

# UNIT EXAM KINGS PERORY

34 E I/II

## UNIT EXAM 1

Grade 10

Science

ENG MED

Time – 1 ½ Hr

Name .....

School .....

Institute .....

1. Which of the following is not a bio molecule

- 1) Protein                      2) Vitamin                      3) Lipid                      4) Nucleic Acid

2. To be the observation of a test to identify a monosaccharide is,

- 1) Appearance of a blue color                      2) Appearance of a reddish-brown precipitate  
3) Appearance of a brick red precipitate                      4) Appearance of red fat globules

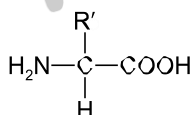
3. Which of the following is not a polysaccharide?

- 1) Starch                      2) Cellulose                      3) Fructose                      4) Glycogen

4. The protein in the feathers is

- 1) Hemoglobin                      2) Keratin                      3) Mayosin                      4) Osein

5. The structure of an amino acid is given. Which one is the carboxyl group?



- 1) NH<sub>2</sub>                      2) COOH                      3) H                      4) R

6. What are the fat-soluble vitamins?

- 1) A, D, E, K                      2) A, B, C, D                      3) A, B, E, K                      4) A, C, D, K

7. Compound vitamin is,

- 1) A                      2) C                      3) B                      4) K

8. Non-organic component in the body of organisms

- 1) Protein                      2) Water                      3) Lipid                      4) Carbohydrate

9. Wrong statement about Nucleic Acid

- 1) DNA and RNA are the types                      2) Storage of genetic information  
3) Performs Protein synthesis                      4) Regulating heat

10. Ratio of Hydrogen and Oxygen in Carbohydrates ,

- 1) 1:2                      2) 2:1                      3) 1:1                      4) 3:1

11. Type of carbohydrate in sucrose  
1) Monosaccharide      2) Disaccharide      3) Polysaccharide      4) Nothing
12. What is the component found in the plant cell wall?  
1) Starch      2) Cellulose      3) Glycogen      4) Maltose
13. The main components included in lipids are,  
1) C, H, O, N      2) C, H, O, N, P      3) C, H, O      4) C, H, O, P
14. Water-insoluble carbohydrate  
1) Starch      2) Glucose      3) Sucrose      4) Maltose
15. Mineral that contributes to blood clotting  
1) K      2) Ca      3) Mg      4) P
16. A chemical used in the laboratory to identify starch.  
1) Iodine      2) Sudan III      3) Copper Sulphate      4) Hydrochloric Acid
17. Foods containing lipids  
1) Bread      2) Lentils      3) Butter      4) Potato
18. The special property of water that allows aquatic organisms to breathe underwater  
1) Water is a solvent      2) Water is a conductive medium.  
3) The water is coolant      4) Becoming a habitat for organisms
19. What are the water-soluble vitamins?  
1) A, C      2) B, C      3) A, B      4) E, K
20. Which element is found in the human body in largest amount by mass?  
1) O      2) C      3) N      4) H
21. Which vitamin is the cause of anemia?  
1) A      2) B      3) C      4) D
22. What is another name for protein testing?  
1) Biuret Test      2) Starch Test  
3) Sudan III      4) Glucose
23. Which of the following statements about water is incorrect?  
1) It is a good solvent      2) It regulates body temperature  
3) It acts as a medium of life      4) It has low heat capacity
24. Which of the following vitamin- disease combination is wrong?  
1) Vitamin A - Night blindness      2) Vitamin K – Delays blood clotting  
3) Vitamin B - Anemia      4) Vitamin D - Scurvy
25. What is the structural unit of nucleic acid?  
1) Glucose      2) DNA      3) Amino Acid      4) Nucleotide

26. Which of the following is a biological substance used as a biological catalyst?  
 1) Hormone                      2) Enzyme                      3) Bile                      4) Nucleic acid
27. The human body is made up of 7% minerals, Which minerals make up  $\frac{3}{4}$  of that?  
 1) Fe, Cl                      2) Mn, Zn                      3) Ca, P                      4) Mg, Ca
28. Fatty acid with only single bonds between Carbon atoms is  
 1) Cis Fatty Acid                      2) Trans Fatty acid                      3) Saturated fatty acid                      4) Unsaturated fatty acid
29. An hormone is vertebrates that is formed by lipids  
 1) Growth hormone                      2) Adrenaline                      3) Insulin                      4) Oestrogen

30. Consider the following equation:  
 $2 \text{C}_6\text{H}_{12}\text{O}_6 \rightarrow \text{C}_{12}\text{H}_{22}\text{O}_{11} + \text{H}_2\text{O}$

Select the option that gives appropriate examples for A and B in the above equation:

Option	A	B
(1)	glucose	maltose
(2)	glucose	cellulose
(3)	fructose	starch
(4)	fructose	glycogen

## PART II /A

01. The chemical substances that make up the body of the organisms can be classified into two main categories. They are bio-organic compounds and bio-inorganic compounds.

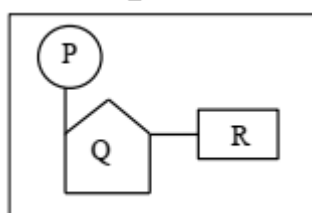
A.

I. Give 4 types of bio-organic compounds,

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II. The structural unit of one of the above bio-organic compound is shown below.



a. Name the structural unit shown above figure.

.....

b. Identify the components P, Q and R here.

P ..... Q ..... R .....

III. Give 2 functions of the polymer formed by the combination of components shown in the figure II question I.

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B.

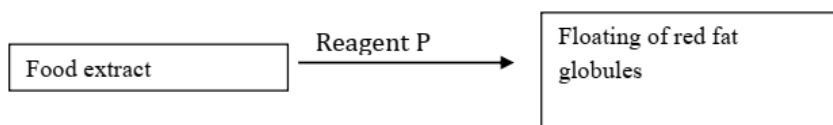
I. Complete the following chart:

Component	Elements that make up	Reagent	Observation
Glucose			
Protein	C, H, O, N (S)	Sudan III	

II. Give 2 unique properties of water that contribute to the survival of living organisms.

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02. One step of an activity performed to identify a certain nutrient in a student's food is given below.



i. What is the nutrient identified in the food extract?

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ii. Name the three elements that have contributed to the build-up of that nutrient.

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iii. Name the P reagent in the above diagram.

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iv. Name a lipid component that helps in the formation of cell membranes.

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v. Name the chemical substance and explain the observation you got in the activity to identify that water is present as a component in food.

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vi. Name a deficiency symptom that you see in plants due to the deficiency of the mineral calcium.

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## **PART II /B**

(01 ) (A) Carbohydrates are the most abundant organic compound. These compounds can be classified into 3 groups according to the way they are formed.

I) Name the 3 main groups of carbohydrates that can be classified in to and give an example for each group.

II) X is a compound relevant to one type of carbohydrate you mentioned above. When a certain reagent is added to a tube containing X and heated, a series of colours would be observed.

- a) What would be X?
- b) What is the reagent added to X?
- c) What is the last colour of the colour series that was observed?

(B) The highest proportion of the body mass of a living organism is composed of water which is an inorganic compound.

- 1) Which fraction of body weight of organisms is by water?
- 2) How is the solvent property of water mainly useful for aquatic animals?
- 3) Which property of the water is helpful to transport water to the upper parts of the plant?