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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL

A Constituent Institution of Manipal University

SIXTH SEMESTER B.TECH. (PRINT AND MEDIA TECHNOLOGY)

END SEMESTER EXAMINATIONS, APR/MAY 2017

SUBJECT: PACKAGING APPLICATIONS [PMT 4001]

REVISED CREDIT SYSTEM
(27/04/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** What are the various atmosphere manipulation techniques inside the food package? Explain each technique with suitable example.
- 1B.** Explain the features of aerosol packaging used in cosmetic industry. Also explain the limitations and latest trends in cosmetic aerosol packaging.
- 1C.** With a neat sketch explain the parts of label used for the packaging of hazardous chemicals.

[04 + 03 + 03]

- 2A.** Explain the working of Total Environmental Control system in food packaging with suitable examples.
- 2B.** What is meant by inert gas packaging? What are the five applications of inert gas packaging?
- 2C.** What are the six characteristics of formable materials used in pharmaceutical packaging? Also list six materials used to manufacture thermoformed trays.

[04 + 03 + 03]

- 3A.** List and explain the properties and applications of eight types of materials used in packaging of fertilizers.
- 3B.** What is Indices of Failure in food packaging? Explain the characteristics of flesh foods for packaging.

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- 3C.** Discuss the four major groups of pharmaceutical products based on dosage form. Also explain the categories of injectables.

[04 + 03 + 03]

- 4A.** Explain the four possibilities of mutual influences between oral pharmaceutical product and package.

- 4B.** What are the classifications of convenience foods in packaging of ready to eat foods? Explain.

- 4C.** What are the recent trends in the development of materials for pesticides packaging? Explain.

[04 + 03 + 03]

- 5A.** With a neat sketch explain the process of continuous vacuum forming process in pharmaceutical packaging.

- 5B.** Explain the steps in the development of dairy product packaging.

- 5C.** Explain the construction and advantages of two types of bags used in the packaging of hazardous chemicals.

[04 + 03 + 03]