

M.Sc. – I Semester I Examination
FOOD PROCESSING AND PACKAGING
Technology of Cereals, Legumes & Oilseeds (MFPT-201)
Subject Code: 91605
Question Bank

Q.1 Define the following term

[2marks]

- 1) Wheat milling
- 2) Barley malting
- 3) Conditioning
- 4) Two stage milling
- 5) Antinutritional factors
- 6) Corn wet milling
- 7) Kilning
- 8) Polishing
- 9) Protein isolate
- 10) One stage milling
- 11) Tempering & Conditioning
- 12) Fortification
- 13) Protein concentrates
- 14) Degumming
- 15) Fortification
- 16) Parboiling of paddy
- 17) Malting
- 18) Falling number
- 19) Neutralization
- 20) Solvent extraction
- 21) Farinograph
- 22) Groat

- 23) Oatmeal
- 24) Germination
- 25) Diastatic Power

Q.2 Answer the following

[6Marks]

- 1) Explain in detail about modern rice milling.
- 2) Describe in detail about Corn wet milling process.
- 3) What are the types of wheat? How they are classified?
- 4) What are pulses? Describe dry milling method of any pulses.
- 5) What are the types of Corn? How they are classified?
- 6) Write a note on wheat milling
- 7) What is HFCS? Describe the HFCS production in detail.
- 8)
- 9) What are oilseeds? Describe oil extraction process in detail.
- 10) What is the use of barley malt? Explain barley malting process in detail.
- 11)
- 12) What is Falling number test? Describe Chemical, physical methods for testing of flour.
- 13) What are oats? Explain in detail oats processing
- 14) Elaborate the process of barley malting and uses of malt.
- 15) Describe in detail Oil refining methods in detail
- 16) What are pulses? Describe dry milling method of any pulses.
- 17) What are the types of Corn? How they are classified?
- 18) What is protein concentrate? Describe method of preparation of protein concentrate.

Q.5 Answer the following

[4marks]

- 1) Write a note on parboiling of rice
- 2) Describe in detail about corn dry milling.

- 3) Write a note on products & by products of wheat.
- 4) Explain in detail about production of High Fructose Corn Syrup
- 5) Write a note on rice bran stabilization and oil extraction.
- 6) Describe in detail pulses wet milling process
- 7) Elaborate the process of barley malting and uses of malt.
- 8) What are oats? Explain in detail oats processing
- 9) What are oilseeds? Describe oil extraction process
- 10) What are the types of wheat? How they are classified?
- 11) What are oats? Explain in detail oats processing.
- 12) Describe in detail pulses wet milling process.
- 13) What is waxy corn? Describe in detail types of corn & how they are classified?
- 14) What is protein isolate? Describe method of preparation of protein isolate?
- 15) Write a note on parboiling of rice & enlist their advantages & disadvantages.
- 16) What is protein concentrate? Describe method of preparation of protein concentrate.
- 17) Write a note on rice bran stabilization and oil extraction
- 18) Explain in detail toxic constituents present in pulses.
- 19) Write a note on parboiling of rice.
- 20) What is HFCS? Describe the HFCS production in detail.
- 21) Write a note on products & by products of wheat.
- 22) What are the different products obtained from rice bran? Write a note on rice bran stabilization and oil extraction.
- 23) How flour color is analyzed? Explain in detail about chemical methods of flour analysis.
- 24) Describe in detail corn dry milling process.
- 25) Describe in detail about Corn wet milling process.
- 26) Explain in detail about modern rice milling.

- 27) What are oilseeds? Describe different methods of oil extraction in detail.
- 28) Describe oil refining process in detail with flowchart.
- 29) Explain in detail rheological properties of wheat flour
- 30) Describe roller milling system of wheat,rice with diagram & flowchart.

M. Sc. I Semester II Examination _____
Food Processing and Packaging
Food Plant Organization and Layout
(MFPT 202)
Subject code: 91606

Q1. Answer the following terms. / Define (2 Mark)

1. State the types of plant layout.
2. Define plant design
3. Input of process Scheduling
4. Draw a symbols of tanks used in food plant.
5. Draw S- type flow pattern.
6. Scheduling algorithm
7. State plant layout problem.
8. Define Pilot plant
9. 3) Define Plant Layout
- 10.4) Define Productivity
- 11.5) State the types of plant layout.
12. What is plant design
13. State the types of flow pattern.
14. Draw symbol of valves used in food plant.
15. Define Plant Layout
16. Define Productivity
17. State any two characteristics of suitable construction material.
18. Role of stainless steel in food plant.
19. Draw symbol of conveyor used in food plant.
20. State types of Stainless steel used in food industry.

