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(A constituent unit of MAHE, Manipal)

VI SEMESTER B.TECH. (PRINT AND MEDIA TECHNOLOGY) MAKEUP EXAMINATIONS, JUNE 2019 SUBJECT: PACKAGING APPLICATIONS [PMT 4001] REVISED CREDIT SYSTEM (14/06/2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ✤ Answer ALL the questions.
- ✤ Missing data may be suitably assumed.
- **1A.** Explain the properties and applications rigid and semi rigid containers in oral pharmaceutical packaging.
- **1B.** What are the requirement of packaging materials used in pesticides packaging? Explain.
- **1C.** Discuss the types and significance of food simulants in food packaging.

[04+03+03]

- 2A. Explain the properties of various packaging materials used for packaging of fertilizers.
- **2B.** What are the classifications of convenience foods in packaging of ready to eat foods? Explain.
- **2C.** Explain six characteristics of thermofomable materials used in the packaging of medical devices.

[04 + 03 + 03]

- **3A.** With a neat sketch explain dynamic gaseous exchange in MAP.
- **3B.** Explain the compliance requirements of materials used in pharmaceutical packaging.
- **3C.** What are the classifications of convenience foods in packaging of ready to eat foods? Explain.

[04+03+03]

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- **4A.** Explain the working of Total Environmental Control system in food packaging with suitable examples.
- **4B.** List and explain the requirement of three types of auxiliary packaging materials.
- **4C.** Explain the construction and specifications of textile bags used in the packaging of chemicals.

[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 influence of environmental factors on cosmetic products.
- 5C. Some snacks sealed in a bag made from 24 μm HDPE gained 1.8 g in 8 days and 9.8 g altogether when the bag was cut open and reposed. At what time would it have gained exactly 7.6 g of moisture, if the packaging bag material is changed to 96 μm?

[04+03+03]