SLR-BE-2

Seat No.	

Set P

P. G. Diploma in Dietetics and Nutrition (Sem-I) (New) (CBCS)
Examination: March/April – 2025
Nutritional Biochemistry(DDN102)

Day & Date: Friday, 22-May-2025 Max. Marks: 80
Time: 11:00 PM To 02:00 PM

Instructions: 1) Q.Nos.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 A) Choose correct alternative. (MCQ) - 10

1) The essential fatty acids are called so because _____.
a) these are essential component of lipids.
b) these are not synthesised by our body and are essential for normal growth.
c) these contain unsaturated hydrocarbon chain.
d) these are constituents of all fats and oils.

2) The fats and oils can be differentiated on the basis of which of the following?
a) The source from which these are separated
b) The hydrocarbon chain attached to the fatty acid
c) Extent of unsaturation in the fatty acids constituting them.
d) The hydrocarbon chain attached to the alcohol.

3) Majority of auto immune diseases are _____.
a) cell mediated b) antibody mediated
c) macrophage mediated d) mast cells mediated

4) Megaloblastic anemia is caused due to deficiency of _____.
a) Cobalamin b) Pyridoxine
c) Niacin d) Folic acid

5) Butter is a example of _____.
a) A gel b) An emulsion
c) A sol d) Not a colloid

6) Which is the leading cause of blindness in children worldwide?
a) Cataracts
b) Colour blindness
c) Night blindness
d) Vitamin A Deficiency

7) Name the enzyme which is found in tears, sweat, and an egg white?
a) Ribozyme b) Lysozymes
c) Zymogen d) isozymes

8) Vitamin D deficiency in adults lead to _____.
a) Rickets b) Osteporosis
c) Goiter d) Cretinism

9) Which of the following is synthesized by bacteria in human intestinal tract _____.
a) Vitamin A b) Vitamin C
c) Vitamin D d) Vitamin K

10) Steroids is the example of which type of lipid?
a) Waxes b) Derived lipids
c) Phospolipids d) Glycospingolipids

B) Write true/false - **06**

1) Glucose is an aldohexose while fructose is a ketohexose.
2) Enzymes are the proteins that will not catalyze biochemical reactions.
3) Enzymatic browning is due to the activity of a group of enzymes called phenolases.
4) Ground nut oil has more unsaturated fatty acids as compared to olive oil.
5) The change in flavour and odours of fats and oils on storage is due to enzymatic hydrolysis only.
6) Vitamin D3 is produced by the UV irradiation.

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 its 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 is the basis of lipid classification? Name the various types.
b) Differentiate between fat soluble and water soluble vitamins. Give two examples for each type.

Q.5 Answer the following **16**

a) Differentiate between macrominerals and microminerals. Give two examples for each of these.

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

Q.6 Answer the following **16**

a) What are polysaccharides? What are its types? Explain giving examples.

b) Explain and differentiate Caramelization and Maillard reaction?

Q.7 Answer the following **16**

a) Write short note on the nutritional applications of lipids.

b) What do you understand by the following terms:

i) Oxidative rancidity ii) Saponification

SLR-BE-5

Seat No.	

Set P

P. G. Diploma in Dietetics and Nutrition (Sem-II) (New) (CBCS)
Examination: March/April - 2025
Nutrition and dietetics-II (DDN201)

Day & Date: Wednesday, 21-May-2025 Max. Marks: 80
Time: 11:00 AM To 02:00 PM

Instructions: 1) Q.Nos.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 A) Multiple choice questions. (MCQ) **10**

1) When the cancer is initiated from mesoderm known as
a) sarcoma b) lymphoma
c) both a and b d) None

2) Which solution is used in dialysis machine
a) dialysate b) osmosis
c) hypotonic solution d) none

3) BMI percentile is a parameter used to asses
a) Body composition b) X ray
c) Blood d) weight category

