



C16-AEI-105

6012

BOARD DIPLOMA EXAMINATION, (C-16)

MARCH/APRIL—2021

DAEIE - FIRST YEAR EXAMINATION

ELECTRONIC COMPONENTS AND DEVICES

Time : 3 hours]

[Total Marks : 80

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. State the need of tapering in potentiometers.
2. List any three common faults in capacitors.
3. Write the expression for equivalent inductance when two inductors are connected in parallel opposing.
4. Define the term relay.
5. List any three specifications of microphones.
6. Draw the symbols of Varactor diode and Tunnel diode.
7. List any three specifications of diode.
8. Define alpha and gamma factors.
9. List any three types of storage batteries.
10. List any three soldering methods of PCBs.

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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 criterion for valuation is the content but not the length of the answer.

12. (a) Derive an equivalent capacitance of a capacitors connected in parallel with circuit diagram.
(b) State the factors affecting the capacitance of a capacitor.
13. Explain the constructional features of RF choke with diagram and list its applications.
14. Explain the working of toggle switch with diagram and list applications.
15. Explain the formation of P-type and N-type materials and draw the energy band diagrams.
16. Explain the working of transistor as amplifier in CE configuration with diagram.
17. Explain the working of FW Rectifier circuit with wave forms.
18. (a) Explain the Layout scale in PCB Layout planning with diagram.
(b) Explain the principle of crystal headphone with diagram.

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