



## Royal College - Colombo 07

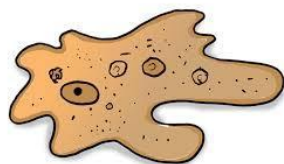
Grade 9 – First Term Test – April 2019

### Science – I

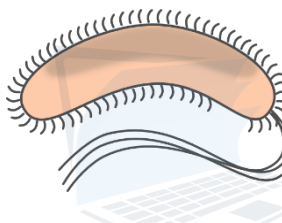
Name :- ..... Grade : -..... Index number:-.....

- Select the correct or most suitable answer for each of the following questions from (1) to (20)
- Underline the correct answer.

(1) Following diagram illustrate some micro-organism. Answer with the correct order of them is,



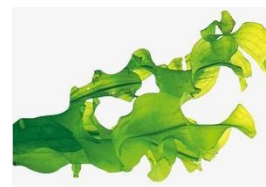
C



A



D

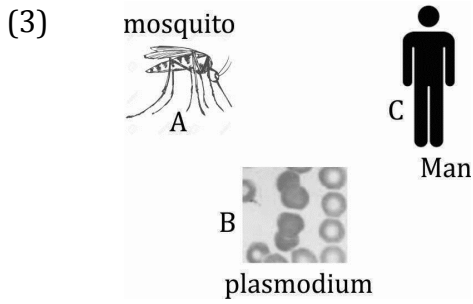


B

- (1) bacterium, amoeba, alga, fungus.
- (2) amoeba, bacterium, fungus, alga
- (3) fungus, amoeba, alga, bacterium
- (4) alga, fungus, bacterium, amoeba

(2) In the yoghurt industry, an acid prepared by micro-organisms is used to preserve and control the damage to yoghurt by other micro-organisms. This acid is,

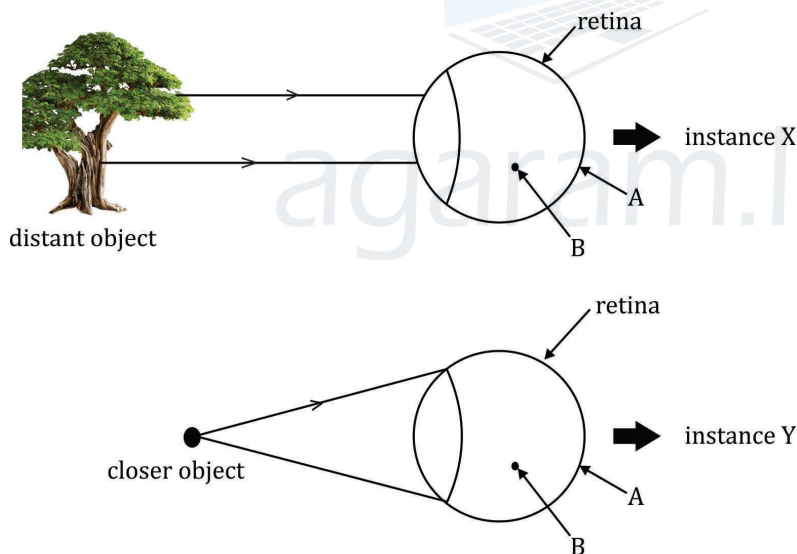
- (1) carbonic acid
- (2) sulphuric acid
- (3) lactic acid
- (4) hydrochloric acid



Correct order of A, B and C is,

	A	B	C
(1)	host	parasite	vector
(2)	vector	host	parasite
(3)	vector	parasite	host
(4)	host	vector	parasite

(4) Following diagrams illustrate the conditions of a healthy eye when looking at a closer and a distant object. Which answer is correct from the following?