4) Agent responsible for liver damage
a) excess consumption of carbohydrate
b) stetorrhea
c) alcohol
d) all a, b, c

5) what strengthen epithelial tight junctions to protect against intracellular invasion by pathogens
a) worms b) probiotic
c) parasites d) Fibers

6) Oral rehydration salt solution is used in
a) dehydration b) prevent obesity
c) gastritis d) all a and b

7) Type of constipation in which intestinal tone is disturb
a) anorexia nervosa b) atonic
c) obstructive d) None

8) Increased risk of CHD with
a) High calorie diet b) High amount of fat
c) regular diet d) a and b

9) Hyper insulanamia occurs in many people having
a) Old age b) obesity
c) underweight d) all

10) Identify immunonutrient
a) Arginine b) Purine nucleotide
c) Omega 3 fatty acid d) All a,b and c.

B) True or False. **06**

1) In parental Nutrition a minimum of 100 g glucose per day is given to prevent protein catabolism.
a) True b) False
2) Very low residue diet is prescribed in atherosclerosis.
a) True b) False
3) Release of pyrogen is responsible for raise in body temperature.
a) True b) False
4) Low GI foods may benefitin weight control.
a) True b) False
5) HDL is known bad cholesterol.
a) True b) False
6) Soyaprotein is a source of flavonoids.
a) True b) False

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

a) Tropical and non tropical sprue.
b) Write about hypoglycemic drugs.
c) Polyneuropathy.
d) Test for allergy.

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

a) Causes of peptic ulcer .
b) Acute apendicitis.

Q.4 Answer the following **16**

a) Causes and dietary needs in kidney stones.
b) Angina pectoris.

Q.5 Answer the following **16**

a) Causes, symptoms and dietary modification in Glomerulo Nephritis .
b) Nutritional needs in Jaundice.

Q.6 Answer the following **16**

a) Bums its type and nutritional needs.
b) Define hypertension and importance of DASH diet.

Q.7 Answer the following **16**

a) Role of different foods in cancer prevention and recovery.

b) Detail of type of Anaemia.

Seat No.	

Set **P**

P. G. Diploma in Dietetics and Nutrition (Sem-II) (New) (CBCS) Examination: March/April - 2025
Food Science and Food Microbiology (DDN202)

Day & Date: Friday, 23-May-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) Figures to the right indicate full marks.

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

1) Which of the following food components give energy to our body
a) Water b) Vitamins
c) Minerals d) Carbohydrates.

2) Fermentation increase _____
a) digestibility b) vit A
c) calcium d) total protein

3) Which of the following is the advantage of microwave cooking _____
a) not suitable for all foods,
b) food is cooked in its own juices so it's flavour is retained
c) limited space
d) all of the above

4) Which of the following is measured in a sensory evaluation _____
a) sight b) smell
c) taste d) all of the above

5) Among the given nutrients milk is a poor source of _____
a) Calcium b) Protein
c) vitamin C d) Fiber

6) Mustard seeds are adulterated with _____ seeds
a) Niger b) Papaya
c) Argemone d) none of the above

7) _____ is used as natural leavening agent in bakery.
a) Mould b) Mushroom
c) Yeast d) all of the above.

8) Which of the following is the artificial agent that causes food contamination _____

a) Utensils
b) Water
c) Air
d) none of the above

9) Egg yolk proteins begin to coagulate at _____ temperature than white

a) lower
b) higher
c) same
d) none of the above

10) Fish and meat are usually preserved by _____ method.

a) smoking
b) canning
c) pasteurization
d) all of the above

B) State true / false **06**

1) The tip of the tongue is more sensitive for sweet taste.
2) When yeast is added to bakery products, it produces oxygen and alcohol.
3) Dehydration is one of the bacteriostatic method of food preservation.
4) For storage of pickles metal can be suitable than glass bottle.
5) Eggs are having highest biological value of protein.
6) Spoilage of food can be avoided by heating it.

