



C14-AEI-105

**4047**

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**JUNE—2019**  
**DAEIE—FIRST YEAR EXAMINATION**  
**ELECTRONICS COMPONENTS AND MATERIALS**

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

3 ×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.
1. Define the property of resistance.
  2. List any three common faults in resistors.
  3. State any three losses in capacitors.
  4. Classify the types of capacitors on the basis of dielectric material used.
  5. List the specifications of inductors.
  6. Define switch.
  7. Mention the specifications of loudspeaker.
  8. List the soldering methods of PCBs.
  9. Define superconductivity.
  10. Define insulating material.

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## 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.

11. (a) Explain the specifications of a resistor and state their importance. 6  
(b) What is the need for tapering in potentiometers? 4
12. (a) Explain the factors affecting the capacitance of a capacitor.  
(b) Find the equivalent capacitance of capacitors connected in series.
13. Explain the constructional features of RF choke and list its applications.
14. Explain the construction and working of general purpose of electromagnetic relay.
15. Explain the working of carbon and dynamic microphones along with their polar characteristics. 5+5
16. Explain the photo-processing techniques for PCB preparation.
17. Classify materials and explain the general properties like conductivity, resistivity. 2+4+4
18. Explain hard magnetic materials with examples.

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