



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours Part-I Examination, 2019

FOOD AND NUTRITION

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) Define BMR.
 - (b) What is 'Lactobacillus bifidus factor'?
 - (c) Define RDA.
 - (d) What is Physical Activity Ratio (PAR)?
 - (e) Define health.
 - (f) What is the meaning of the term 'Bulimia'?
 - (g) What do you mean by 'catch up growth'?
 - (h) What is BMI?
 - (i) What is central obesity?
 - (j) Define weaning.
 - (k) Name two placental hormones.

2. Write short notes on any **three** of the following: 4×3 = 12
 - (a) Composition of colostrum
 - (b) Significance of growth chart
 - (c) Baby-led weaning
 - (d) Management of a low birth weight baby
 - (e) Galactagogue
 - (f) Significance of weight gain during pregnancy.

3. Answer any **two** questions from the following: 12×2 = 24
 - (a) Define SDA. State its significance. Write the BMR of adult male and female. Explain the factors affecting BMR. What should be the BMR of an adult Indian male and female? 2+2+6+2
 - (b) Discuss the points to be considered in planning diets for school children. Give recipe of two 'low cost school tiffin'. Write a note on adolescent obesity. 4+4+4
 - (c) Write a note on the nutritional and non-nutritional complications during pregnancy? Describe any two complications from each. Explain briefly the problems of weaning. (2+2)
+(4+4)
 - (d) What do you mean by 'Growth' and 'Development'? Explain the importance of nutrition for ensuring adequate development. Discuss the feeding problems of LBW babies. (2×2)+4+4

UNIT-II
(FOOD SCIENCE)

1. Answer any *seven* questions from the following: 2×7 = 14
- (a) What do you mean by 'niacin equivalent'?
 - (b) State the applications of iodine value.
 - (c) Distinguish between Lactose and Sucrose by a single chemical test mentioning the chemistry.
 - (d) What do you mean by obligatory water loss?
 - (e) Write the names of two MUFA rich oils and give the structure of one MUFA.
 - (f) Write the limiting amino acids of cereals and pulses.
 - (g) Name the micronutrient deficiency responsible for—
Hypochromic microcytic anaemia-
Nyctalopia-
Pernicious anaemia-
Myxedema-
 - (h) Distinguish between fructose and glucose by a single chemical test mentioning the chemistry.
 - (i) Name two essential and two non-essential amino acids.
 - (j) What do you mean by hemosiderosis and hemochromatosis?
2. Write short notes on any *three* of the following: 4×3 = 12
- (a) Factors affecting protein bioavailability
 - (b) Soluble vs Insoluble fibre
 - (c) Symptoms of Vitamin-C deficiency
 - (d) Antioxidant role of Vitamin-E
 - (e) Biochemical role of calcium in our body
 - (f) Glycemic index vs Glycemic load.
3. Answer any *two* questions from the following: 12×2 = 24
- (a) Explain your understanding about malnutrition. What do you understand by body composition? Write a note on its assessment. 4+(4+4)
 - (b) What is mutarotation? Explain its mechanism with a suitable example. Write a note on hormonal changes in and regulation of lactation. (2+2)+
(4+4)
 - (c) (i) Saponification value is inversely proportional to the molecular weight of fat or oil —
Justify the statement. 3
(ii) What happens when —
 - (a) Same oil is repeatedly heated and used for frying. 2
 - (b) Triglycerides are reduced by hydrogen. 2
 - (iii) Briefly explain the process of micelle formation. 5
 - (d) Discuss the factors affecting iron absorption. Write the biochemical functions of thiamine in human body. Write the RDA (2010) of vitamin B₁₂ and folic acid of an adult male. 5+5+2

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