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

a) State the nutritional significance of meat, poultry and fish.
b) Define preservation and explain natural preservation.
c) Descriptive tests of sensory evaluation
d) Objectives of cooking food

Q.3 Answer the following.

a) How colour of food affect the food acceptance. **06**
b) Explain traditional methods of food preservation in detail. **10**

Q.4 Answer the following.

a) Explain various cooking methods in detail **10**
b) What are common adulterants used in tea powder, coffee and haldi and how we can detect it. **06**

Q.5 Answer the following.

a) Explain use of high temperature in food preservation. **10**
b) Objectives and importance of packaging **06**

Q.6 Answer the following.

a) Explain emulsifying and stabilizing agents in detail **10**
b) Changes occured in egg due to cooking. **06**

Q.7 Answer the following.

a)	Practical requirements of sensory tests.	**06**
b)	Explain causes of food contamination and how to control it	**10**

Seat No.	

Set **P**

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

Day & Date: Monday, 26-May-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) Sports highly benefitted by carbohydrate loading ____.
a) Long distance swimming b) Boxing
c) Marathon d) all of the above

2) American heart association recommends total dietary fiber intake of ____.
a) 5-10 gram/day b) 10-15 gram/day
c) 15-20 gram/day d) 25-30 gram/day

3) ____ describe athletic performance enhancing substances and training techniques.
a) Performance aids b) Strength aids
c) Ergogenic aids d) None of above

4) Delayed onset muscle soreness (DOMS) causative agent ____
a) Hydrooxyproline b) Proline
c) Leucine d) Isoleucine

5) The brain can use ____ cal/day of glucose from liver glucogen.
a) 200 b) 400
c) 600 d) 500

6) 1 gram of glycogen is stored with about 3 gm of ____.
a) Lipid b) Amino acid
c) Glucose d) Water

7) Creatine phosphate helps in all except ____.
a) Football b) Marathon
c) Power lifting d) Weight lifting

8) ____ primary role of transportation of fatty acids into mitochondria.
a) L Carnitine b) L arginine
c) L Valine d) L Tyrosine

9) Glucosamine is helpful in ____.
a) Nervous tissue b) Muscle tissue
c) Connective tissue d) Epithelial tissue

10) ____ includes the chemical reactions that continue different biomolecules to create larger more complex one.
a) Metabolism b) Anabolism
c) Catabolism d) None of above

B) Fill in the blanks OR write true/false: **06**

1) ____ training greatly increases the body s functional capacity to transport and use oxygen and to burn fatty acids during exercise.
a) Aerobic b) Anaerobic
c) Catabolic d) None of above

2) ____ will mostly benefit long distance athletes.
a) L Carnitine b) Whey protein
c) Creatine d) Q10

3) ____ are required to spare muscle breakdown during exercise.
a) Glutamine b) BCAA (branched chain amino acid)
c) Collagen d) Arginine

4) A reduction of your body water content as little as ____ can reduce performance
a) 5-8 % b) 1-4 %
c) 9-10 % d) None of above

5) ____ describe athletic performance enhancing substances and training techniques.
a) Performance aids b) Strength aids
c) Ergogenic aids d) None of above

6) Skin fold measurement is ____ handed operation.
a) One b) Two
c) Right d) Left

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

Write a Note.
a) Caffeine
b) Sodium bicarbonate
c) Creatine
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 briefly importance of water and oxygen in athletes?
b) Write a note in muscle fiber types and function along with muscular hypertrophy and mechanics of muscular contraction?

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

a) Write a note on anaerobic oxidative sports and plan a sample menu?
b) Write a note on Aerobic system changes and Anaerobic system changes

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

a) Write a note on anaerobic glycolytic energy sports and plan a sample menu?
b) Athletic significance of protein, amino acid and lipids.

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

a) Write a note on anaerobic immediate energy sports and plan a sample menu.?
b) Enhancing performance by carbohydrate loading and sports benefitted?