



FOURTH SEMESTER B.TECH. (E & C) DEGREE END SEMESTER EXAMINATION

JUNE 2019

SUBJECT: ELECTRONIC PRODUCT DESIGN AND PACKAGING (ECE - 3282)

TIME: 3 HOURS

MAX. MARKS: 50

Instructions to candidates

- Answer **ALL** questions.
- Missing data may be suitably assumed.

- 1A. With neat diagram, explain the chip making process from wafer to testing?
- 1B. Write a note on ribbon cables along with their configuration.
- 1C. What are the sources of new ideas? List it and any three in details.
(4+3+3)
- 2A. What are the categories of heat sink? Explain each with neat diagram.
- 2B. Explain the importance of aesthetic and ergonomic in industrial design?
- 2C. What is Through-Hole mounting? List benefits and drawback of it.
(4+3+3)
- 3A. What is the electronic packaging? What are the issues in electronic packaging? Explain any two.
- 3B. What are benefits and drawback of SMD?
- 3C. Explain the failure rate curve with diagram.
(4+3+3)
- 4A. Describe reflection and cross talk noise with necessary diagram.
- 4B. What is CSP? Write benefit and drawback of CSP?
- 4C. What is digital noise? List the digital noise sources.
(4+3+3)
- 5A. Define reliability in product design and its types? With neat graph explain failure rate curve?
- 5B. What is skin depth? Describe it at low and high frequency.
- 5C. What is grounding? Explain different ground systems with suitable diagram and mention their advantages and disadvantages.
(4+3+3)