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Question Paper Code:UA104

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Professional Elective

Agricultural Engineering

21AGV104- Storage and Packaging Technology

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 1 = 10 Marks)

1. In the history of packaging of the food industry, which among these was never a material of packaging? CO1-U
(a) Bakelite (b) Pottery and vases
(c) Iron and tin-plated steel (d) None of the mentioned
2. Which of the given reasons, is NOT a valid reason for packaging of food items? CO1-U
(a) Security and portion control
(b) Marketing and convenience
(c) Protection and information transmission
(d) None of the mentioned
3. Which of the following is a form of mis-description? CO1-U
(a) Incorrect Origin
(b) Incorrect Quantitative Description
(c) Extending the food
(d) All of the mentioned
4. Which of the following functions of food packaging does the temperature-Time Indicator (TTI) cover? CO1-U
(a) Communication (b) Containment (c) Convenience (d) Protection

5. At which temperatures (degree Celsius) should pasteurized milk shelf life samples be kept? CO1- U
 (a) -7, -11. (b) 10, 15. (c) 25, 35. (d) 30, 40.
6. Which harmful component can be found in PET bottles? CO1 -U
 (a) Lead (b) Phthalates. (c) Aluminum. (d) Styrene monomers.
7. Which of the following is an example of tertiary packaging? CO1- U
 (a) A crate of beer bottle.
 (b) A packet of dried apricot.
 (c) A box of breakfast cereal.
 (d) A shrink-wrapped pallet of orange juice.
8. HDPE bottles for packaging of milk are pigmented so as to provide protection against _____. CO1 -U
 (a) Air. (b) Light. (c) Humidity. (d) High temperature.
9. The aluminum-copper alloys typically contain between _____% copper. CO1- U
 (a)15-30 (b) 20-30 (c) 10-20 (d) 2-10
10. Chromium is added to aluminum alloy to _____. CO1 -U
 (a)prevent recrystallisation (b) increase impact strength
 (c) increase abrasion resistance (d) prevent cracking

PART – B (5 x 2= 10 Marks)

11. What are different types of spoilage? CO1-U
12. What are direct damages caused by storage? CO1-U
13. What is edible packaging? CO1-U
14. What are the effects of relative humidity on crops? CO1-U
15. What are main types of glass packaging? CO1-U

PART – C (5 x 16= 80 Marks)

16. (a) Explain the details about the belt conveyor and chain conveyor with neat sketch, advantage and disadvantage. CO1-U (16)

Or

- (b) Explain the details about the Inclined belt separator with neat sketch, advantage and disadvantage. CO1-U (16)

17. (a) Illustrate the detail about Product development in processing of potato chips. CO1-U (16)
Or
(b) Describe the manufacturing of plastic packaging. CO1-U (16)
18. (a) What are different types of plastic used in packaging? CO1-U (16)
Or
(b) Explain the principles of storage process. CO1-U (16)
19. (a) Describe the functional properties of edible film coating. CO1-U (16)
Or
(b) Explain the metal can making process with sketches. CO1-U (16)
20. (a) Write a detailed procedure for glass and glass container manufacturing. CO1-U (16)
Or
(b) Explain in detail about food preservation at low and high temperature. CO1-U (16)

