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53 (FPT 601) FPTC

2018

FOOD PACKAGING TECHNOLOGY

Paper : FPT 601

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions out of six.

1. (a) Explain different levels of food packaging with examples. 5
- (b) Elaborate on the major functions of food packaging. 9
- (c) Briefly elaborate on the process of manufacturing electrolytically chromium coated steel (ECCS) and tin plate (ETP) for can manufacturing. 6

Contd.

2. Write short notes on **any two** of the following : 2×10
- (i) Gases in modified atmospheric packaging (MAP)
 - (ii) Factors affecting corrosiveness of metal cans
 - (iii) Active and intelligent packaging.
3. (a) Elaborate on plastic film processing by different methods of post-extrusion steps. 12
- (b) Briefly explain the following two major mechanical properties of a packaging material, and their importance. 4+4
- (i) Density and related properties.
 - (ii) Coefficient of friction.
4. (a) Give the structural description of polypropylene and polystyrene. 8
- (b) Briefly elaborate on a generalized flow diagram describing different steps involved in paper making. 12

5. (a) What is aseptic packaging ? What are the different modes by which food packaging is sterilized and aseptic filling is achieved ? 2+8
- (b) Elaborate on *any two* of the following : 2×5
- (i) RFID system for food packaging
 - (ii) Shock/Impact test of packaging
 - (iii) Application of TTIs in food packaging.
6. (a) Briefly elaborate *any* of the PET bottle manufacturing procedures using simple schematic diagram(s). 14
- (b) Explain the difference in procedures between two-piece and three-piece can manufacturing. 4
- (c) What are the *two* major functions of a MAP with high concentration of in-package CO₂ ? 2
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