Q2. Answer the following

(6 Mark)

- 1) Draw flow chart for food plant design .Draw a layout of milk processing plant.
- 2) Which are the food processing unit operation? How do prevent product contamination of food product?
- 3) Explain prefeasibility stage of food plant.
- 4) Explain technical analysis and financial analysis of food pant.
- 5) What is illumination and ventilation?
- 6) Explain in detail types of material used in food plant construction and its characteristics
- 7) Explain the role of experimental pilot plant.
- 8) What is plant size? Which are the factors responsible plant size?
- 9) What is layout design procedure?
- 10)What are the factors responsible plant layout?
- 11)Explain any two basic types of plant layout.
- 12)What are the types of material used for constructing the food equipment?
- 13)Explain equipment selection and capacity determination of food plant.
- 14)Explain technical analysis. Draw a layout of dairy plant**
- 15)State the basic types of food plant layout. Draw a fixed position layout
- 16)Explain illumination and ventilation in food plant**
- 17)Draw flow chart for food plant design. Draw layout of oil seed processing plant.
- 18)Which are the food processing unit operation? How do prevent product contamination**
- 19)Draw flow chart for food plant design .Draw a layout of cold storage processing plant
- 20) How do determine capacity of food plant?

Q3. Attempt the following / Short Notes (4 Mark)

1. Explain plant design specification.
2.) Explain plant design situations
3. Explain plant design sanitations and deterioration
4. Objective and advantages of plant layout.
5. Process scheduling
6. Process water
7. When does a food plant location arise?
8. What are the benefits of Process scheduling?
9. Types of Lamps used in Food Plant
10. Sensitivity and Risk analysis
11. Plant location Strategies
12. Electricity for Food plant
13. Illumination in food plant.
14. Process scheduling
15. Technical analysis
16. Food plant Effluents
17. What are the regulatory requirements of food industry.
18. Draw symbols of Storage Vessel, Mixing and Comminution.
19. When does a food plant location arise?
20. What are the advantages of good layout?
21. What are the types of material used for constructing a food equipment?
22. Explain plant design specification.
23. Explain regulatory requirements of food industry.

24.Explain plant design sanitations and deterioration

25.Explain Objectives of plant layout.

26.Process scheduling of food plant

27.Process water for food processing

**M. Sc. I Semester II Examination
Food Processing and Packaging
Packaging Laws and Regulations
(MFPT 203)**

Q. 1 Answer the following Question. (One Sentence) (2 Mark)

1. Enlist ministry involves in packaging laws.
2. Define primary packaging with example.
3. Which packaging material is applicable under REACH?
4. Write down establishment year and full form of FPO.
5. What is environmental pillar?
6. What is traditional packaging?
7. Enlist packaging regulations.
8. What is EOPO?
9. What is AGMARK?
10. Define secondary packaging with example.
11. What is FPO?
12. Write down establishment year and full form of SWMA.
13. Enlist packaging laws.
14. What is economic pillar?
15. What is REACH?
16. What is sustainable packaging?
17. Write down establishment year and full form of PFA.
18. What is packaging?
19. Define tertiary packaging with example.
20. What is MFPO?
21. Write down two main benefits of CE marking.
22. What is sustainability development?

23. What is CE marking?

24. What is social pillar?

25. What is BIS?

Q.2 Answer the following Question. (Long Answer) (6 Mark)

1. Explain in brief about CE marking?
2. Enlist the labelling requirement and declaration in detail.
3. Explain International Maritime Dangerous Goods in detail.
4. Explain component of sustainability development.
5. Explain in detail various storage requirements for meat, poultry and sea foods.
6. Explain Food Safety and Standards (Packaging) Regulations in detail.
7. Explain in detail specific requirements for primary food packaging.
8. Write down in detail about relevance of sustainable development in packaging sector.
9. Draw a table on any five commodities and their quantity declared and maximum permissible limit?
10. Explain various storage requirements for dairy products in detail.
11. Enlist and explain pillars of sustainability development.
12. Explain labelling regulation in detail.
13. Draw a table of food/laws regulation and ministries involved.
14. Explain in detail various storage requirements for dry products.
15. Enlist the packaging laws and regulation and explain SWMA in detail?
16. Explain in detail sustainable development in packaging
17. Explain label declaration in detail.
18. Enlist and explain types of sustainability development.

