Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY
Manipal University

FOURTH SEMESTER B.TECH (E & C) DEGREE END SEMESTER EXAMINATION
MAY/JUNE 2016
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. Explain a generic Product design process?

1B. What is aesthetics? Explain Elements of Aesthetics and pleasure types?

1C. What is product life cycle? Explain with neat graph?

(5+3+2)

2A. Explain the thermal design process?

2B. What is heat sink? Explain thermal circuit associated with heat sinks?

2C. What is control panel? Explain its organization?

(5+3+2)

3A. What is product detailing? What are the different tools and techniques used for product detailing?

3B. Explain two wire bounding techniques and tools with neat diagrams?

3C. What is PWB? How can it be characterized?

(5+3+2)

4A. Why is conductive coating required for electronic enclosures? Explain any 4 methods of producing a conductive plastic enclosure?

4B. Describe two methods of noise coupling with necessary diagrams?

4C. What is digital noise? List the digital noise sources?

(5+3+2)

5A. Write a short note on ribbon cables along with their configurations?

5B. With diagrams, explain underfill in IC packaging?

5C. What is Shielding? What is near and far fields?

(5+3+2)