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| Question Paper Code | 12217 |
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**B.E. / B.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023**

Seventh Semester

**Computer Science and Engineering**

**20CYOE904 - FUNDAMENTALS OF NUTRITION**

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |  | <i>Marks,<br/>K-Level, CO</i> |
|--|-------------------------------|
| 1. Why pregnant women need additional nutrients? | <i>2,K2,CO1</i>               |
| 2. What do you understand by the term nutrition? | <i>2,K2,CO1</i>               |
| 3. What is meant by digestion?                   | <i>2,K2,CO2</i>               |
| 4. What are the functions of bile?               | <i>2,K2,CO2</i>               |
| 5. Define glyceic index.                         | <i>2,K1,CO3</i>               |
| 6. What is hyperglycemia?                        | <i>2,K2,CO3</i>               |
| 7. Define food enzyme.                           | <i>2,K1,CO4</i>               |
| 8. Write the main functions of fats.             | <i>2,K2,CO4</i>               |
| 9. Define BMI.                                   | <i>2,K1,CO5</i>               |
| 10. What is meant by energy balance?             | <i>2,K2,CO5</i>               |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) Write a note on Atwater method and Bomb Calorimetric methods for calculating energy. *13,K2,CO1*

**OR**

- b) Explain the six classes of nutrients, sources and their function. *13,K2,CO1*

12. a) What are the major digestive organs, and which organs are the accessory digestive organs? *13,K2,CO2*

**OR**

- b) What are the enzymes and their role involved in the digestion of food? *13,K2,CO2*

13. a) Explain any three Artificial sweeteners in detail. *13,K2,CO3*

**OR**

- b) Write in detail about NIDDM and IDDM. *13,K2,CO3*

*K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create*

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14. a) Explain texturized proteins & how they act as a meat substitute. *13,K2,CO4*

**OR**

b) Define protein. List the sources of protein and give its functional role. *13,K2,CO4*

15. a) Write note on *13,K2,CO5*  
(i) Hunger,  
(ii) Satiety,  
(iii) Satiation.

**OR**

b) Write a detailed note about obesity and its effects. *13,K2,CO5*

**PART - C (1 × 15 = 15 Marks)**

16. a) (i) What is protein malnutrition? Explain their short and long term effects? *8,K2,CO4*  
(ii) Explain in detail about Pharmaceutical grade with suitable examples. *7,K2,CO5*

**OR**

b) (i) What do you understand about fat replacement? *8,K2,CO4*  
(ii) Write note on weight loss schemes. *7,K2,CO5*