



C16-EC-105

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**BOARD DIPLOMA EXAMINATION, (C-16)**  
**MARCH/APRIL—2018**  
**DECE—FIRST SEMESTER EXAMINATION**  
**BASIC ELECTRONIC—I**

Time : 3 hours ]

[ Total Marks : 80

**PART—A**

2×15=30

**Instructions** : (1) Answer *any fifteen* questions.  
(2) Each question carries **two** marks.  
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define density and strain.
2. Mention the three applications of superconductivity.
3. Classify the types of resistor.
4. List the applications of carbon film resistors.
5. List the common faults in resistors.
6. Distinguish between preset and potentiometer.
7. Draw the European symbols of potentiometers.
8. List the two types of variable resistor.
9. Give the standard specifications of thermistor.

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10. List any three applications of LDR.
11. Draw the symbols of different types of inductor.
12. List the applications of AF chokes.
13. List the common faults in inductors.
14. List the specifications of a capacitor.
15. Mention the losses in capacitors.
16. Define working voltage of a capacitor.
17. Draw the ISI symbols of various switches.
18. List the contact materials used in relays.
19. List the types of laminate used in PCB's.
20. Give the standard specifications for PCB.

**PART—B**

10×5=50

*Instructions* : (1) Answer any **five** questions.  
(2) Each question carries **ten** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

21. (a) Distinguish between soft and hard magnetic materials.  
(b) Explain the effect of temperature on magnetism.
22. (a) Explain the constructional details of wire wound resistors.  
(b) Describe the constructional details of carbon potentiometers.
23. (a) Explain the working of sensistor.  
(b) Give the constructional details of LDR.

- 24.** (a) <sup>\*</sup> Explain the terms 'stray inductance' and 'stray capacitance'.  
(b) List the applications of RF chokes.
- 25.** Mention the properties, range of values and applications of paper capacitors.
- 26.** Explain the construction and working of general purpose electromagnetic relay.
- 27.** (a) Explain the need for fly back diode across the relay coil when used in electronic circuits.  
(b) Distinguish between relay and contactor.
- 28.** Mention the method of layout preparation of PCB.

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