MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS)

FIRST SEMESTER EXAMINATION

(2024 ADMISSION ONWARDS)

MG1DSCCND100 – BASIC NUTRITION AND DIETETICS

Duration: 2hrs Maximum Marks: 50

Students should attempt atleast one question from each course outcome to enhance their overall outcome attainability.

Each question is tagged with the appropriate Bloom's Revised Taxonomy level (Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating.) and the relevant course outcome (CO) number.

* Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S).

Part A

Multiple Choice Questions

Answer **All** Questions

Each question carries **1** mark

1. Absolute lack of an individual nutrient. [K] [1]
   a) Under nutrition b) Malnutrition c) Nutrient imbalance d) Specific deficiency
2. Major energy source of our body. [K] [1]
   a) Carbohydrates b) Fat c) Vitamins d) Proteins
3. Protein molecule combined with a carbohydrate group is known as…….. [U] [2]
   a) Nucleoprotein b) Glycoprotein c) Chromoproteins d) Lipoprotein
4. Give an example for essential fatty acid. [K] [2]
   a) Butyric acid b) Linolenic acid c) Palmitic acid d) Oleic acid
5. The form of Vitamin D in plants. [U] [3]
   a) Cholecalciferol b) Ergosterol c) Cholesterol d) 7-dehydro-cholesterol
6. Type of diet used for patients experiencing acute gastrointestinal issues. [K] [4]
   a) Full fluid diet b) Clear fluid diet c) Soft diet d) Normal diet

[1 X 6 = 6]

Part B

Short Answer Type Questions

Answer **2** Questions

Each question carries **2** marks

7. Define malnutrition according to WHO. [K] [1]
8. Differentiate essential and non-essential aminoacids. [U] [2]
9. List the functions of thiamine. [K] [3]
10. List the purpose of diet therapy. [K] [4]

[2 X 2 = 4]

Part C

Short Essay Type Questions

Answer **4** Questions

Each question carries **5** marks

11. Comment on basic 4 food group system suggested by ICMR. [K] [1]
12. Explain Total Energy Requirement. [U] [2]
13. Classify proteins by their nutritional quality. [U] [2]
14. Discuss the functions of Vitamin B12. [U] [3]
15. Describe the role of calcium in bone formation. [U] [3]
16. Discuss the role of dietitian in hospital. [U] [4]

[5 X 4 =20]

Part D

Essay Type Questions

Answer **2** Questions

Each question carries **10** marks

17. Explain the process of digestion, absorption and transport of nutrients in the body. [K] [1]
18. Summarize the classification of carbohydrates based on its composition and explain their nutritional importance. [U] [2]
19. Explain the functions of Vitamin A. [U] [3]
20. Explain the therapeutic adaptations of normal diet. [U] [4]

[10 X 2 =20]

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS)

FIRST SEMESTER EXAMINATION

(2024 ADMISSION ONWARDS)

MG1DSCHPY100 – BASICS OF PHYSIOLOGY

Duration : 2 Hrs Maximum Marks: 50

Students should attempt atleast one question from each course outcome to enhance their overall outcome attainability

Part A

Multiple Choice Questions

Answer **All** Questions

Each question carries **1** mark

1. Identify the type of connective tissue connects muscles to bones. [K] [1]
   A) Ligament
   B) Tendon
   C) Cartilage
   D) Adipose tissue

2. Basic unit of life is ……. [K] [1]
   A) Cell
   B) Tissue
   C) Organ
   D) Molecule

3. The normal pH of blood is …….. [U] [2]
   A) 5.7
   B) 7.4
   C) 6.5
   D) 7.2

4. The accumulation of fluid in body is known as …….. [U] [2]
   A) Oedema
   B) Swelling
   C) Ascites
   D) Inflammation

5. …… is the colouring pigment in blood [K] [2]

A) Haemoglobin
B) Myoglobin
C) Protein
D) Albumin

6. The muscle present in heart ……. [U] [3]
   A) Sketelal muscle
   B) Cardiac muscle
   C) Smooth muscle
   D) Unstriated muscle

(1 x 6 = 6 marks)

Part B

Short Answer Type Questions
Answer **2** Questions
Each question carries **2** marks

