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***Grade 09 – First Term Examination - 2024***

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புனித பேதுரு கல்லூரி, கொழும்பு 4

***St. Peter's College - Colombo 04***



Name: ''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''' Class: '''''''''''''''''''' No: ''''''''''''''''''

**Part - I**

* **Select the correct or most suitable answer.**

01. Organisms who cannot be seen by naked eye as an individual are known as “Micro-organisms”. But some of them can be seen without a microscope in some instances. Such group of Micro-organism is,

i. Bacteria ii. Virus iii. Protozoa iv. Fungi

02. Not an extreme environment,

i. Hot water springs ii. Ripen fruits

iii. Salt marshes iv. Petrol

03. Some statements about viruses are given below.

- Can observed by electron microscope only.

- Has a cellular organization.

- Display both living and non-living characteristics.

True statement/s,

i. A and B only ii. B and C only iii. A and C only iv. A, B, C all

04. Antibiotics are produced by,

i. Bacteria and Fungi ii. Bacteria and Viruses

iii. Bacteria and Algae iv. Fungi and Algae

05. Methane is,

i. A compound in compost fertilizer ii. A compound in Bio gas

iii. A compound in L.P. gas iv. A compound in Petrol

06. Not a disease infected by virus,

i. Ebola ii. Tetanus iii. AIDS iv. Common cold

07. Vaccine made by the technology of genetic engineering is,

i. Hepatitis B ii. Polio iii. Measles iv. Cholera

08. “Bio fertilizers” are,

i. Decaying plant and animal materials

ii. Cow dung, Poultry wastes etc.

iii. Nitrogen fixing bacteria that introduced to cultivation lands.

iv. Compost fertilizer

09. An instance where micro-organism are used in gene technology,

i. Production of bio gas ii. Production of golden rice

iii. Yoghurt production iv. Separating of plant fibers

10. When observing far objects,

i. Curvature of the lens should be reduced.

ii. No need to change the curvature of eye lens

iii. Curvature of the eye lens should be increased.

iv. Length of the eye ball should be reduced.

11. The result of high blood pressure inside the eye is lead to,

i. Cataract ii. Glaucoma

iii. Eye infections iv. Hypermetropia

12. Cartilaginous structure of ear is,

i. Ossicles ii. Ear lobe

iii. Cochlea iv. Semi-circular canal

13. Instrument suitable to measure a force is,

i. Table balance ii. Spring balance

iii. Pan balance iv. Triple beam balance

14. SI unit to measure a force is,

i. ii. iii. iv.

15. Symbols of Sodium, Chlorine, and Nitrogen in order,

i. ii. iii. iv.

16. Example for a hetero-atomic molecule,

i. Hydrogen molecule ii. Nitrogen molecule

iii. Water molecule iv. Iron molecule

17. Read the statements given below about atoms.

- All the atoms of a given element has a same atomic number.

- An atom is a neutral unit as it’s number of protons are equal to the number of neutrons.

- The atom consist of a large empty space and central nucleus is located in a small area.

Correct out of above are,

i. A and C ii. A and B iii. B and C iv. A, B, C all

18. A pressure can be exerted by,

i. All solids, liquids and gases ii. Only solids

iii. Only liquids iv. Only solids and liquids

19. - Compounds are formed by chemical combination of atoms.

- Elements in a compound cannot be shown the characteristic of the compound.

- Chemical compounds can be written as chemical formulae.

Correct statements are,

i. P, Q, R all ii. P and Q only iii. Q and R only iv. P and R only

20. SI unit to measure the pressure,

i. ii. iii. iv.

