



C14-EC-505

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**BOARD DIPLOMA EXAMINATION, (C-14)
OCTOBER/NOVEMBER-2018
DEC-FIFTH SEMESTER EXAMINATION**

ELECTRONIC PRODUCT DESIGN AND QUALITY ASSURANCE

Time : 3 Hours]

[Total Marks: 80

PART-A

3X10=30

- Instructions :**
1. Answer **All** questions.
 2. Each question carries **THREE** marks
 3. Answer should be brief and straight to the point

1. Draw the block diagram of product development.
2. List the requirements of customer.
3. Give classification of an electronic product.
4. List the important properties of Laminates.
- * 5. Define cross talk.
6. Write the use of logic analyzer in hardware design and testing.
7. List the factors affecting signal integrity of an instrument.
8. List three types of vibration test techniques.
9. Define EMI and EMC.
10. Write six important rules for preparing effective document.

PART-B

10X5=50

Instructions :

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

11. Compare the cost and performance of the three different types of electronic products.

12. Explain shielding and guarding techniques.

13. Explain layout considerations for mixed signal circuits.

14. Explain packages for discrete devices for use in PCBs.

15. Explain the used mixed signal Oscilloscope for hardware testing.

16. Explain about Vibration testing methods.

17. Explain UL and CE certification of industrial electronic products.

18. Explain PCB documentation.
