

- c) They stimulate the growth of microorganisms
 d) They enhance enzymatic activity
- iii) Select the organ that plays a central role in regulating water balance by adjusting the volume and concentration of urine .
 a) Liver
 b) Kidneys
 c) Heart
 d) Stomach
- (ix) Select the main function of dietary fiber in the digestive system .
 a) To provide energy
 b) To aid in protein digestion
 c) To support the absorption of vitamins
 d) To promote regular bowel movements
- (x) What is the condition caused by severe Vitamin D deficiency, characterized by soft and weakened bones?
 a) Rickets
 b) Scurvy
 c) Beriberi
 d) Xerophthalmia
- (xi) Which vitamin is synthesized in the skin upon exposure to sunlight?
 a) Vitamin C
 b) Vitamin D
 c) Vitamin B12
 d) Vitamin A
- (xii) Select the active coenzyme form of Vitamin B2 .
 a) Riboflavin triphosphate (FTP)
 b) Riboflavin tetraphosphate (FTPP)
 c) Riboflavin mononucleotide (FMN)
 d) Riboflavin monophosphate
- (xiii) Which condition is associated with a severe deficiency of vitamin D in children ?
 a) Scurvy
 b) Beriberi
 c) Rickets
 d) Anaemia
- (xiv) Select the active coenzyme form of Vitamin B1.
 a) Thiamine disulfide (TDS)
 b) Thiamine hydrochloride (THC)
 c) Thiamine pyrophosphate (TPP)
 d) Thiamine monophosphate (TMP)
- (xv) HDL is often referred to as: ?
 a) "Bad" Cholesterol
 b) "Good" Cholesterol
 c) Triglycerides
 d) VLDL

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define Saponification Value . (3)
 3. Discuss "Hyponatremia" (3)
 4. Explain "Zwitter-ion". (3)
5. Write down the WHO classification of Xerophthalmia. (3)
 6. Explain the common sources of dietary fiber, and what is the basic composition of dietary fiber? (3)

OR

Illustrate why is drinking water essential for human health? What percentage of the human body is composed of water, on average? How does the body regulate water balance to prevent dehydration or overhydration? (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Illustrate the "Osazone reaction" of carbohydrate. (5)
 8. Describe the bio-chemical role of Vitamin C. (5)
 9. Explain the physiological relationship between calcium and vitamin D. (5)
 10. Illustrate the bio-chemical role of thiamine. (5)
 11. How is iron absorbed in our body? (5)

12. Distinguish the types and functions of dietary fiber.

(5)

OR

(5)

Justify the interrelationship between Calcium and parathormone.

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