

**Seat  
No.**

**Set P**

**P. G. Diploma in Dietetics and Nutrition (Semester-I) (New) (CBCS)**  
**Examination: October/November - 2025**  
**Nutritional Biochemistry (DDN102)**

Day & Date: Friday, 31-10-2025  
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

**Instructions:** 1) Q.Nos.1 and 2 are compulsory.

2) Attempt any three questions from Q.No.3 to Q.No.7  
3) Figures to the right indicate full marks.

**Q.1 A) Choose correct alternative. (MCQ)**

10

8) Phenylketonuria is caused by the absence of the enzyme \_\_\_\_

- Phenylalanine hydroxylase
- Phenylalanine oxidase
- Phenylalanine glutamate
- Phenylalanine pyruvate

9) \_\_\_\_\_ helps in the regulation of blood volume and blood pressure.

- Iron
- Iodine
- Sodium
- Phosphorous

10) When dispersed phase is liquid and dispersion medium is gas, then the colloidal system is called \_\_\_\_.

- Smoke
- Clouds
- Emulsion
- Jellies

**B) Fill in the blanks OR Write True/False.**

06

- a) Glucose is the most abundant carbohydrate in nature and is a component of all the carbohydrates.
- b) The non-starch polysaccharides that are not digestible are also called dietary fibers.
- c) Enzymes are the proteins that catalyze biochemical reactions.
- d) Proteolytic enzymes are able to tenderize meat.
- e) All the types of fruits and vegetables show enzymatic browning.
- f) Waxes are also simple lipids and are esters of fatty acids.

## Q.2 Answer the following.

16

**a)** Explain the classification and functions of proteins.

**b)** Describe in detail about the role of dietary fiber in relation to nutrition.

**c)** What are the food starches and write its applications?

**d)** Explain in detail about the nutritional classification of amino acids with examples.

### Q.3 Answer the following.

16

**a)** Write about the classification of Colloidal Systems in food chemistry.  
**b)** Explain the terms enzymes, coenzymes, cofactors and prosthetic groups.

#### **Q.4 Answer the following.**

16

- a) What are emulsions? Give example of a naturally occurring emulsion.
- b) Write short note on the nutritional applications of lipids.

### **Q.5 Answer the following**

16

**a)** What are fat soluble vitamins its sources and explain in detail and functions?

**b)** What is hydrogenation? What are the harmful health effects of partial hydrogenation of fats?

**Q.6 Answer the following** 16

- a) What is dietary fibre structurally? How are these nutritionally important?
- b) What are the main sources of carbohydrates in nature? Give two examples of carbohydrates for each source.

**Q.7 Answer the following** 16

- a) Explain and differentiate Caramelization and Maillard reaction.
- b) Differentiate between macrominerals and microminerals. Give two examples for each of these.

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**Set P**

**P. G. Diploma in Dietetics and Nutrition (Semester-II) (New) (CBCS)**  
**Examination: October/November - 2025**  
**Nutrition and Dietetics - II (DDN201)**

Day & Date: Tuesday, 28-10-2025  
Time: 11:00 AM To 02:00 PM

Max. Marks: 80

**Instructions:** 1) All questions are compulsory.  
2) All Questions carry Equal marks.  
3) Draw diagrams wherever necessary.

**Q.1 Solve any one in detail. 16**

- a) Write in details about obesity definition, causes and types of obesity. Dietary guidelines and role of exercise.  
**OR**
- b) Write in details about Hepatitis & cirrhosis. Causes, Symptoms, Dietary management. Food to be given and avoided.

**Q.2 Solve any one in detail. 16**

- a) Write in details Atherosclerosis & role of Lipids.  
**OR**
- b) Write in details about AIDS.

**Q.3 Write short answers. (Any Four) 16**

- a) Burns – Causes and remedies
- b) Role of fibers in different diseases
- c) Anemia – Causes & dietary sources
- d) Drug & Nutrient interaction
- e) Athlete's nutrition
- f) Causes & remedies for underweight

**Q.4 Write Short Notes. (Any Four) 16**

- a) What is dehydration?
- b) Write about tropical sprue.
- c) Arthritis – Causes & dietary modification
- d) Chronic renal failure
- e) Jejunectomy
- f) Write about ischemic heart disease.

**Q.5 Write in short.****16**

- a)** Define alcoholics.
- b)** Define appendicitis.
- c)** What is tropical sprue?
- d)** Define constipation.
- e)** Causes of renal calculi
- f)** Glucose tolerance test
- g)** Use of medium chain triglyceride in diet therapy
- h)** Define trauma.

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Set P

**P. G. Diploma in Dietetics and Nutrition (Sem-II) (New) (CBCS)**  
**Examination: October/November – 2025**  
**Food Science and Food Microbiology (DDN202)**

Day & Date: Thursday, 30-10-2025

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

**Instructions:** 1) Q.No.1 and 2 are compulsory.  
 2) Attempt any three questions from Q.No.3 to Q.No.7.  
 3) Figure to right indicate full marks.

