



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

END SEMESTER MAKE-UP EXAMINATIONS, DECEMBER 2019

SUBJECT: PACKAGING TECHNIQUES AND PROCESSES [PMT 4003]

REVISED CREDIT SYSTEM

(30/12/2019)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A.** i) List and explain the advantages of shrink wrapping.
 ii) Explain the lamination process used to join a paper substrate and an aluminum foil with neat diagram.
- 1B.** Discuss the 3 methods used to create perforation in a label.
- 1C.** A lime soda maker needs glass bottles to pack and sell them. Explain the 2 methods of manufacturing glass bottles along with advantages in packaging.
[(02+02) + 03 + 03]
- 2A.** i) Discuss the features of the following paper bag designs;
 a) Flat bags b) Self-opening satchel bags
 ii) With neat diagram, explain the working principle of a weighing filler.
- 2B.** Explain the features and manufacturing process of alu-alu blister.
- 2C.** List 4 advantages of aseptic packaging. Compare aseptic and retort packaging.
[(02+02) + 03 + 03]
- 3A.** i) With neat diagram, explain band sealing method used to seal pouches.
 ii) Discuss the features of heat sensitive labels and self-adhesive labels.

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3B. Discuss 3 types of embossing presses.

3C. With neat diagram, explain the parts of a fibre drum.

[(02+02) + 03 + 03]

4A. i) Explain how shape and typography of a package influence its design.

ii) Explain the working of a HFFS machine with neat diagram.

4B. With neat sketches, discuss the features of the following closures;

a) Tamper evident plastic closures

b) Lever lid push-in

4C. Explain various steps involved in manufacturing plastic collapsible tubes.

[(02+02) + 03 + 03]

5A. i) How strip package is different from blister package? Explain the steps involved in manufacturing a strip package.

ii) Discuss various factors to be considered while installing a new packaging machinery.

5B. A customer needs to buy a filler to pack toothpaste. Identify and explain the features of the filler with neat diagram.

5C. With neat sketches, discuss the features of the following liquid packaging cartons;

a) Brick

b) Pouch

c) Prisma

[(02+02) + 03 + 03]