

2005-COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

B.TECH DEGREE EXAMINATION MAY-2005

ELECTRONIC PRODUCT DESIGN

(ELECTRONICS AND COMMUNICATION ENGINEERING)

TIME- 3HOUR

MARKS-100

ANSWER ALL QUESTIONS

MARKS [10*10=100]

- 1a. Explain the importance of requirement analysis and product requirement specification
- b. Discuss the role of computer based tools in product design
- 2a. Discuss briefly the steps involved in transforming the concept of a product to the final form
- b. Explain the role of CAD and CAM tools
- 3a. Explain how packaging could be critical to the success of a product
- b. What are ergonomics and aesthetic consideration? Why are they important?
- 4a. Quality management is a multifaceted approach. Comment
- b. Discuss the importance of designing good user interfaces
- 5a. Explain how PCB layouts can be adopted to tackle heat generation problem
- b. Discuss the guidelines for cooling and ventilation in electronic equipments
- 6a. Explain the steps that can be taken to control heat related problems in an equipment
- b. Discuss the role and types of PCB s
- 7a. Explain the methods that can be adopted to minimize the effects of EMI generation and reception
- b. Write notes on EMI standards and regulations
- 8a. Explain the PCB design approaches to suppress the effects of EMI
- b. Discuss the common sources of EMI and their effects
- 9a. Discuss the advantage of EDA tools in schematic capture over manual methods
- b. Discuss the purpose and importance of simulation tools
- 10a. How are PCB layout tools like ORCAD superior over manual methods? In which aspects are they inferior?
- b. Write notes on SPICE