7. Describe the structure and function of adherens junctions. [U] [1]
8. Discuss oedema. [U] [2]
9. Explain spleen. [U] [2]
10. Enumerate different types of muscles. [K] [3]

(2 x 2 = 4 marks)

Part C

Short Essay Type Questions
Answer **4** Questions
Each question carries **5** marks

11. Discuss homeostasis. [U] [1]
12. Classify the main types of connective tissue. Briefly describe their characteristics and functions. [U] [1]
13. Enumerate the functions of lymph. [K] [2]
14. Explain the main functions of the skeletal system and its importance to overall health. [U] [3]
15. Explain the properties of muscles. [K] [13
16. Discuss the types of bone cells. [U] [3]

(5 x 4 = 20 marks)

Part D

Long Essay Type Questions
Answer **2** Questions
Each question carries **10** marks

17. Explain structure of cell with a neat diagram. [U] [1]
18. Explain the composition of blood. [U] [2]
19. Explain the structure and functions of muscles. [U] [3]
20. Discuss how autocrine signalling contributes to cancer progression. [U] [1]

(10 x 2 = 20 marks)

MAHATMA GANDHI UNIVERSITY, KOTTAYAM
MGU-UGP (HONOURS)

FIRST SEMESTER EXAMINATION

(2024 ADMISION ONWARDS)

MG1DSCNBC100 – FUNDAMENTALS OF BIOCHEMISTRY

Duration: 2 hrs Maximum Marks: 50

Students should attempt at least one question from each course outcome to enhance their overall outcome attainability.

Each question is tagged with appropriate Bloom's Revised Taxonomy level (Remembering, Understanding, Applying, Analyzing, Evaluating and Creating) and the relevant course outcome (CO) number.

*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C)

Part A

Multiple Choice Questions
Answer **All** Questions
Each question carries **1** mark

1. Which of the following is a monosaccharide? [K] [1]

A) Sucrose
B) Lactose
C) Glucose
D) Maltose

2. What type of polysaccharide is agar? [U] [1]

A) Homopolysaccharide
B) Heteropolysaccharide
C) Monosaccharide
D) Tetra saccharides

3. The protein present in Rice is …… [U] [2]
   A) Oryzenin
   B) Glutenin
   C) Glutelin
   D) Gliadin

4. Glycerol combines with fatty acid to give……. [K] [2]

   A) Mono acyl glycerol
   B) Triglyceride
   C) Glycerol
   D) Monoglyceride

5. Vitamin D is synthesized in the skin in response to: [K] [3]
   A) Dietary intake
   B) Cold temperature
   C) Sunlight
   D) Vitamin E

6. Which of the following describes the structure of vitamin E: [K] [3]
   A) Long chain fatty acid
   B) A tocopherol or tocotrienol ring
   C) Delta-tocopherol
   D) A phenolic compound

(6x1=6 marks)

Part B

Short Answer Questions
Answer Any **two** Questions
Each question carries **two** marks

7. State the differences between Ionic and Covalent bond. [U] [1]
8. Explain the classifications of monosaccharides based on the number of carbon atoms.[U] [1]
9. Compare fibrous proteins and globular proteins in terms of structure and solubility.[U] [2]
10. Explain the synthesis of cholecalciferol .[K] [3]

(2x2=4 marks)

Part C

Short Essay Questions

Answer Any **four** Questions

Each question carries **five** marks

11. Explain the importance of glycosidic bond in carbohydrates [U] [1]
12. Describe the classification of proteins based on composition and solubility [K] [2]
13. Explain the classification of fatty acids. [K] [2]
14. Explain the role of vitamin A in our body.[U] [3]
15. Describe the structure of proteins [U] [2]
16. Explain the types of chemical bond[K] [1]

(4x5=20 marks)

Part D

Long Essay Questions

Answer Any **two** Questions

Each question carries **ten** marks

17. Discuss the various properties of carbohydrates. [U] [1]
18. Describe the classification of proteins .[K] [2]
19. Discuss on the classification and properties of lipids [K] [2]
20. Explain the structure, properties and role of vitamin D. [U] [2]

(2x10=20 marks)

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS)

FIRST SEMESTER EXAMINATION

(2024 ADMISSION ONWARDS)

COURSE CODE- MG1MDCCND100

Course Title - MDC - FOOD AND NUTRITION

Duration: 1hr Maximum Marks : 35

(Students should attain at least one question from each course outcome to enhance their overall outcome attainability)

Each question is tagged with the appropriate Bloom's Revised Taxonomy level (Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating.) and the relevant course outcome (CO) number.