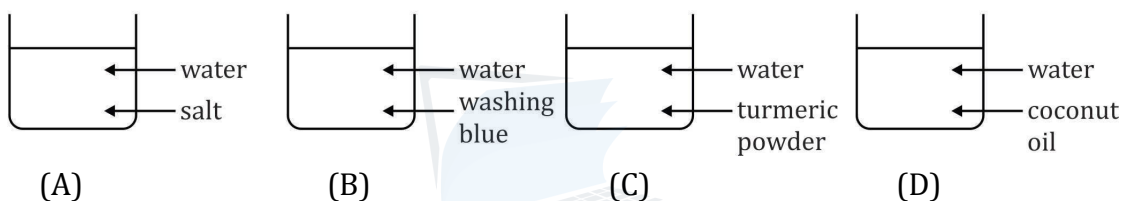
- (1) In both instances, image is formed at B.
- (2) image is formed at B in instance X.
- (3) image is formed at B in instance Y
- (4) In both instances, image is formed at A.

(5) The first vibratory part of the human ear during the transmission of sound waves is,

- (1) tympanic membrane
- (2) ear lobe
- (3) ear ossicles
- (4) fluid in cochlea

- (6) Animal with a well developed binocular vision is,  
 (1) loris (2) mongoose (3) squirrel (4) eagle
- (7) Number of different elements in  $KMnO_4$  is,  
 (1) 6 (2) 3 (3) 4 (4) 1
- (8) Correct statement regarding the  $^{1735}Cl$  atom is,  
 (1) there are 35 protons in it.  
 (2) there are 18 electrons in it.  
 (3) there are 17 neutrons in it.  
 (4) there are 17 protons, 18 electrons, 18 neutrons in it.

- (9) Following are some of the mixtures.



Homogeneous mixture out of them is,

- (1) A (2) B (3) C (4) D
- (10) Weight of a 20 kg mass is,  
 (1) 2 N (2) 20 kg (3) 200 N (4) 20 N
- (11) Following are some of the effects of a force,  
 A) moving a stationary object.  
 B) stopping of a moving object.  
 C) changing the speed of a moving object.  
 D) changing the direction of motion and the shape of an object.  
 Correct statements out of the above are,  
 (1) A and B only (2) A and C only  
 (3) A, B and C only (4) A, B, C and D all.

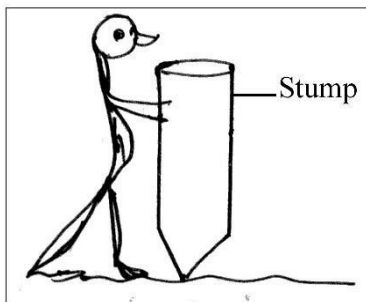
- (12)



Area of the foot of the elephant, standing on one leg is  $0.4 \text{ m}^2$ . If the mass of the elephant is 2000 kg, pressure exerted by the elephant is,

- (1) 50000 Pa      (2) 5000 Pa      (3) 500 Pa      (4) 50 Pa

(13)



A village-man used to point one end of a stump / club before he fixes it to the ground. Advantage of this is,

- (1) to increase the pressure with a large force.  
 (2) to increase the pressure with a small force.  
 (3) to decrease the pressure with a small force.  
 (4) to decrease the pressure with a large force.

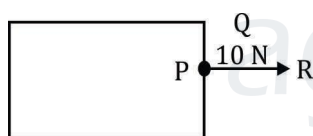
(14)



These diagrams illustrate four pieces of thread. Their area of cross-sections are different. Piece of string suitable to cut a soap with a lesser effort is,

- (1) D      (2) B      (3) A      (4) C

(15) Following diagram illustrates the application of a force on an object.



Correct order of P, Q and R is given by,

- (1) magnitude, direction, point of action.  
 (2) point of action, magnitude, direction .  
 (3) direction, point to action, magnitude  
 (4) point of action, direction, magnitude

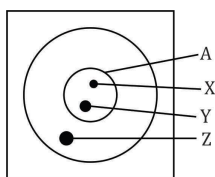
(16) Functions of different parts of an eye are given below,

- A - conduction of messages between eye and brain.  
 B - focusing the light onto retina, that enters into the eye.  
 C - controlling the size of the pupil.  
 D - holding the eye lens.

Parts of the eye performing the above functions to the correct order are,

- (1) ciliary muscle, iris, eye lens, optic nerve.  
 (2) iris, ciliary muscle, eye lens, optic nerve.  
 (3) eye lens, optic nerve, iris, ciliary muscle.  
 (4) optic nerve, eye lens, iris, ciliary muscle.

