

(ii) Name the following :

- (a) Two water soluble vitamins
- (b) Mineral responsible for oxygen carriage
- (c) Vitamin responsible for vision cycle
- (d) Mineral responsible for ossification of bones.

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**M.Sc. Home-Science (Food Science and Nutrition)**  
**Semester—II Examination**  
**NUTRITIONAL BIOCHEMISTRY**  
**Subject Code—122 NB 51**

Time—Two Hours]

[Total Marks—45

**Note :— ALL questions are compulsory.**

1. Answer any ONE :

- (i) Explain the factors affecting energy expenditure and requirements. Explain the estimation of energy requirement of painter. 9
- (ii) Define and explain the components of energy requirements. Explain the estimation of energy requirement of a family. 9

2. (i) Fill in the blanks :

- (a) Monomeric unit of polysachharide starch is \_\_\_\_\_. 1
- (b) The end product of glycolysis in anaerobic condition is \_\_\_\_\_. 1
- (c) Renal threshold value is \_\_\_\_\_. 1
- (d) Synthesis of glycogen from glucose is called \_\_\_\_\_. 1
- (e) Normal blood glucose level is \_\_\_\_\_. 1

(ii) Write true or false :

- (a) Fructose is a monomeric unit of polysaccharide starch. 1
- (b) Krebs cycle is also called TCA cycle. 1
- (c) Blood glucose level above normal level is called hyperglycemia. 1
- (d) Carbohydrates are stored in the body in the form of glycogen. 1

3. (i) Choose appropriate answer :

- (a) Break down of protein will give :
  - (i) Fatty acids      (ii) Glycerol
  - (iii) Amino acid      (iv) Glucose 1
- (b) Removal of amino group from amino acid is called :
  - (i) Deamination      (ii) Transamination
  - (iii) Decarboxylation      (iv) Transmethylation 1
- (c) In the urea cycle the by-product removed with ammonia is :
  - (i)  $O_2$       (ii)  $NO_2$
  - (iii)  $CO_2$       (iv)  $SO_2$  1
- (d) Sulphur containing amino acid is :
  - (i) Leucine      (ii) Glycine
  - (iii) Alanine      (iv) Cystine 1

(e) Transfer of amino group from amino acid to Keto acid is called :

- (i) Deamination      (ii) Transamination
- (iii) Urea cycle      (iv) Transmethylation 1

(ii) Name the following :

- (a) Any one conjugated protein
- (b) Any one essential amino acid
- (c) End products of urea cycle
- (d) Any one Polysaccharide. 4

4. Answer any ONE :

- (i) Explain the Ketosis and breakdown of triglycerides. 9
- (ii) Give the reactions of fatty acid oxidation and cholesterol biosynthesis. 9

5. (i) Match the following :

- |                       |                  |
|-----------------------|------------------|
| (1) Rickets           | (a) Vit K        |
| (2) Scurvy            | (b) Vit D        |
| (3) Blood coagulation | (c) Iron         |
| (4) ATP               | (d) Vit C        |
| (5) Anaemia           | (e) Phosphorus 5 |