

IDA REGISTERED DIETITIAN EXAMINATION

PAPER I (Human Physiology, Microbiology, Nutritional Biochemistry)

Date: 9th February 2019

**Time: 2 Hours
100**

Marks:

Note: 1. All Questions are compulsory

2. Draw diagrams wherever necessary

SECTION - A

I. Choose the correct answer:

(10x2= 20 Marks)

1. Serum amylase increases in the following condition.

- | | |
|--------------|-----------------|
| a. Burns | c. Pregnancy |
| b. Hepatitis | d. Both A and B |

2. Major Histocompatibility antigens are present on this

- | | |
|----------------|-----------------|
| a. Erythrocyte | c. Stem Cell |
| b. Leukocytes | d. Thrombocytes |

3. Tyrosine is involved in synthesis of the following important biological compounds.

- | | |
|---------------------|---------------------|
| a. Epinephrine | c. Melanin |
| b. Thyroid Hormones | d. All of the above |

4. What is the percentage of albumin as part of total proteins in blood?

- | | |
|--------|--------|
| a. 7% | c. 54% |
| b. 38% | d. 12% |

5. Which is the most common specimen collected in suspected cases of lower respiratory infections?

- | | |
|-----------|----------------|
| a. Saliva | c. Breath |
| b. Sputum | d. Throat Swab |

6. In ECG, QRS complex indicates:

- | | |
|--------------------------|-------------------------------|
| a. Atrial depolarization | b. Ventricular repolarization |
|--------------------------|-------------------------------|

7. Excess hormonal production by the pituitary gland produces this disorder with abnormal growth in children.
8. Respiratory alkalosis is caused by decrease in plasma concentration of this substance.
9. A 30-year-old woman has non-bloody diarrhoea for the past 14 hours. Which organisms are likely to cause this illness?
10. Carbohydrate associated with flatulence caused by ingestion of leguminous seeds.

IV: State whether the following statements are true or false, if false give the reason (5x1=5 Marks)

1. Severe exercise cannot cause haematuria.
2. Lingual lipase activity starts in mouth
3. Gram negative organisms have extensively crossed linked peptidoglycan.
4. Alkaptonuria occurs due to deficiency of the enzyme alanine oxidase.
5. pH of pancreatic juice is 7.5

V. Match the following: (5x1=5 Marks)

- | | |
|--------------------------------|---------------------------------|
| 1. High serum phosphate levels | a. Wheat |
| 2. ADH | b. Vasodilation |
| 3. Lysine | c. Aquaporin 2 |
| 4. NO | d. Dengue |
| 5. Aedes aegypti | e. Large doses of cod liver oil |

VI. Fill in the Blanks (6x1 = 6 Marks)

- Cirrhosis of liver causes reversal of _____ratio.
- _____ from the atria of the heart helps maintain blood volume.
- Negative nitrogen balance is a condition in which the nitrogen output is _____than output.
- Stepladder fever is caused by_____.
- _____ is an adipocytokine antagonist to insulin.
- The utilization of light energy to drive the synthesis of ATP is called as_____.

VII. Expand the following and give one significance of the same: (5x2 = 10 Marks)

- | | |
|---------------|--------|
| 1. FADH | 4. BCG |
| 2. PYY (3-36) | 5. THF |
| 3. IGF | |

VIII. Give any two differences between:

(3x3 = 9 Marks)

1. Slow twitch and Fast twitch muscle fibers
2. Endotoxin and Exotoxin
3. Soluble and insoluble fibre

SECTION - C

IX. Answer any two questions

(2x15 = 30 Marks)

1. A. Describe the Renin – Angiotensin – Aldosterone pathway (8 Marks)
B. Explain the digestion and absorption of proteins. (7 Marks)
2. A. Write a short note on role of microorganisms in nosocomial infections. (5 Marks)
B. Outline the factors leading to food spoilage. Discuss the conditions that favour microbial spoilage of food. (10 Marks)
3. A. Give an overview of biosynthesis of cholesterol (no structures). (5 Marks)
B. Write a short note on functions of phospholipids. (5 Marks)
C. Give a brief on four major lipoproteins in blood serum. Discuss the factors affecting the levels of each in the blood stream. (5 Marks)
