capacitor is a device used to store electrical energy
13. Capacitor stores potential energy
14. The capacitor blocks direct current
15. Metal medium capacitance is high
16. Reactance resistance offerered by capacitor
17. Reactance of a inuctor is $\chi_L = j\omega L$
18. Reactance of a capacitor is $\chi_c = \frac{1}{j\omega c}$
19. The unit of inductance is Henry (H)
20. The unit of capacitance is farad
21. KVL is also called as Loop law (or) loop rule
22. KCL is also called as Junction law
23. When 'n' resistars connected in series, the voltage across Rth registrar is $V_{th} = V_S \times \frac{R_{th}}{R_1 + R_2 + \dots R_n}$
24. What is value of current in given circuit 50A
25. The algebraic sum of all voltages in any closed loop is zero. This law is called KVL
26. The time rate of net motion of an electric charge called Electric current
27. The net reistance in parallel is $\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \dots + \frac{1}{R_n}$
28. The total active power supplied by battery is $P = V \times I$
29. Using mesh analysis, the resistance common to two makes has two opposing mesh currents

30. In an electric circuit, the point where two (or) more elements have a common connection known as node
31. A Branch is a single (or) group of components which are connected b/n two nodes
32. Any closed path in a circuit called loop
33. Mesh is kind of loop, that has no loop inside it
34. A closed path made by several branches of network known as Loop
35. Mesh-current method uses KVL
36. Nodal analysis method uses KCL
37. For network having 'N' nodes, and 'B' branches the no. of equations B-N+1
38. The circuit drawn plane surface with no wire crossing each other planar circuit
39. In network of 'N' nodes, the no of nodal equations are N-1

II. Short Questions.

1. What colour are used in colour coding process of resistors
2. What are the types of resistors
3. Name the types of capacitors
4. State KVL?
5. State KCL?
6. Define self and mutual inductance?
7. Write the expression for coefficient of coupling ?
8. Formulas for voltage division and what is it?
9. Explain electrical potential and electric charge.
10. Explain electric field.