Q.3 Answer the following Question. (Short Answer) (4 Mark)

1. Describe in brief Standard Weight and Measure Act.
2. Short note on storage condition of refrigerated product
3. Explain economic pillar in brief.
4. Write short note on traditional packaging vs. Sustainable packaging
5. Explain in brief sustainability.
6. Write short note on design for recycling
7. Explain in brief BIS.
8. Describe in detail various storage requirements for Frozen foods.
9. Write short note on replace plastic with bioplastics.
10. Write down short note on social pillar.
11. Describe in brief Fruit Product Order.
12. Explain IS specification with respect to packaging and packaging material.
13. Write down the introduction about sustainability development.
14. Explain about ISO 14000 environment management system.
15. Give brief information about storage requirement.
16. Explain in brief PFA.
17. Explain silent feature of packaging order under EOPO.
18. Write down the short note on reduce and remove packaging.
19. Describe in brief storage condition for frozen products.
20. Write short note on design for reuse.
21. Explain in brief AGMARK.
22. Write short note on increase recycled content
23. Describe about specification of raw material used.
24. Write short note on FPO

- 25.Explain in brief Meat Food Product Order.
- 26.Explain REACH in brief.
- 27.Write short note about packaging requirement under PFA
- 28.Describe environmental pillar in brief.
- 29.Explain sustainability development
- 30.Write short note on MFPO

M. Sc. I Semester II Examination _____
Food Processing and Packaging
Instrumentation and Process Control
(MFPT 204)

Q. 1 Answer the following Question. (One Sentence) (2 Mark)

1. Define Instrumentation
2. What are transducers? Give 2 examples.
3. RS stand for
4. Fuzzy logic was first introduced by whom and in which year?
5. What is change of state sensors?
6. TF stands for
7. Define Laplace transform.
8. Define Absolute stability.
9. What is SCADA?
10. Define Transfer function.
11. What is specific gravity?
12. Define Relative stability.
13. Define DAS.
14. Give 2 uses of candy thermometer.
15. What is analyte? Give example.
16. LT stands for
17. Define Routh stability criterion.
18. Define Temperature.
19. Give formula for specific gravity.
20. BD stands for
21. Define Block diagram.
22. What is pyrometer?

23. Give 1 drawback of PLC.

24. RSC stands for

25. What is process control

Q.2 Answer the following Question. (Long Answer)

(6 Mark)

1. Define Data Logger. Explain in detail with applications.
2. Explain open and close loop system.
3. Define Humidity. Explain the working of impedance type hygrometer with diagram.
4. Explain in detail absolute and relative stability.
5. Explain laplace transform.
6. Explain in brief the concept of biosensors.
7. Give review on laplace transform.
8. Explain in brief measurement of humidity with appropriate diagrams.
9. Explain in brief measurement of specific gravity with appropriate diagrams.
10. Distinguish between open and close loop system.
11. Explain in detail general concepts of stability.
12. Explain in brief biosensors.
13. Explain in detail about Laplace transform.
14. Explain in detail measurement of temperature. Explain any 2 thermometers with proper diagram.
15. Explain in brief measurement of humidity. Explain any 2 hygrometers with proper diagram.
16. Explain in detail about signal flow graph reduction techniques.
17. Describe in detail fuzzy logic and neural network.

18.Explain in detail about data loggers.

Q.3 Answer the following Question. (Short Answer)

(4 Mark)

1. What is Flow? Explain working of rotameter with appropriate diagram.
2. Write short note on stability.
3. Explain in detail measurement of specific gravity.
4. Describe block diagram reduction technique.
5. Explain in detail programmable logic controller with 2 advantages and drawbacks.
6. Write short note on Laplace transform.
7. Explain routh stability criterion.
8. Explain the Difference between Neural Network and Fuzzy Logic
9. Give short note on liquid filled thermometer.
- 10.Explain transfer function.
- 11.Explain in detail measurement of pressure.
- 12.Write short note on direct digital control.
- 13.Explain in detail neural network.
- 14.Write short notes on alcohol thermometer.
- 15.Give short note on cooking thermometer.
- 16.Define transducers. Explain venturi flow meter.
- 17.Write short note on Fuzzy logic.
- 18.Explain Advantages of using PLC's.
- 19.Write short note on dew point recorder.
- 20.Describe supervisory control and data acquisition system.
- 21.Explain alcohol thermometer with appropriate diagram.
- 22.Write short note on Neural Network.

23. Describe stability general concept.
24. Explain the concept of direct digital control.
25. Write short note on close loop system.
26. Describe the electronic thermometer.
27. Write short note on transducers.
28. Write short note on flow measurement.
29. Write short note on Routh stability criterion.
30. Explain the Difference between Neural Network and Fuzzy Logic