



**WEST BENGAL STATE UNIVERSITY**

B.Sc. Honours PART-I Examinations, 2018

**FOOD AND NUTRITION-HONOURS**

**PAPER- FNTA-I**

Time Allotted: 4 Hours

Full Marks: 100

*The figures in the margin indicate full marks.*

*Candidates should answer in their own words and adhere to the word limit as practicable.*

**Unit-I  
(Human Nutrition)**

1. Answer any **seven** questions from the following: 2×7 = 14
  - (a) What is SDA?
  - (b) What do you mean by Spina bifida?
  - (c) Write down any two factors determining RDA.
  - (d) What is meant by galactagogue?
  - (e) Write the full form of SGA and TEF.
  - (f) Differentiate between colostrum and transitional milk.
  - (g) What is growth spurt?
  - (h) What do you mean by anorexia nervosa?
  - (i) What is eclampsia?
  - (j) What are meant by 'fore milk' and 'hind milk'?
  
2. Write short notes on any **three** of the following: 4×3 = 12
  - (a) Principles of deriving human nutrients requirements
  - (b) Weaning
  - (c) Low birth weight baby
  - (d) Factors influencing BMR
  - (e) Advantages of breast feeding
  - (f) Gestational diabetes.
  
3. Answer any **two** questions from the following: 12×2 = 24
  - (a) What is "let-down reflex"? Discuss the hormonal regulation of the maintenance of lactation. Describe the nutritional requirements during lactation. 12
  - (b) What are meant by stunting and underweight? Discuss the significance of growth chart in evaluating the under-nutrition in pre-school children. Describe the nutritional requirements of pre-school children. 3+4+5
  - (c) Describe the factors affecting eating habit of adolescents. Mention the common nutrition related diseases in adolescents. Discuss the symptoms, causes and preventive measures to be taken for *any one* of these diseases. 3+3+6

- (d) Describe the non-nutritional factors affecting the outcome of pregnancy. 4+2+6  
What is the importance of nitrogen balance in pregnancy? Discuss the nutrients influencing the weight gain during pregnancy.

**Unit-II**  
**(Food Science)**

4. Answer any *seven* questions from the following: 2×7 = 14
- (a) What is iodine number?
  - (b) Why sucrose is a non-reducing sugar but maltose is not?
  - (c) Name one heterocyclic and one sulfur containing amino acid.
  - (d) Define glycemic index.
  - (e) What is meant by inversion of sugar?
  - (f) Differentiate between amylose and amylopectin.
  - (g) What is micelle?
  - (h) Name the essential fatty acids.
  - (i) Name two rich vegetable source of iron.
5. Write short notes on any *three* of the following: 4×3 = 12
- (a) Hydrogenation of oils
  - (b) Primary and secondary structure of proteins
  - (c) Assessment of protein quality
  - (d) Zinc and its function in human body
  - (e) Assessment of nutritional quality of protein
  - (f) Iron absorption
6. Answer any *two* questions from the following: 12×2 = 24
- (a) Discuss the physiological role of pyridoxine and niacin in human body. (3+3)+3+2  
Describe the symptoms of niacin deficiency in humans. Mention four rich +1  
sources of niacin. How are niacin and tryptophan related?
  - (b) Mention the routes of water loss from human body. What is obligatory water 2+2+6+2  
loss from the body? Discuss the regulation of water content in human body.  
Briefly write the nutritional significance of dietary fiber in our body.
  - (c) Describe the factors affecting the absorption of calcium in human body. 6+3+3  
Discuss the role of calcium in bone formation. Compare Osteomalacia and  
Osteoporosis.
  - (d) What happens when- (3+3)+3+3
    - (i) glucose reacts with phenylhydrazine
    - (ii) unsaturated oils are exposed to warm and moist air.Compare the structure of starch and dextrin. Name two polar and two non-polar amino acids and mention their single letter code.

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B.Sc. Honours PART-I Examinations, 2018

**FOOD AND NUTRITION-HONOURS**

**PAPER-FNTA-II**

**UNIT-I**

Time Allotted: 2 Hours

Full Marks: 50

*The figures in the margin indicate full marks.*

*Candidates should answer in their own words and adhere to the word limit as practicable.*

1. Answer any **five** questions from the following: 2×5 = 10
  - (a) What is antihemophilic factor?
  - (b) Mention two functions of endoplasmic reticulum.
  - (c) Why the heart muscles are not fatigued?
  - (d) State the functions of Brunner's gland.
  - (e) Where would you find podocytes in your body? Mention its functions.
  - (f) What do you mean by preganglionic and postganglionic sympathetic nerve fibers?
  - (g) Mention the location and functions of Sertoli Cells.
  - (h) Why a person with AB-negative blood group should not be transfused with O-positive blood?
  
2. Write short notes on any **four** of the following: 4×4 = 16
  - (a) Gigantism and acromegaly
  - (b) Regulation of hunger
  - (c) Hamburger phenomenon
  - (d) Oogenesis
  - (e) Anatomical structure of eye
  - (f) Digestion of protein
  - (g) Role of skin in regulation of body temperature
  - (h) Endocrine functions of adrenal medulla.
  
3. Answer any **two** questions from the following: 12×2 = 24
  - (a) (i) State how fat is digested in human gastro intestinal tract. 6+(1+2)+3
    - (ii) Mention the location and functions of Peyer's Patch.
    - (iii) Name the cells present in gastric gland by mentioning their functions.
  - (b) (i) Discuss the mechanism of respiration. 6+6
    - (ii) Discuss about the oxygen transport in blood with reference to oxygen dissociation curve.
  - (c) Name the hormones secreted from posterior pituitary. Discuss their functions on human body. 2+(5+5)
  - (d) (i) Define blood pressure, mean pressure and pulse pressure. 3+5+(2+2)
    - (ii) Discuss about the factors which affect blood pressure.
    - (iii) State the specific locations and functions of bicuspid and semilunar valves of heart.

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