



KERALA AGRICULTURAL UNIVERSITY
B.Tech. (Food Engg. & Technology) 2017 Admission

VII Semester Final Examination-February 2021

Fdpr.4105

Food Packaging Technology (2+1)

Marks: 50
Time: 2 hours

I Fill in the Blanks (10x1=10)

1. The barrier properties of polyethylene may be changed by coating it with other _____.
2. _____ type of glass offer UV protection to the product packed in it.
3. Microbial spoilage of food is often involved in the _____ of the texture of food.
4. In the aseptic packaging process UHT treatment is followed by packing in a _____ container in a _____ environment.
5. Migration of packaging to food gets affected by the _____ of available potential migrants in the packaging material itself.

State True or False

6. The transit vibration in pneumatic wheels on pavement (truck) is generally more than 25Hz.
7. The amount of heat treatment for packed food required depends on the characteristics of the most harmful microorganism present in it.
8. The physical damage vulnerable area of a flexible pack is the centre of the surface.
9. The inner layer of the flexible packaging is the most important for a dry baked product for determining its shelf-life.
10. The gravure press consists of a series of printing stations in-line, each applying a set of compatible colours of liquid ink.

II Write Short notes on any FIVE of the following (5x2=10)

1. What is corrugated box packaging? Explain its advantages and disadvantages.
2. How the oxygen around the food in a package is affecting the shelf-life of the product?
3. Explain the effect of interactions of intrinsic and extrinsic factors on shelf-life of the product.
4. What is the flexographic printing technique? Write its advantages and disadvantages.
5. What are the performance properties of paper and paperboard packaging material?
6. Explain the use and working of heat sealing machine.
7. What are the gases used in MAP? How the share of each gas is determined?

III Answer ANY FIVE of the following. (5x4=20)

1. Enlist the advantages and disadvantages of glass containers.
2. Explain the working principle and composition of vacuum filling machine.
3. Describe the process of lamination in the production of plastic packaging material? When is lamination selected over co-extrusion?
4. Selection of packaging material for avoiding migration from packaging to food.
5. What is water vapor transmission rate (WVTR)? How to determine the WVTR of the packaging film?
6. How to manage plastic waste generated by used packaged materials?
7. Explain the factors that affect the migration of tin materials from can to food.

IV Write an essay on ANY ONE of the following (1x10=10)

1. What is the importance of the printing on packages? Explain the major techniques available along with the printing of labeling on rigid plastic container.
2. What is the role of coating on plastic by other plastic in food packaging? Explain with examples some of the major coating materials used in food packaging.
