

DISCUSSION QUESTIONS (NUTRITION)

1. a) Giving two examples in each case, explain what is meant by the following terms

- i. Parasitism
- ii. Symbiosis
- iii. Saprophytism
- iv. Commensalisms

b) How are the parasites adapted to their mode of feeding?

2. a) what is an enzyme?

b) State the conventional system of enzymes nomenclature.

c) Give any three enzymes that conform to the above system and the substrates and products in each.

Enzyme	Substrate (food acted up on)	Products
i.		
ii.		
iii.		
iv.		
v.		

3. a) state the properties of enzymes.

b) Describe an experiment to show how temperature affects enzyme activity

c) Apart from temperature what other factors affect enzyme activity.

4. a) state the basic units of proteins

b) What is the difference between essential

c) Describe two ways you can show that egg albumen contains proteins in the laboratory.

5. a) using diagrams describe the life cycle of a tapeworm

b) describe how a tapeworm is adapted to its mode of life.

c) What are the dangers of parasitic mode of life?

6. The optimum PH for enzyme X is 2.00 and for enzyme Y is 9.00. suggest the name of the enzymes X and Y

a). The optimum PH for enzyme X is 2.00 and for enzyme Y is 9.00.suggest the name of the enzymes X and Y, and name the parts of the alimentary canal where you would expect to find each enzyme.

	Name of enzyme	Part of alimentary canal the enzyme is found.
X		
Y		

b) State three enzymes contained in the pancreatic juice, the food substance acted on by each enzyme and the product formed in each case

Enzyme	Food acted upon	Product formed
I.		
II.		
III.		

- a) State the contents of bile secretion in the liver.
- b) Explain the digestive functions of the bile contents.

7. describe an experiment that you would carry out in the laboratory to test for the presence of a non-reducing (complex) sugar in a solution of a food sample. In your description, state the use of each reagent used.

8. Write short notes about the following, giving an example in each case

- a) Monosaccharide.
- b) Disaccharides
- c) Polysaccharides

9.a) Describe the nitrogen cycle and suggest the role played by.

- I. Micro organisms
- II. Plants

- b) Show how nitrogen is lost and gained from the soil.
- c) What is the importance of the nitrogen cycle to the life of an animal

10. The table below shows the rate of an enzyme activity at different temperatures.

TEMPERATURE	RATE OF PRODUCTION PER MINUTE
0	1.8
5	2.4
10	3.7
15	4.9
20	7.4
25	9.3
30	13.4
35	17.2
40	19.0
45	19.0
50	8.1
55	1.7
60	0

- a) Draw a suitable graph for the above results.
- b) State the optimum temperature for this enzyme
- d) Explain the rate of activity at 37° c
- e) Explain the results at temperature above 45°c