(17) Following is an atomic model, According to this model,



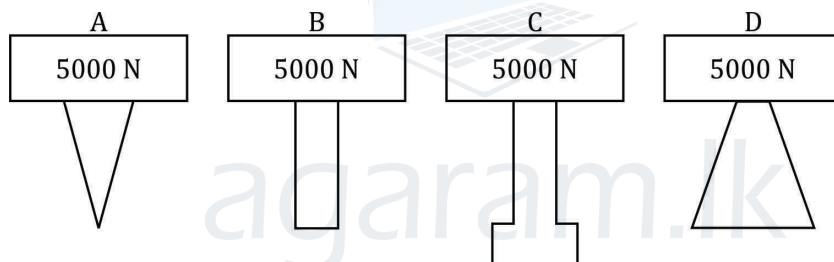
- (1) A is the atom.  
 (2) X and Y are protons and electrons.  
 (3) X and Z are protons and electrons.  
 (4) A is the nucleus, Z is protons.

(18) Following are some of the methods used to isolate components in mixtures.

Answer with the incorrect method is,

- (1) mining gems - distillation  
 (2) extraction of salt from sea water – evaporation.  
 (3) extraction of cinnamon oil from leaves – steam distillation.  
 (4) Extracting gold from sand → directing water towards it.

(19) Out of the following instances, the instance that applies the highest pressure on the ground is,



- (1) D                      (2) C                      (3) B                      (4) A

(20) Consider the following statements,

- A - observing the environment clearly.  
 B - identification of problems through observations.  
 C - thinking the solutions for problems identified.  
 D - testing the solutions.

Characteristic / characteristics that you should develop as a student learning science is / are,

- (1) A only                      (2) B only  
 (3) A, B and C                      (4) A, B, C and D all.



## Royal College - Colombo 07

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Grade 9 – First Term Test – April 2019

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Science – II

úoHdj – II

Name :- ..... Grade : -..... Index number:-.....

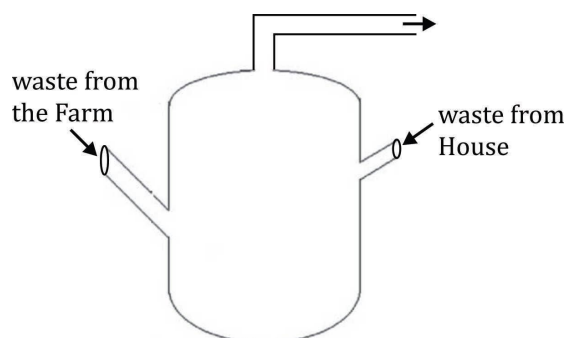
**Write the answers for five questions including the first question.**

**(Question No. 1 is compulsory)**

- (1) A) Micro-organisms are a group of organisms that bring both advantages and harms to man.

- (i) What are micro-organisms? (1 mark)
- (ii) Mention two main groups of micro-organisms. (1 mark)
- (iii) Name a group of autotrophic micro-organisms. (1 mark)
- (iv) Write two habitats where micro-organisms live in abundance. (1 mark)
- (v) Mention one extreme environment where micro-organisms live. (1 mark)
- (vi) Write one use of micro-organisms. (1 mark)

- B) Following is a diagram of a bio-gas unit.

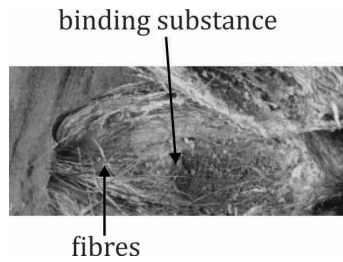


- (i) Mention two raw materials added to the bio-gas unit. (2 marks)
- (ii) What is the chemical name used for bio gas? (1 mark)
- (iii) Write one advantage of using a bio gas at home. (1 mark)
- (iv) Do micro-organisms act under aerobic or anaerobic conditions in

the bio gas unit?

