


VI SEMESTER B.TECH. (PRINT AND MEDIA TECHNOLOGY)
END SEMESTER EXAMINATIONS, APRIL 2019
SUBJECT: PACKAGING APPLICATIONS [PMT 4001]
**REVISED CREDIT SYSTEM
(30/04/2019)**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** Discuss the four major groups of pharmaceutical products based on dosage form. Also explain the categories of injectables.
- 1B.** What are the recent trends in the development of materials for pesticides packaging? Explain.
- 1C.** What are the two objectives of legislation on food contact materials? Name and explain four types of food simulants according to European Union.

[04 + 03 + 03]

- 2A.** List and explain specific properties and applications of eight types of materials used in packaging of fertilizers.
- 2B.** What are the two attributes of food packaging? Explain the characteristics of horticultural products for packaging.
- 2C.** What are the four main materials used in the packaging of injectables? Explain the properties and applications of each type.

[04 + 03 + 03]

- 3A.** Design a packaging hazard label for the supply of radio-active materials.
- 3B.** Discuss the key parameters in selecting suitable plastic material for oral pharmaceutical products.
- 3C.** What is Indices of Failure in food packaging? Explain the characteristics of flesh foods for packaging.

[04 + 03 + 03]

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- 4A.** Some biscuits, sealed in a bag made from 35 μm low density polythene, gained 1.9 g in seven days, and 12.5 g altogether when the bag was cut open and re-exposed. At what time would it have gained exactly 6.8 g of moisture, if the packaging material is changed to 175 μm low density polythene?
- 4B.** Explain the properties and applications of three types of rigid and semi rigid containers used in the packaging of oral pharmaceutical products.
- 4C.** What are the six requirements of packaging of hazardous liquid products as per IS: 8190? Explain.

[04 + 03 + 03]

- 5A.** Differentiate between explosives and radio-active materials. List six hazardous chemicals and indicate a suitable container for each.
- 5B.** Explain the properties and applications of plastics used in cosmetic packaging.
- 5C.** Explain six guidelines for using Paper and Board for food contact as per Federal Institute for Risk Assessment XXXVI.

[04 + 03 + 03]