

PH 591.4

Reg. No:

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St Aloysius College (Autonomous)
Mangaluru
Semester IV – P.G. Examination – M.Sc. Food Science and Technology
April- 2019

POST HARVEST TECHNOLOGY OF PLANTATION CROPS

Time: 3 Hours

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Max. Marks: 70

I Answer any SIX of the following:

(6x3=18)

1. Give difference between oleo resin and essential oil.
2. Classify spices based on economic importance.
3. How adulteration in chili powder is detected?
4. List out the products and by products of cashew.
5. What is conching?
6. Write short note on desiccated coconut.
7. Name the value added products of coffee.

II Answer any FOUR of the following:

(4x7=28)

8. Explain on fermentation and roasting technique of coffee.
9. What is VCO? Explain in detail.
10. Explain quality evaluation and grading in tea.
11. Give an account of volatile molecule in spices.
12. Discuss on technology in processing of chocolate.

III Answer any TWO of the following:

(2 x12=24)

13. Describe the post harvesting process of ginger and turmeric.
14. Describe the manufacturing of different types of tea and account on the tea products.
15. Give the value added products of the following and processing for one of the product
a) Mint b) Vanilla c) Cashew

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Semester IV – P.G. Examination – M.Sc. Food Science and Technology

April- 2019

FOOD PACKAGING

Time: 3 Hours

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Max. Marks: 70

I Answer any **SIX** of the following.

(6x3=18)

1. Explain the mechanical properties of paper used for Packaging.
2. Define a food Package and mention the barrier properties.
3. Briefly describe classification of polymers.
4. Describe packaging requirements for milk and diary products.
5. Differentiate between thermo- plastics and thermosets.
6. Mention the functions of packaging.
7. Differentiate between active packaging and intelligent packaging.

II Answer any **FOUR** of the following.

(4x7=28)

8. Explain sources of toxic materials from packaging material and brief about the migration of toxins into food materials.
9. Explain different types of papers used for food packaging.
10. Explain the application of nanoparticles in food packaging.
11. Explain in detail aseptic packaging systems in food packaging.
12. Write a note on Packaging materials used for microwavable foods.

III Answer any **TWO** of the following.

(2 x12=24)

13. Briefly explain vacuum and modified atmosphere packaging systems.
14. Explain in detail manufacture of glass containers and its properties.
15. With a neat labelled diagram explain blow molding process of thermoplastics.

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FOOD SAFETY AND QUALITY CONTROL

Time: 3 Hours

Max. Marks: 70

I Answer any SIX of the following:

(6x3=18)

1. What is food adulteration? Name two adulterants usually present in
 a) milk b) Vegetable oil c) spices.

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2. Differentiate between food quality and food safety.
3. Write a note on ISO 9000.
4. Write a note on statistical quality control in food industry.
5. Write briefly the different methods of evaluation of food adulterants.
6. List down the principles of GMP.
7. What are food hazards? Comment on how food hazards affect food safety?

II Answer any FOUR of the following:

(4x7=28)

8. Write short notes a) Organic Foods, b) Nutritional labeling
9. Explain briefly the role and activities of Codex Alimentary Commission?
10. Write a note on a) microbial quality control and b) pest control
11. Discuss on Total Quality Management system.
12. Discuss the current challenges to food safety?

III Answer any TWO of the following:

(2 x12=24)

13. Give a detailed account on the principles and benefits of HACCP.
14. What is ISO 22000? Discuss about the importance and salient features of ISO 22000?
15. Discuss the different types, Principles and steps involved in ELISA assays.

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Time: 3 Hours

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Max. Marks: 70

I Answer any SIX of the following:

(6x3=18)

1. What are the advantages of addition of chicory in coffee?
2. What is instant tea?
3. What are curcuminoids?
4. How adulteration in chili powder is detected?
5. Different sources for extraction of the carotenoids.
6. What is retting process?
7. What is fermented and non fermented tea?

II Answer any FOUR of the following:

(4x7=28)

8. Explain on grading of Tea.
9. Explain on fermentation and roasting techniques of coffee.
10. Describe how cocoa is processed for cocoa –powder and cocoa butter?
11. Comment on the health benefits of spices.
12. Give an account of volatile molecule in spices.

III Answer any TWO of the following:

(2 x12=24)

13. Describe the process manufacture of chocolate
14. Explain the methods of extraction of essential oils form spices. What are the benefits of essential oil over raw spices?
15. Explain technology in processing of Decaffeinated tea.

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FOOD PACKAGING

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Max. Marks: 70

I Answer any SIX of the following:

(6x3=18)

1. Write a note on migration studies for synthetic packaging.
2. Write a simple note on Polyhydroxyalkanoates .
3. Differences between active packaging and smart packaging with examples.
4. Mention different materials used in retort pouch and their purpose.
5. Write a note on Nano – composite packaging materials.
6. Why there is a need for recycling food packaging materials?
7. What does the acronym MAP stand for in food packing? What are the gases used in, MAP?

II Answer any FOUR of the following:

(4x7=28)

8. Explain about packaging requirement for frozen foods.
9. Give the properties of the following plastic materials.
 - a) Polyethylenes
 - b) Polypropylenes
 - c) PVC
10. Write in detail about biodegradable packaging materials.
11. Explain extrusion and blow molding processing in thermoplastic polymers.
12. What are the different steps used in metal can making process?

III Answer any TWO of the following:

(2 x12=24)

13. Explain safety considerations in food packaging and also types of food safety problems associated with these packaging systems.
14. Write in detail the major testing methods to evaluate packaging systems.
15. Explain in detail about edible films and coatings.

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(6x3=18)

I Answer any SIX of the following:

1. What are food hazards? Comment on how hazards affects food safety?
2. Distinguish between food quality management and food quality assurance.
3. Write a note on statistical quality control in food industry.
4. What is food adulteration? Name two adulterants of a) milk b) vegetable oil and c) spices.
5. Write the salient features USFDA.
6. Differentiate between GLP and GHP ?
7. Abbreviate FSSAI and role of FSSAI in Food Safety.

II Answer any FOUR of the following:

(4x7=28)

8. Write short notes a) organic foods, b) nutritional labeling
9. Explain the salient features of food traceability system?
10. Discuss the factors affecting microbial growth?
11. Explain the salient features and role of BIS and AGMARK in food quality control?
12. Describe the different methods of evaluation of food adulterants and toxins.

III Answer any TWO of the following:

(2 x12=24)

13. Describe briefly the PCR method used for the enumeration of microorganism in food?
14. Give a detailed account on the current challenges to food safety.
15. Explain briefly the role and important activities of Codex Alimentarius Commission?