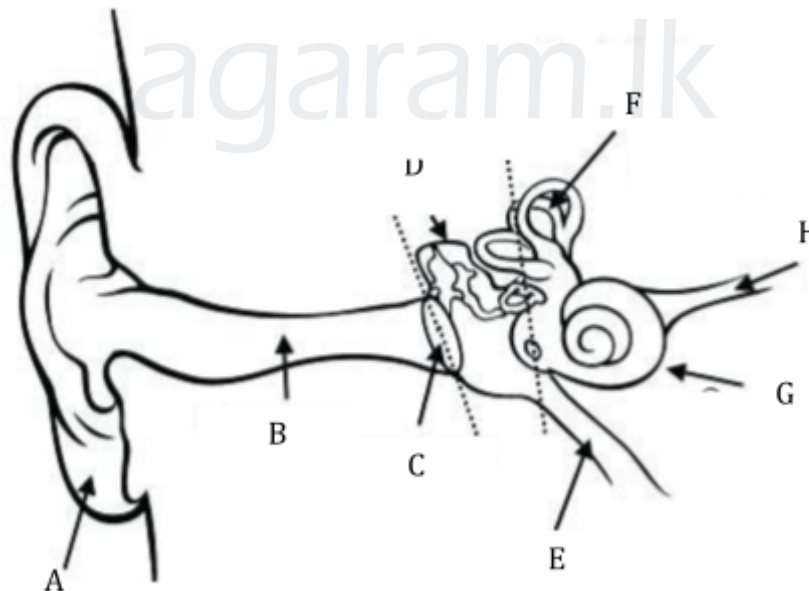
(1 mark)

C) micro-organisms are used to separate fibres in coir industry.



- (i) What precaution is used to separate fibres in coir industry? (1 mark)
- (ii) What is the binding substance present among fibres? (1 mark)
- (iii) Name the enzyme secrete by bacteria to digest that binding substance. (1 mark)
- (iv) Mention one product based on plant fibres. (1 mark)
- (v) Write another plant other than coconut that is used to separate fibres. (1 mark)

(2) Following is a diagram of a human ear with parts.

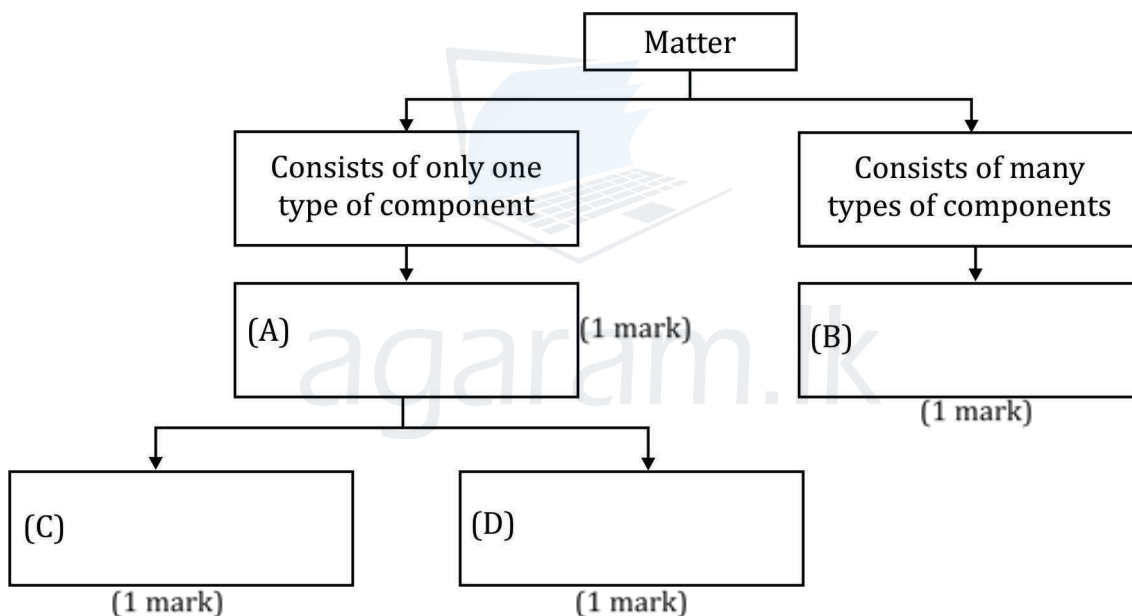


- (i) Name B, C, E, G and H parts. (3 marks)
- (ii) Write the importance of E. (1 mark)

