



# Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B

Coimbatore - 641 043, Tamil Nadu, India

## Bachelor's Degree Examination – August 2020 VI Semester

**Class : III UG**  
**Major : Biochemistry and Biotechnology**

**Time : 2 Hours**  
**Max. Marks: 50**

### 15BBCC16 Nutritional Biochemistry

#### Part A

10 x 1 = 10

#### Choose the Correct Answer

- This method is used for the determination of oxygen consumption.  
a. Direct calorimetry  
b. Harris-Benedict equation  
c. Indirect calorimetry  
d. Stable isotopes
- Which of the following has the highest calorific value?  
a. Carbohydrates  
b. Fats  
c. Proteins  
d. Vitamins
- Good sources of carbohydrates are  
a. fats, oils, butter and margarine  
b. fish, eggs, beef, pork and poultry  
c. cereals, fruits, vegetables & milk  
d. green leafy vegetables, seafood & water
- A slice of bread with 1gm of fat, 10 gm of carbohydrate and 2 gm of protein contains \_\_\_\_\_ kcal.  
a. 42  
b. 57  
c. 82  
d. 102
- Which of the following is a non-essential amino acid?  
a. Serine  
b. Threonine  
c. Lysine  
d. Histidine
- Pulses are good source of  
a. Carbohydrates  
b. Fats  
c. Proteins  
d. Vitamins
- Which type of diet is recommended for weight maintenance?  
a. Low protein and high Glycemic Index  
b. High protein and high Glycemic Index  
c. Low protein and low Glycemic Index  
d. High protein and low Glycemic Index
- Protein-Energy Malnutrition (PEM) refers to a state where the infants dietary intake is insufficient in  
a. protein  
b. overall calories  
c. carbohydrates  
d. both a and b
- Which is the most common form of diabetes?  
a. Type 1 diabetes mellitus  
b. Type 2 diabetes mellitus  
c. diabetes insipidus  
d. They all are about same frequency
- Which of the following is associated with atherosclerosis  
a. Increased exercise  
b. High fiber diets  
c. High cholesterol diets  
d. Low salt diets

**Part B**

**3x 6 = 18**

**Answer any Three questions**

**Each answer should not exceed 400 words or two pages**

11. Calculate the BMI of following persons given with height and weight and interpret the Results:
  - i. Ramu- Height-1.70 m, Weight -51 kg
  - ii. Vijay- Height -1.95 m, Weight-82 kg
  - iii. Raj-Height-1.63 m, Weight-78 kg
12. What is RQ of foods? List its applications.
13. What are essential fatty acids? List its available sources with examples.
14. Briefly discuss about the dietary fibres and their types.
15. What are single cell protein? Discuss its nutritive value?
16. Discuss the factors influencing protein requirements.
17. Discuss the preventive measures of Kwarshiorkar.
18. Write short notes on RDA for infants.
19. Write short notes on hypertension and its risk factors.
20. Briefly discuss about nutritional therapy.

**Part C**

**2 x 11 = 22**

**Answer any Two questions**

**Each answer should not exceed 800 words or four pages**

21. Discuss the techniques used to measure energy expenditure.
22. Describe about BMR and list the factors influencing it.
23. Discuss about the types of vitamins and its natural food sources.
24. Explain in detail i. Glycolysis and ii. Gluconeogenesis.
25. How will you evaluate protein by nitrogen balance method?
26. Discuss the adverse effects of protein intake above RDA level.
27. Discuss in detail about protein malnutrition and the diseases associated with it.
28. Describe about the essential nutrients for healthy balanced diet.
29. Explain drug-nutrient interactions in detail.
30. Discuss in detail about the role of diet and nutrition in the prevention and treatment of Diseases.

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