12/1/26

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Food & Nutrition

[Time: 3 Hours] [Max. Marks: 80]

VI SEMESTER

PAPER I - (Nutritional Biochemistry II)

QP CODE: 8680

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions **10X1 = 10 Marks**

1. Describe the sources, daily requirements, functions and deficiency manifestations of Vitamin D.

Short Essays: (Any – 8) **5 X 8 = 40 Marks**

2. Describe transcription and post-transcriptional processing in eukaryotes.
3. Describe the biochemical role of Vitamin K
4. Name the thyroid hormones. Mention their functions.
5. Classification of proteins based on biological functions with examples.
6. Describe the sources, daily requirements and deficiency of pyridoxine.
7. Functions of vitamin A.
8. Describe the functions of thiamine.
9. Describe general mechanisms of Hormone action.
10. Explain the beriberi, its types and their features.

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. What are essential amino acids? Name them.
12. What is avidin? Mention its biomedical importance.
13. Anti-oxidant role of Vitamin E.
14. What are the differences between water-soluble and fat-soluble vitamins?
15. Write a note on protein malnutrition
16. What is the deficiency disease produced by niacin deficiency?
17. Note on denaturation of proteins.
18. What are the deficiency manifestations of folic acid?
19. Clinical manifestations of scurvy
20. What is Bence Jones's protein? Write about its clinical significance and how it can be detected in urine.
21. State the methods available for DNA repair.

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VI SEMESTER

PAPER II - (Quality control II)

QP CODE: 8681

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions **10X1 = 10 Marks**

1. Explain principles of food quality control.

Short Essays: (Any – 8) **5 X 8 = 40 Marks**

2. What are samples? Write a note on sampling methods.
3. What are food additives? Explain.
4. What is food fortification? Explain its importance.
5. What is sensory evaluation? Explain sensory characteristics of food.
6. Write a note on different types of control in quality control.
7. Write a note on colouring agents.
8. Write briefly about toxicants occurring in food.
9. Explain in detail about types of tests in food quality evaluation.
10. Brief about industrial quality control of foods.

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. What are synthetic flavours?
12. What are non-nutritional constituents of food?
13. Explain texture evaluation.
14. Define food quality & quality control.
15. What are bacterial food poisoning?
16. Give one sensory test used for evaluation.
17. What is evaluation card?
18. Explain magnetic separation method.
19. Write a note on leavening agents.
20. What is hedonic scale? Explain.
21. What are raw materials? Explain need of its quality control.

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VI SEMESTER

PAPER III - (Chemistry IV)

QP CODE: 8682

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions **10X1 = 10 Marks**

1. What is Chromatography? Explain the Principles and their applications of chromatography techniques.

Short Essays: (Any – 8) **5 X 8 = 40 Marks**

2. Derive the Nernst Equation?
3. Explain Biological oxygen demand.
4. Explain stereoisomerism and its types.
5. Write the properties and applications of Polypropylenes.
6. Write a note on chemical properties and applications of Indole?
7. What is Stereoisomerism; explain the types of stereoisomerism in detail.
8. What are the three stages of wastewater treatment?
9. What is Reference electrode and draw the structure of Reference Electrode?
10. Explain the structure and properties of polyethylene

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. Write a note on column Chromatography?
12. Write a short note on Polysterene.
13. What are purines and pyrimidines? Give examples.
14. What are radioactive wastes?
15. Write a note on Chemical Oxygen Demand.
16. Write a note on equilibrium constant and energy.
17. Brief about Alkaloids with examples.
18. What are the control measures of air pollution?
19. Lechatelier's principle and its applications
20. What is polymerization? Write types of polymers.
21. Write a note on soil pollution.

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pm

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VI SEMESTER

PAPER IV - (Therapeutic Nutrition II)

QP CODE: 8683

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions — 10X1 = 10 Marks

1. Give a brief introduction on Cancer development along with its risk factors.

Short Essays: (Any – 8) — 5 X 8 = 40 Marks

2. Give dietary management for Hypercholesterolemia.
3. Write a note on types of tumors & give its detailed classification.
4. Explain foods to be allowed & restricted in Gout.
5. What is Epilepsy? What are its clinical features and etiology?
6. Explain role of fat in development of Atherosclerosis.
7. Write a note on symptoms of specific cancers.
8. Write a note on Galactosemia.
9. Explain Phenylketonuria dietary management.
10. Describe clinical features and risk factors for CHD.

Short Answers: (Any – 10) — 3 X 10 = 30 Marks

11. Explain lifestyle modifications to manage Hypertension.
12. What are the feeding problems seen in cancer?
13. Define gout and list out its symptoms.
14. Explain short term and long term side effects of ketogenic diet.
15. Explain common disorders of CHD.
16. What are metabolic alterations seen in cancer.
17. Explain inborn errors of metabolism.
18. List out foods rich & low in galactose.
19. What are nutritional & non-nutritional neurological disorders?
20. Explain role of physical activity in preventing CVD.
21. Explain stages of hypertension.

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VI SEMESTER

PAPER V - (Food Microbiology II)

QP CODE: 8684

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions **10X1 = 10 Marks**

1. Explain in detail the factors affecting the growth of microorganisms in food, fruits and vegetables.

Short Essays: (Any – 8) **5 X 8 = 40 Marks**

2. Suggest some examples of food borne pathogens other than bacteria with causative agents & disease they cause briefly.
3. Enlist the symptoms of food borne botulism and salmonella.
4. Explain fitness and unfitness of food.
5. Contamination and kinds of organisms causing spoilage of milk and milk products.
6. General principles underlying spoilage of food.
7. Give an account on botulism.
8. Explain various factors affecting food preservation
9. Water borne diseases bacterial, viral and protozoan.
10. Give an account of food spoilage by *Staphylococcus aureus.*

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. Explain the role of pH on the growth of microorganisms.
12. Define the terms: Food poisoning, Food borne infection.
13. Write a note on the major sources of microbial contamination of food.
14. Brief on contamination of poultry.
15. What are the effects of food composition on the spoilage process?
16. What is blanching? What is its effect on food?
17. What do you mean by cold sterilization?
18. What is water microbiology? Examples of water micro flora.
19. Contamination of milk and milk products.
20. Write a short note on food microbiology.
21. Write a note on sewage disposal. Give examples of important microbes involved.

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VI SEMESTER

PAPER VI - (Food Preservation II)

QP CODE: 8685

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions **10X1 = 10 Marks**

1. Explain different techniques used for food preservation.

Short Essays: (Any – 8) **5 X 8 = 40 Marks**

2. Write the advantages of Microwave heating.
3. What are different methods involved in thermal treatment.
4. Techniques involved in preservation by use of low temperature.
5. Mention chemical and physical changes in food preserved by freezing techniques.
6. Principle of high pressure processing.
7. Types of blanching techniques.
8. General principles involved in canning.
9. Classification of chemical preservatives.
10. Equipment used for canning.

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. Define pasteurization.
12. Food used in canning techniques
13. List out organic preservatives.
14. Microwave heating technique.
15. Dry heating methods.
16. Thawing.
17. Write the disadvantages of food preservation by heating.
18. Refrigeration methods.
19. Natural chemical preservatives.
20. Rotor dryer.
21. Define salting & its advantages.