

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMESTER END THEORY EXAMINATION, *B.TECH. (D.T.)***

Semester	: III (V Dean)	Academic Year	: 2021-2022
Course No.	: DC-304	Course Title	: <b>Human Nutrition</b>
Credits	: (1+1=2)	Total Marks	: 50
Day & Date	: Saturday, 09/04/2022	Time	: 2.00 Hrs.

**Note :**

- 1) All questions from **Section 'A'** are compulsory.
- 2) Solve **Any Three** questions from **Section 'B'**.
- 3) Draw neat and well labelled diagram wherever necessary.

## SECTION –‘A’

Q.1 A) Choose the most appropriate answer from the options given below. (05)

- i) Deficiency of ..... element leads to goiter.
  - a) Zinc
  - b) Iodine
  - c) Iron
  - d) Calcium
- ii) Pro-vitamin of vitamin D3 .....
  - a) Ergosterol
  - b) 7-dehydrocholesterol
  - c) Cholecalciferol
  - d) None of these
- iii) ..... is bacterial synthesized vitamin.
  - a) Vitamin B<sub>12</sub>
  - b) Tocopherol
  - c) Cholecalciferol
  - d) Retinoic acid
- iv) ..... is the storage form of carbohydrates.
  - a) Glycogen
  - b) Glucose
  - c) Sugar
  - d) Inositol
- v) The hormone having opposite action of insulin is .....
  - a) Estragol
  - b) Pulegone
  - c) Glucagon
  - d) Serotonin

B) Define the following. (05)

- Nutrition
- Essential fatty acid
- Villi
- Pepsin
- Aflatoxins

Q.2 A) Give reasons for the following. (05)

- Zinc is considered as an essential trace element.
- Ascorbic acid is considered as an antioxidant.
- Cereals and legumes are considered as complementary protein foods.
- Calcium bioavailability from milk is higher than plant food.
- Dietary fiber is partially digested in large intestine.

(P.T.O.)



- B) State whether True or False, If False, rewrite the statement after making necessary corrections to the underlined word. (05)
- i) Maize protein is complete protein.
  - ii) Vitamin D shows antisterility property.
  - iii) Organophosphatepesticides are most toxic.
  - iv) Lipase is an enzymeresponsible for lactose intolerance.
  - v) The digestion of starch begins in the mouth.

### SECTION – 'B'

- Q.3 A) Describe the function of vitamin A and D along with structure. (05)  
B) Describe in brief methods for evaluation of nutritive value of food. Differentiate (05)  
between nutritive value of cow and buffalo milk.
- Q.4 A) Furnish classification of foods based on function. Describe components of (05)  
balanced diet for Indians.  
B) Define the term hormones. Give the classification of hormones according to (05)  
chemical nature.
- Q.5 A) Explain health and economical aspects of presence of antibiotic residues in milk. (03)  
B) Briefly describe nutrient requirement of different age group. (03)  
C) Write a note on anti-nutritional factors in food. (04)
- Q.6 A) Explain the role of probiotics in maintaining human health. (03)  
B) What are toxic trace elements? Briefly explain health risk posed by toxic trace (03)  
elements.  
C) What is lactose intolerance? Explain consequences and remedial measures for (04)  
lactose intolerant individual.
- Q.7 Explain digestion and absorption of carbohydrates and lipids in the human body. (10)

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