



C14-EC-603

4737

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2017

DECE—SIXTH SEMESTER EXAMINATION

**ELECTRONIC PRODUCT DESIGN AND QUALITY
ASSURANCE**

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. List the power supply protection devices.
2. Define noise reduction.
3. List the important properties of laminates.
4. Describe two types of high-speed EMI reduction methods in PCB design.
5. List the applications of mixed signal oscilloscope.
6. List the different types of analysis.
7. Define vibration testing.

- * 8. Define bump testing.
- 9. List the rules for preparing effective document.
- 10. List the contents of a service manual.

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. Explain the concept of product development with a neat block diagram.
- 12. Explain shielding and guarding techniques.
- 13. Explain layout consideration for mixed signal circuits.
- 14. Explain IC's calculation of parasitic elements in PCB.
- 15. Explain the use of digital storage oscilloscope in testing.
- 16. Explain UL and CE certifications of industrial electronic products.
- 17. Explain vibration and temperature cycling.

- * 18. Explain product documentation bill of materials.
