

BSC
Food & Nutr
2024

JAN-2024

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 in detail the classification and biomedical importance of Amino acids.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Describe transcription and post-transcriptional processing in eukaryotes.
3. Describe the functions of Vitamin D
4. Describe the biochemical role of Vitamin K.
5. Describe the general mechanisms of hormone actions.
6. Classification of proteins based on biological functions with examples.
7. Describe the functions of thiamin.
8. Describe the sources, daily requirements and deficiency of niacin.
9. Describe the denaturation of DNA and mention its significance.
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. Mention the causes and features of vitamin D excess.
13. Clinical manifestations of scurvy.
14. What is the clinical use of protein precipitation?
15. Write a note on protein malnutrition.
16. Deficiency manifestations of Vitamin C
17. Write the differences between water-soluble and fat-soluble vitamins.
18. Define electrophoresis. Name the fractions obtained in the serum protein Electrophoresis.
19. What is Bence Jones's protein? Write about its clinical significance and how it can be detected in urine.
20. What are the deficiency manifestations of folic acid?
21. Anti-oxidant role of Vitamin E.

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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. What is food fortification? Explain with its classification and examples.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain types of tests involved in sensory evaluation.
3. Explain the principles of quality control.
4. What are colouring agents? Explain its types.
5. Write a note on microbial toxicants in food.
6. Explain importance of conducting sensory evaluation tests.
7. What is the role of quality control in food products?
8. Write a note on flavouring agents.
9. Explain quality control in fruits, vegetables & nuts?
10. Write a note on sample and sampling methods.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What is industrial quality control?
12. Note on leavening agents.
13. What is texture evaluation?
14. What are naturally occurring toxicants in food products?
15. What are food additives? Why are they used?
16. What is the importance of food fortification?
17. How to prepare an evaluation card?
18. How does contamination occur in processing?
19. Note on bacterial food poisoning?
20. What is hedonic scale? Why is it useful?
21. List out types of additives with example.

JRN - 2024

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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 Nernst Equation? Derive the Nernst Equation and their various applications?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Write the various properties and applications of Polyethylene terephthalate?
3. Explain Biological function of alkaloids with examples.
4. What is Stereoisomerism; explain the types of stereoisomerism in detail.
5. What is polymerization? Write the different types of polymers.
6. Conformational isomerism and analysis of ethane
7. What is the role of pesticides and fertilizer in the role of soil pollution?
8. Write a note on Chemical oxygen demand and Biological oxygen demand.
9. Explain ion exchange chromatography and their applications
10. What is Reference electrode and draw the structure of Reference Electrode?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Given an account of radioactive compounds.
12. Write a note on properties of Polystyrene.
13. What are purines and pyrimidines? Give examples.
14. Lechatelier's principle and its applications
15. What is difference between LDPE and HDPE?
16. Write a note on Paper Chromatography.
17. Brief about industrial effluents and its effects.
18. What are the control measures of Air pollution?
19. Add a brief note on Column Chromatography.
20. Write a note on treatment of sewage.
21. Write a note on Water Pollution.

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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. How is gene involved in causing metabolic disorder? Give an example of such disorder in detail.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Write a note on Hypertension.
3. Explain in detail about Cancer development and its characteristics.
4. Describe metabolic changes in Gout and its dietary management.
5. Write a note on Neurological disorders.
6. What is the role of Cholesterol, Saturated fatty acids & Trans fatty acids in CVD?
7. Explain Carcinogenic foods and role of food in cancer prevention.
8. What is Galactosemia? Explain diagnosis & etiology for the same.
9. Define Epilepsy and give its dietary management.
10. What is Xanthoma? Explain its complications.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Explain DASH diet.
12. Define tumor and its types.
13. List out symptoms of gout.
14. Define phenylketonuria and give its prognosis.
15. Give dietary guidelines for CHD.
16. What are nutritional problems of cancer therapy?
17. List out foods allowed & not allowed in gout.
18. Give etiology for epilepsy.
19. List out short term and long term effects of ketogenic diet.
20. Explain role of physical activity in Heart diseases.
21. List out dietary & non-dietary factors for cancer.

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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. Give an account on food spoilage specific to Staphylococcal poisoning, botulism, Shigellosis and salmonellosis.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Write about microbiology of sewage.
3. Explain fitness and unfitness of food.
4. Write a brief note on food borne infections. Explain the role of microorganisms in food borne diseases.
5. Explain the different steps in the purification of water.
6. Justify the statement “role of food hygiene”.
7. General principles underlying spoilage of food.
8. Water borne diseases bacterial, viral and protozoan.
9. Write about the role of microorganisms in food spoilage.
10. Write a note on contamination and spoilage of fats and oils.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What are food borne infections? Give examples.
12. Spoilage of milk products.
13. Write a note on air borne infections.
14. Brief on contamination of poultry.
15. Define filtration and sedimentation.
16. What is food poisoning?
17. Write a note on contamination of meat and fish.
18. What is water microbiology? Examples of water micro flora.
19. Role of food packaging.
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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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 types of freeze drier and its application in food preservation.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Write in short about principle of food preservation.
3. What are different methods freeze drying treatment?
4. Disadvantages of chemical preservatives.
5. What are different methods of blanching?
6. Different component of freeze drier.
7. Chemical changes in preserved food items.
8. Heat technique used for food preservation.
9. Effect of cold temperature on microbial growth.
10. Bottling of any one fruit and vegetable.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Effects heat on texture.
12. Food used in canning techniques.
13. List out organic preservatives.
14. Types of canning.
15. Dry heating methods.
16. Write about the sterilization method in food preservation.
17. Health impacts use to excessive use of chemical preservatives.
18. Principle of high heating of food preservation.
19. Blanching method.
20. Rotor dryer.
21. Define Lyophilization.