- (iii) Write down by means of a flow chart the pathway taken by a sound wave during the transmission from A to brain. (2 marks)
- (iv) Mention two methods that can cause for the deafness of a person. (2 marks)
- (v) Write two steps you can take to protect your ears. (2 marks)
- (vi) Mention the limits of hearing of a healthy man. (1 mark)

(3) Matter is one of the major component in the environment. Matter consists of different properties and there are different types of matter in our environment.

- (i) Define the term "matter". (2 marks)
- (ii) Copy the following chart to your answer scrip and fill in the blanks.



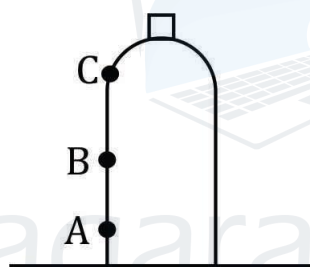
(iii) Copy down the following table and complete it.

Atom of the element	1123Na	612C	1735Cl	
Number of protons				(1 mark)
Number of electrons				(1 mark)
Number of neutrons				(1 mark)
Mass number				(1 mark)

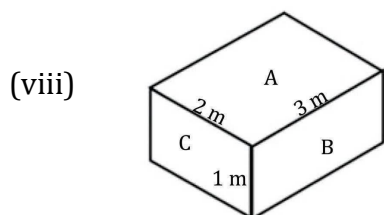


Atomic number				(1 mark)
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- (4) Force can be used to do number of works.
- Define the term “force” (1 mark)
  - Mention two properties of a force. (2 marks)
  - 5N force is applied on a block of wood. Represent it using a suitable scale. (2 marks)
  - Why is it considered force as a vector quantity? (2 marks)
  - Name a laboratory equipment used to measure the magnitude of a force. (1 mark)
  - What is the weight applied on the palm, when 100 g mass is placed on it? (2 marks)
  - What is the most suitable point of application to topple the bottle with the minimum force? (1 mark)



- (5) Pressure is a useful concept applied in our day-to-day life.
- Define the term “pressure”? (1 mark)
  - Write down the equation used to calculate the pressure. (1 mark)
  - Write an advantage of using a broad belt for the school bag. (1 mark)
  - Mention a unit of measuring pressure. (1 mark)
  - Write a special property of a tyre in a vehicle that runs in a muddy place. (1 mark)
  - What is the advantage of sharpening a knife? Write the reason using the knowledge on pressure? (1 mark)
  - If 100 Pa pressure is applied on an area of 5 m<sup>2</sup>. What is the perpendicular force applied (2 marks)



Which side exerts the minimum pressure on the ground? (1 mark)

(ix) If the weight of the above wooden block is 400 N, calculate the pressure when side C is placed on the ground. (2 marks)

(6) Write short answers for each of the following questions.

- (i) Name the group of micro-organisms which shows both living and non-living characteristics and electron microscopic. (1 mark)
- (ii) What is the technology used to remove environmental pollutants by the microbial activities? (1 mark)
- (iii) Explain what is meant by 'short sightedness'. (1 mark)
- (iv) What is the main symptom in the disease glaucoma? (1 mark)
- (v) When a person is deaf in born, he shows another difficulty. What is that? (1 mark)
- (vi) Give an example for a homogeneous mixture. (1 mark)
- (vii) Write the type of sub-atomic particle with a negative charge. (1 mark)
- (viii) What is the defect of the eye which use a convex lens as the solution.
- (ix) What is meant by the mass of an object? (1 mark)
- (x) Give an example for a 'quantity' which is having a magnitude, but no direction.
- (xi) Mention a substance that can be found in a vaccination.