

August 2021

FOOD PACKAGING TECHNOLOGY*Time Allowed: 1.5 Hours**Full Marks: 70***Answer to Question No. 1 is compulsory and Answer any two questions from the rest.**

1. Answer the following questions (any twenty): 2x20
- i) Define Packaging.
 - ii) Define Primary Packaging.
 - iii) SARAN is the trade name of which type of packaging material?
 - iv) State one example of bio film which is used in food industry.
 - v) Which type of packaging material is suitable for drinking water packaging?
 - vi) Cite two examples where rigid packaging materials are used as primary packaging.
 - vii) Why GSM is important?
 - viii) State the function of liner in closure.
 - ix) Define the term cushion factor.
 - x) How is coating thickness on film evaluated?
 - xi) Define the term fragility.
 - xii) Cite an example of tertiary packaging materials.
 - xiii) Cite an example of transport packaging materials.
 - xiv) Define lacquering of can.
 - xv) State the functions of printing ink.
 - xvi) Cite an example of bio degradable packaging material.
 - xvii) "Nitrogen is added in snacks packaging" - Justify the statement.
 - xviii) Cite an example of CO₂ Absorber
 - xix) State the composition of tin plate.
 - xx) MVTR – Write the full form.
 - xxi) Cite an example of food material which can be packed in Tetrapak.
 - xxii) Which type of packaging materials can be used for biscuits packing?
 - xxiii) How packaging protects food from contamination?
 - xxiv) Define retort pouch.
 - xxv) Define aseptic packaging.
 - xxvi) Define vacuum packaging.
2. Enumerate the features contributing to package as silent salesman? How are packages helpful to a. consumer, b. retailer? State the primary functions of packaging. 5+5+5
3. Write at least three advantages and disadvantages of glass as packaging material? Classify different varieties of paper which can be used as packaging material in food industry. Write six properties of corrugated board. 5+5+5
4. Describe the preparation methods for HDPE & LDPE? Enumerate at least three the advantages and disadvantages of plastic packaging material. Compare the properties of PE and PP films. 5+5+5

5. Explain the various characteristics of Aluminium foil for its wide choice in food packaging. Explain the construction features of Tetrapak. Discuss the role of double seam of two piece can coating to ensure protection of the product. 5+5+5

 6. Define PDP.
Write down the names of packaging materials, machinery and packaging systems which are used for the following food stuffs:
a. Fish sauce, b. Cheese, c. Butter, d. Infant milk, e. Potato chips, f. Ground spice, g. Instant coffee, h. Alcoholic beverage. 5+10

 7. Elaborate the materials and methods of the CAN manufacturing. What are the reasons of Can corrosion? How corrosion of CAN can be prevented. What is OTS and aerosol CANS? 4+4+3.5+3.5

 8. Define Active packaging. Classify active packaging according to their functionality with examples. Compare the advantages and disadvantages of CAP and MAP process. 3+6+6

 9. Describe the various mechanical tests on packages. Explain various tests conducted on corrugated board. Define damage boundary. State methods of evaluating barrier properties of a film. 4+4+3.5+3.5

 10. As per the Indian regulations what are the minimum facts which a food label must contain? Which categories of food are exempted from the labelling requirements? State the significance of green dot on the packaging label. 9+4+2

 11. Write short notes on the following (any three):
a. Packaging environment, b. Intelligent packaging, c. PET, d. PEN, e. LLDPE, f. Foam Fill Seal Machine 5x3
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