Part - II

* **First question is compulsory. Answer another four other than the first.**

01. Choose the correct answer given below and write in the space given in front of the question.

Eye infections , Leishmaniasis , Iris , Cochlea , biological weapons , Eustachian tube , Ciliary muscles , Tuberculosis , Semi-circular canal , bio-remediation , eye muscles , Vitreous humour , bio leaching , rashes , aqueous humour , retina , bio-pesticides

i. A bacterial disease spread through air (………………...)

ii. Extraction of metals using micro-organisms (………………...)

iii. Disease caused by a protozoan (………………...)

iv. Micro-organisms used to control insects that cause damage

to the crops (………………...)

v. Help to maintain the spherical shape of the eye (………………...)

vi. Eyes are fixed to the orbits (………………...)

vii. Removal of environmental pollutants using micro-organisms (………………...)

viii. Disease spread by contact (………………...)

ix. Images of objects are from on this layer (………………...)

x. Help to change the curvature of eye lens (………………...)

xi. Disease spread through insects such as “Konduruwa” (………………...)

xii. Micro-organisms used to harm animals and plants (………………...)

xiii. Control the amount of light enter to the eye (………………...)

xiv. Balance the pressure on either sides of the tympanic membrane (………………...)

xv. Auditory senses are transmitted to the auditory nerve (………………...)

xvi. Contributes to maintain the balance of the body (………………...)

**(16 Marks)**

02. Kamal said that he couldn’t read letters on the white board in the classroom as they were blurred. Doctor advised to use spectacles for Kamal.

i. Name the eye defect that Kamal has **(01)**

ii. Give a reason for it. **(01)**

iii. Which type of lens that Kamal has to use to correct it. **(01)**

iv. Draw a ray diagram to show how light rays focus on Kamal’s eye, before he use spectacles. **(02)**

v. Draw a ray diagram to show which the light rays focus on corrected eye after using spectacles. **(02)**

vi. Define words given below.

a). Binocular vision b). Stereoscopic vision **(02)**

vii. Write two safety precautions that should be followed to maintain healthy eyes. **(02)**

**(11 Marks)**

03. “Atom” is the building unit of matter. Scientists have identified about 120 types of elements. They are using symbols of identify each of them easily.

i. Define words given below.

a). Element b). Mixture c). Molecule **(03)**

ii. An atom of element contain 19 protons. It’s mass number is 39.

a). Denote the atomic number and mass number of atom in a standard method.**(02)**

b). How many electrons are there in ? **(01)**

c). Write the number of neutrons in . **(01)**

iii. Write an example for each given below.

a). A heterogeneous mixture

b). A homogeneous mixture **(02)**

iv. Draw simple diagrams to illustrate molecules given below.

a). Sodium Chloride b). Ammonia **(02)**

**(11 Marks)**

04. Simply a force means a pull or a push.

A). i. Write two things that can be done by applying a force. **(02)**

ii. Force is considered as a vector quantity. Give reasons for it. **(02)**

iii. A force can be represented graphically. Write down the characteristics of a force for each given below.

a). By the length of a segment of straight line: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b). By an arrowhead: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c). By a dot at the starting point of the straight line: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **(03)**

B). Micro-organisms are used to get beneficial impacts by human.

i. Write two reasons to use them economically for large scale productions. **(02)**

ii. What is an “Antibiotic”? **(01)**

iii. Write two examples for antibiotics. **(02)**

05. Manipulation of pressure is useful in daily life.

i. What is “Pressure”? **(01)**

ii. Write two factors affecting pressure. **(02)**

iii. pressure is exerted by a cuboidal object with 900 Newton’s weight. Find the area of the object which contact the surface. **(02)**

iv. a). Write two instances where pressure is increased in daily life. **(02)**

b). Write two instances where pressure is decreased in daily life. **(02)**

v. Write two adaptations that can be seen among organisms to increase pressure. **(02)**

**(11 Marks)**

06. State whether the following statements are true () or false ().

i. Ozone layer is controlled the amount of ultra violet rays which reach

to the earth surface. ( )

ii. Most of the substance naturally found are mixtures, not pure substances ( )

iii. The bacteria commonly used in production of yoghurt is Azetobactor ( )

iv. Ossicles are situated in the middle ear. ( )

v. Vinegar is a pure substance. ( )

vi. Glucose contains elements only C, H, O. ( )

vii. Tympanic membrane is directed sound waves to the ear. ( )

viii. Separation of different type of fuel using cruid oil (petroleum)

by evaporation ( )

ix. Able to see far objects clearly, but not closer objects is myopia. ( )

x. Glaucoma is effected the person who is having diabetes only. ( )

xi. Convex lenses converge parallel beam of light to the centre of the lens. ( )