



VII SEMESTER B.TECH. (PRINT & MEDIA TECHNOLOGY)
END SEMESTER EXAMINATIONS, NOV 2019
SUBJECT: SMART PACKAGING [PMT 4004]
REVISED CREDIT SYSTEM
(26/11/2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ALL** the questions.

- 1A.** Write a structure of Barcode and label its parts. Explain the factors affecting the Barcode readability.
- 1B.** Explain in detail the Ethanol Emitters utilized in Smart packaging.
- 1C.** What are the important aspects to be considered for labeling of smart packaging?
[04 + 03 + 03]
- 2A.** Explain in detail about the outlook and future developments of smart packaging technologies.
- 2B.** Explain how RH and Gas Atmosphere effect the shelf life of a product.
- 2C.** Explain the principle and the applications of LSA technology.
[04 + 03 + 03]
- 3A.** List the merits and demerits of Inkjet Printing and LASER Printing for printing Barcodes.
- 3B.** Explain in detail about the Aldehyde or Aroma Scavengers utilized in fish and sea food packaging.
- 3C.** Explain in detail the applications and benefits of using nanotechnology in food packaging.
[04 + 03 + 03]
- 4A.** With a schematic diagram explain the working of and RFID Tag.
- 4B.** Explain in detail about the Enzymatically Active Packages utilized for Dairy products packaging.
- 4C.** Define Active Packaging, explain how Ph and Water activity effect the shelf life of a product in Active Packaging.
[04 + 03 + 03]
- 5A.** Explain in detail about the SSO's causing damage to the fish and sea food products.
- 5B.** Brief the twelve benefits of Intelligent Packaging.
- 5C.** Explain the solutions available to enhance the shelf life of the dairy products.
[04 + 03 + 03]