**Q.1 Choose the correct alternative. (MCQ)**

**10**

- 1) Which of the following food products are the best sources of animal protein.
  - a) Milk
  - b) egg
  - c) cheese
  - d) all of the above
- 2) Direct steaming is a method of cooking in which \_\_\_\_\_.
  - a) Dry heat is applied
  - b) fat or oil is used as a cooking medium.
  - c) wet cooking recipe
  - d) indirect method of heating
- 3) At what temperature milk is heated during pasteurization.
  - a) At a temperature greater than 33.8 °C and less than 40.6 °C for at least 20 minutes
  - b) at a temperature greater than 62.8 °C and less than 65.6 °C for at least 30 min
  - c) at a temp greater than 30.8 °C and less than 35.6°C for at least 15 min.
  - d) at a temp greater than 40.8 and less than 45.6°C for at least 10 min.
- 4) Triangle test is where \_\_\_\_\_.
  - a) Three food samples are given, two of which are identical, pick up the one that is different.
  - b) the degree of discrepancy from the ideal can be estimated
  - c) food samples are ranked based on a single equality
  - d) information is provided to describe each food sample.
- 5) Which of these is not considered a nutrient?
  - a) vitamins
  - b) minerals
  - c) fiber
  - d) fats

**B) State true /false**

06

- a) At the edges in the front part of the tongue is more sensitive for salty test.
- b) Sulphur dioxide and sulphite is not suitable for the preservation of fruits and vegetables for longer time.
- c) Canning is one of the bacteriostatic method of food preservation.
- d) Food gets contaminated mainly due to the growth of microorganisms.
- e) Cereals are rich in proteins than pluses.
- f) Boiling, simmering and stewing are direct moist heat methods of cooking.

## **Q.2 Answer the following.**

16

- a) State the nutritional significance of nuts, dried fruits and Spices and condiments.
- b) Define leavening agents and explain chemical/artificial leavening agents.
- c) Preferences tests of sensory evaluation.
- d) Dry heat methods of cooking.

### **Q.3 Answer the following.**

1

- a) How the texture of food affects the food acceptance.
- b) Importance and principles of food preservation.

**Q.4 Answer the following.**

- a) Define fermentation state its advantages and uses in food preparation. 10
- b) What are the common adulterants used in tur dal, sabudana/sago and honey and how can we detect it. 06

**Q.5 Answer the following.**

- a) Write classification of food additives and explain colouring agents in detail. 08
- b) Explain changes produced in meat during cooking. 08

**Q.6 Answer the following.**

- a) Explain food Adulteration its causes and types in detail. 10
- b) Important points considered while packaging. 06

**Q.7 Answer the following.**

- a) Explain process of Canning in detail. 08
- b) Causes of food spoilage in detail. 08

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**Set P**

**P. G. Diploma in Dietetics and Nutrition (Sem-II) (New) (CBCS)**  
**Examination: October/November - 2025**  
**Sports nutrition (DDN207)**

Day & Date: Saturday, 01-11-2025

Max. Marks: 80

Time: 11:00 AM To 02:00 PM

**Instructions:** 1) Questions 1 and 2 are compulsory.  
2) Attempt any three from Q. No. 3 to Q. No. 7.  
3) Figure to the right indicates full marks.

**Q.1 A) Choose correct alternative (MCQ) 10**

- 1) MACRO ratios for anaerobic immediate energy sports performance nutrition plan
  - a) 20%fat, 25%protein,55% carbohydrate
  - b) 20%fat, 20%protein, 60% carbohydrate
  - c) 15%fat, 30%protein, 55% carbohydrate
  - d) 25%fat, 15%protein, 60% carbohydrate
- 2) MACRO ratios for anaerobic glycolytic sports performance nutrition plan
  - a) 20%fat, 25%protein,55% carbohydrate
  - b) 20%fat, 20%protein,60% carbohydrate
  - c) 15%fat,30%protein, 55% carbohydrate
  - d) 25%fat,15%protein, 60% carbohydrate
- 3) \_\_\_\_\_ accumulation during workout limits the intensity with which one can exercise muscle.

a) Pyruvic acid	b) Acetic acid
c) Lactic acid	d) None of the above
- 4) What is the lean factor percent body fat level for normal men?

a) 14-20 %	b) 20-28 %
c) 10-14 %	d) Above 28%
- 5) A contraction in which the muscle develops tension but does not shorten is termed as \_\_\_\_.

a) Isotonic	b) Isometric
c) Symmetric	d) None Of Above
- 6) A contraction in which the muscle shortens but retains constant tension is said to be \_\_\_\_.

a) Symmetric	b) Isometric
c) Isotonic	d) None Of Above



**Q.2 Answer the following:** 16

- a) Caffeine.
- b) Sodium bicarbonate.
- c) Catabolism and anabolism.
- d) Common supplements fat loss aids.

**Q.3 Answer the following:** 16

- a) Write a note in muscle fiber types and function along with muscular hypertrophy and mechanics of muscular contraction?
- b) Write note on nutrient timing?

**Q.4 Answer the following:** 16

- a) Describe digestion and absorption in athletes?
- b) Write a note on Aerobic system changes and Anaerobic system changes

**Q.5 Answer the following:** 16

- a) Write a note on anaerobic immediate energy sports and plan a sample menu.?
- b) Describe briefly importance of water and oxygen in athletes?

**Q.6 Answer the following:** 16

- a) Write a note on anaerobic oxidative sports and plan a sample menu?
- b) Write a note on Glycemic index and glycemic load with examples of low G I foods

**Q.7 Answer the following:** 16

- a) Write a note on anaerobic glycolytic energy sports and plan a sample menu?
- b) Enhancing performance by carbohydrate loading and sports benefit?