PH 811.1

Reg. No. ☐☐☐☐☐☐

St Aloysius College (Autonomous)
Mangaluru

Semester I – P.G. Examination – M.Sc Food Science ,Nutrition and Dietetics

February 2021

FOOD MICROBIOLOGY

Time: 3 hrs.

Max Marks: 70

I. Answer any SIX of the following: (6x3=18)

1. Differences between prokaryotes and eukaryotes

2. Robert Koch's postulates

3. Microbial hazards

4. Food spoilage,

5. Listeriosis

6. PCR

7. Microbes of milk and meat

II. Answer any FOUR of the following: (4x7=28)

8. Describe the factors affecting the growth of microorganisms.

9. Explain the principle and methodology for radioimmunoassay and ELISA.

10. Discuss the important features of food poisoning.

11. Give a detail note on HACCP system.

12. Explain the classification of microorganisms in detail.

III. Answer any TWO of the following: (2 x12=24)

13. Describe the bacterial and non-bacterial agents of food borne illness.

14. Explain the microbiological criteria for dairy foods, processed foods, fish and meat products.

15. Discuss the methods for isolation and detection of microorganisms.

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St Aloysius College (Autonomous)
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Semester I – P.G. Examination – M.Sc Food Science ,Nutrition and Dietetics
February 2021
PRINCIPLES OF FOOD PROCESSING AND PRESERVATION

Time: 3 hrs.   Max Marks: 70

I.   Answer any SIX of the following: **(6x3=18)**

1. Write note on principles of canning of foods.

2. Write a short note on UHT processing.

3. Write a note on IMF?

4. List the factors influencing oil uptake during frying.

5. Write a short note on changes in food during dehydration and concentration?

6. Write a short note on food additives.

7. Mention the class I and class II preservatives.

II.   Answer any FOUR of the following: **(4x7=28)**

8. Explain about thermal death curve.

9. Discuss on frying processes.

10. Describe the drying curves.

11. Explain about changes in food during freezing and frozen storage.

12. Discuss in detail about household preservation method

III.   Answer any TWO of the following: **(2 x12=24)**

13. Elaborate on food concentrates and the methods involved.

14. Explain in detail about emulsification process in food processing.

15. Discuss in detail about principle applications of Hurdle technology in food processing.

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Semester I – P.G. Examination – M.Sc Food Science ,Nutrition and Dietetics

February 2021

FOOD CHEMISTRY

Time: 3 hrs.

Max Marks: 70

I. **Answer any SIX of the following:** (6x3=18)

1. Define hydrolysis of lipids.
2. What is food fortification?
3. Write the short note on classification of carbohydrates.
4. Write a note on importance of food chemistry.
5. What is resistant storch. Give example.
6. Write a note on bioavailability of calcium and phosphorus.
7. Define Protein efficiency ratio (PER) and Biological value (BV).

II. **Answer any FOUR of the following:** (4x7=28)

8. Write a note on: Natural and synthetic food colorants.
9. Write short notes on water activity, moisture sorption isotherm, molecular mobility and food stability.
10. Describe the chemical properties of lipids and give an account of safety use of oils and fats in food formulations.
11. Explain Browning reaction in food.
12. Discuss on functional properties of starch.

III. **Answer any TWO of the following:** (2 x12=24)

13. Briefly describe various methods for the modification of fats and oils.
14. Explain in detail denaturing process in protein.
15. Write a detailed note on food flavourants and various technology used for flavour retentions.

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Semester I – P.G. Examination – M.Sc Food Science ,Nutrition and Dietetics

February 2021

BASICS HUMAN PHYSIOLOGY

Time: 3 hrs.   Max Marks: 70

I. Answer any <u>SIX</u> of the following   6 × 3 = 18

1. Write a short note on haemoglobin.

2. Define a synapse. Draw and explain its importance.

3. Write a short note on adrenal glands.

4. Define B.P. List the factors governing B.P.

5. Draw the structure of bone and list out its functions.

6. Write about the role of hunger center in regulation of food intake.

7. Give the structure and functions of glomerulus.

II. Answer any <u>FOUR</u> of the following   4 × 7= 28

8. Explain cell membrane diffusion with respect to transport of ions.

9. Discuss on the disease: Diabetes mellitus.

10. Explain the structure of digestive system.

11. Define blood indices. Explain the use of blood for investigating and diagnosis of specific disorders.

12. List out the hormones secreted by the pituitary gland. Describe the actions and abnormalities of anterior pituitary hormones.

III. Answer any <u>TWO</u> of the following   2 X 12 = 24

13. Describe the organization of skeletal muscles and add a note on the physiology of muscle contraction.

14. With a neat illustration explain the structure of neuron. Add a note on conduction of nerve impulse

15. Discuss the transport of gases with illustration.

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