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A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(AUTONOMOUS)(Grant-in-Aid)
Affiliated to Sardar Patel University
VALLABH VIDYANAGAR-388120



Bachelor of Science (Semester I) External Examination - 2024
US01MIELE01:Basic Electronics

Date: 20/11/2024, Wednesday

Time: 11:00 AM to 12:30 PM

Total Marks: 25

Q.1 Multiple choice questions (Attempt All)

05

- 1 What is the unit for capacitance?
(A) Ohm. (B) Farad.
(C) Voltage. (D) Henry.
- 2 The most common variable capacitor is the ____ capacitor
(A) Oil Gang. (B) Water Gang.
(C) Air Gang. (D) Vacuum Gang.
- 3 Super position theorem is useful in analyzing a network containing ____.
(A) One Voltage Source. (B) One Resistor.
(C) More than one voltage source. (D) More than one resistor.
- 4 Which of the following quantity remains same when two resistors connected in series?
(A) Voltage. (B) Current.
(C) Amplitude. (D) Power.
- 5 In Thevenin's theorem V_{oc} refers to ____.
(A) Open circuit Voltage. (B) Short circuit voltage.
(C) Open controlled voltage. (D) Open component voltage.



Q.2 Define resistance. Explain construction of Carbon and Variable resistors in details. (10)

OR

Q.2 Write a note on types of Inductors with their constructional details. (10)

Q.3 A. State and explain Kirchhoff's law with necessary circuit. (03)

B. Three resistors, $R_1=10\ \Omega$, $R_2=20\ \Omega$ and $R_3=30\ \Omega$ are connected in parallel with a battery of 10V. Find the current passing through R_2 . (07)

OR

Q.3 State Thevenin's theorem and explain it suitable circuit. (10)