*Remember(K),Understand(U),Apply(A),Analyse(AN),Evaluate(E),Create(C),Skill(S),Interest(I)and Appreciation(Ap).

Part A

Objective Questions
Answer any 35 Questions
Each question carries **1** mark

1) Foods that provide a high amount of protein are known as …….. foods. [U] [1]

2) In a balanced diet, about 60-70% of the daily calorie intake should come from ……[U] [1]

3) A food group system can assist healthcare providers in explaining …….. diets to patients.[U] [1]

4) ……... illustrates the optimal number of servings to be eaten from each basic food group. [U] [1]

5) The abbreviation RDA stands for …….[U] [1]

6) The typical activity level of the Indian Reference Man is ……. labor or walking.[U] [1]

7) ……. involves choosing nutrients in correct proportions for optimal bodily function and health. [U] [1]

8) A pathological state caused by either a deficiency or an excess of essential nutrients is termed ……. [U] [1]

9) An inability to …… certain nutrients, or a diet lacking in variety, can lead to nutritional imbalance. [U] [1]

10) Nutrients required in small quantities are known as …… nutrients[U] [3]

11) Proteins are classified as an example of a …… nutrient.[U] [2]

12) The form in which carbohydrates are stored in the liver and muscles is called …….[U] [2]

13) The fibrous type of carbohydrate can be found in …….[U] [2]

14) ……. are the basic components that make up proteins..[U] [2]

15) Foods that are rich in protein often come from …… sources.. [U] [2]

16) A protective lipid barrier in the skin helps to prevent excessive ……. loss..[U] [2]

17) ……. is the type of fat that is hidden within various foods.[U] [2]

18) B-complex vitamins fall under the category of ……. soluble vitamins. [U] [3]

19) The plant-based precursor of Vitamin A, present in carrots and sweet potatoes, is called ……. [U] [3]

20) Lack of Sunlight is often linked to ……. deficiency. [U] [3]

21) Vitamin E functions as a strong ……, which safeguards cells against free radical damage.[U] [3]

22) The vitamin essential for blood clotting is known as ……. [U] [3]

23) Thiamine is necessary for the production of ……, a neurotransmitter critical to brain function.[U] [3]

24) Riboflavin aids in transforming tryptophan into ……, an important nutrient for the body. [U] [3]

25) Despite being low in niacin, milk can prevent pellagra because it contains …….[U] [3]

26) Pyridoxine plays a role in converting the fatty acid linoleic acid into …….[U] [3]

27) During foetal development, folic acid supports the formation of the brain and ….[U] [3]

28) Vitamin B12 is crucial in forming ……, a fatty layer that insulates nerve fibers.[U] [3]

29) Amla serves as a good source of …….[U] [3]

30) A calcium deficiency can lead to bone weakening, known as ……..[U] [3]

31) Phosphorus is necessary for proper …… function, aiding muscle contractions and nerve signaling.[U] [3]

32) High sodium intake can elevate the risk of developing …….[U] [3]

33) …… is a well-known fruit for its abundant potassium content.[U] [3]

34) Iron is stored in the body in the form of .....…[U] [3]

35) To prevent deficiency, iodine is often added to table salt, which is known as …… salt.[U] [3]

36) Shellfish, especially ……, are rich dietary sources of zinc..[U] [3]

37) Selenium contributes to the metabolism of ……, which is essential for reproductive health.[U] [3]

38) In the "My Healthy Plate" guidelines, it is advised to choose …… fats, such as those in avocados, nuts, and seeds.[U] [3]

39) The EAR is mainly applied for …… assessments. [U] [1]

40) Under-nutrition is defined as a deficiency in …… or in one or more essential nutrients.[U] [1]

[1× 35 = 35]