



C14-EC-603

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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.

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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.

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