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MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

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

END SEMESTER ONLINE EXAMINATIONS, MARCH 2021

SUBJECT: PACKAGING DESIGN AND TESTING [PMT 4101]

REVISED CREDIT SYSTEM
(17/03/2021)

Time: 3 Hours **2:00-5:00 PM** MAX. MARKS: 50

Instructions to Candidates:

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

1A.	With neat sketches, explain 6 handling marks commonly used in packages.
1B.	Explain the 2 methods of making glass containers with diagrams.
1C.	i) Compare greaseproof and glassine papers used for packaging. ii) Explain the process of manufacturing DWI cans with diagram.
	[03+ 03 + (02+02)]
2A.	With neat sketches, explain 3 variation in Reverse Tuck End (RTE) style carton design.
2B.	With neat diagrams, explain roller and air-less spray methods of applying coating on metal containers.
2C.	i) Explain various steps involved in filling an aerosol container. ii) With neat diagram, explain the process of manufacturing BOPP film.
	[03+ 03 + (02+02)]
3A.	Discuss the influence of distribution factors on package design.
3B.	With neat sketches, explain various types of closures made up of metal.
3C.	i) Discuss various treatments done on plastic substrates after forming. ii) Compare injection molding and thermoforming processes.
	[03+ 03 + (02+02)]
4A.	With sketch, explain the purpose and procedure of following tests done on corrugated boards; i) RCT ii) PAT iii) Mullen test

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4B.	List and explain the 5 methods of manufacturing thermoformed plastics containers.
4C.	i) Discuss various types of resilient cushioning materials. ii) Write notes on various flute profiles of corrugated board.
	[03+ 03 + (02+02)]
5A.	With neat diagram, explain various parts of an aerosol valve.
5B.	With neat diagram, explain the working principle of plasticating extruder.
5C.	i) Write notes on Vintage and minimalist product packaging trends. ii) Explain 2 types of desiccants used for packaging.
	[03+ 03 + (02+02)]