



विद्या सर्वार्थ साधिका

ANANDALAYA  
ANNUAL EXAMINATION  
Class: VIII

Subject: Science

MM: 80

Date : 03-03-2023

Time: 3 hours

General Instructions:

- (i) There are four sections with 36 questions in this question paper. All questions are compulsory.
- (ii) Section A consists of 16 Objective type questions carrying 1 mark each.
- (iii) Section B consists of 8 Very short answer questions carrying 2 marks each.
- (iv) Section C consists of 6 Short answer questions carrying 3 marks each.
- (v) Section D consists of 6 Long answer questions carrying 5 marks each.

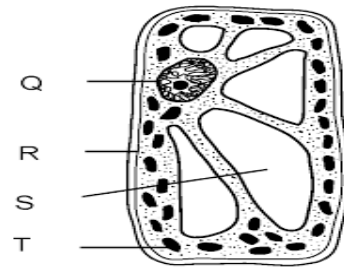
**SECTION A**

- 1 The number of images formed by two mirrors will be maximum when their reflecting surfaces are kept at \_\_\_\_\_. (1)  
(A)  $0^\circ$  (B)  $90^\circ$  (C)  $180^\circ$  (D)  $45^\circ$
- 2 Choose the appropriate answer from the options given: (1)  
I. Plantation on the roadside and elsewhere can reduce noise pollution.  
II. One of the causes of temporary or even permanent impairment of hearing is noise pollution.  
III. Sound of 60 dB is noisy.  
(A) I and II are correct but III is not correct  
(B) I and III are correct but II is not correct  
(C) II and III are correct but I is not correct  
(D) I, II and III are correct
- 3 Which part of our body vibrates to produce sound? (1)  
(A) wind pipe (B) larynx (C) tongue (D) trachea
- 4 A student was given Magnesium, Zinc, Iron and Copper metals. The student put these metals in dilute Hydrochloric acid taken in test tubes A, B, C and D respectively. Choose the correct observations made by the student: (1)  
(i) Effervescence was seen in test tubes A, B and D  
(ii) Effervescence was seen in test tubes A, B and C  
(iii) Effervescence was seen in test tubes B, C and D  
(iv) No Effervescence was seen in any test tubes  
(A) (ii) (B) (i) (C) (iv) (D) (iii)
- 5 It is an important fraction of petroleum. It is further distilled to get lubricating oil and paraffin wax. (1)  
(A) Petroleum gas (B) Heavy oil (C) Anthracite (D) Residue

- 6 Renewable resources need to be conserved because \_\_\_\_\_. (1)  
 (A) we are using them faster than they are replenished by nature.  
 (B) they are slowly disappearing from the earth.  
 (C) if we overuse them, nature will stop replacing them.  
 (D) all of these

- 7 The part of earth which supports the biodiversity is called \_\_\_\_\_. (1)  
 (A) Biosphere (C) Ecosystem  
 (B) Sanctuary (D) Zoo

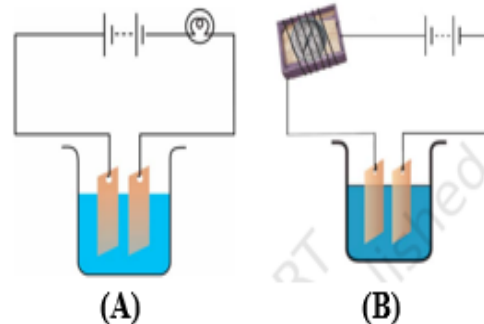
- 8 Cell is the structural and functional unit of life. It has many functional regions to survive in all conditions.



In the given figure, cell parts are labelled as Q, R, S and T. Identify which part indicates the cell structure that controls the molecular movements between cells.

- (A) T (B) Q (C) S (D) R (1)
- 9 Animals exhibiting external fertilisation produce a large number of gametes because \_\_\_\_\_. (1)  
 (A) the animals are small in size and want to produce more offsprings.  
 (B) food is available in plenty in water.  
 (C) to ensure better chance of fertilisation.  
 (D) water promotes production of large number of gametes.

- 10 Arun observed that the bulb in the circuit shown in figure A was not glowing. Then he changed the circuit as shown in figure B. He observed deflection in the magnetic compass.



- (a) What does the deflection in magnetic compass indicate?  
 (b) Why did the bulb not glow in figure A?

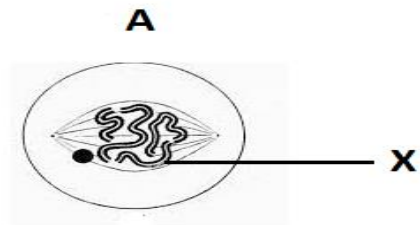
- 11 The angle between incident ray and reflected ray is  $100^\circ$ . What is the value of angle of incidence? (1)

- 12 Give reason for the following: (1)  
 (a) School bells are made up of metals.  
 (b) Electric wires are made up of copper.

- 13 How does the fire extinguisher control fire? (1)

- 14 Industries should switch over to cleaner fuels such as CNG and LPG in the Taj Mahal Zone in Agra. Justify your answer. (1)

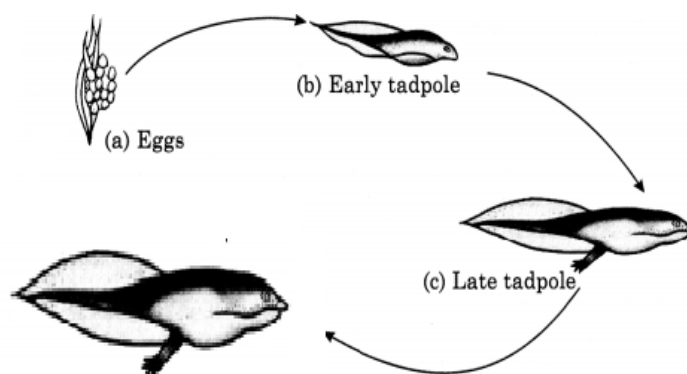
- 15 The organism 'A' is an unicellular and microscopic organism. The figure shows that 'A' is under the process of cell division to form new cells. Observe the given figure and name the part labelled as 'X' in organism 'A'.



- 16 Fill in the blanks with appropriate word to complete the given sentences: (1)
- (i) The environmental impact due to the clearance of large patches of forest is \_\_\_\_\_.
- (ii) A particular area along with the living and non-living components is \_\_\_\_\_.

### SECTION B

- 17 Write any two points of differences between regular and diffused reflection. (2)
- 18 Give reason for the following: (2)
- (a) A night bird, like owl can see very well in the night but not during the day.
- (b) The movies that we see are actually a number of separate pictures in a proper sequence, but we see them in motion.
- 19 In a tug of war, side A applies 10N force and side B applies 10N force. Which side the rope will move and what will be the net force acting on the rope? (2)
- 20 (a) Hema and Heena are best friends. One evening, Hema went to Heena and found her working in the kitchen. The gas burner was emitting yellow flame instead of blue flame. Hema immediately asked Heena to put off the gas. She cleaned the holes of the gas burner with a needle. The burner was emitting blue flame now. Why was the burner emitting a yellow flame? (2)
- (b) In an experiment, 4.5 kg of fuel was completely burnt. During this process, the heat produced was 180000 kJ. What is the calorific value of the fuel?
- 21 What can be the possible reasons for the low visibility during winters? (2)
- 22 The life cycle of frog has distinct phases, that is egg, larval and adult stage. The figure given below depicts the incomplete life cycle of a frog. (2)



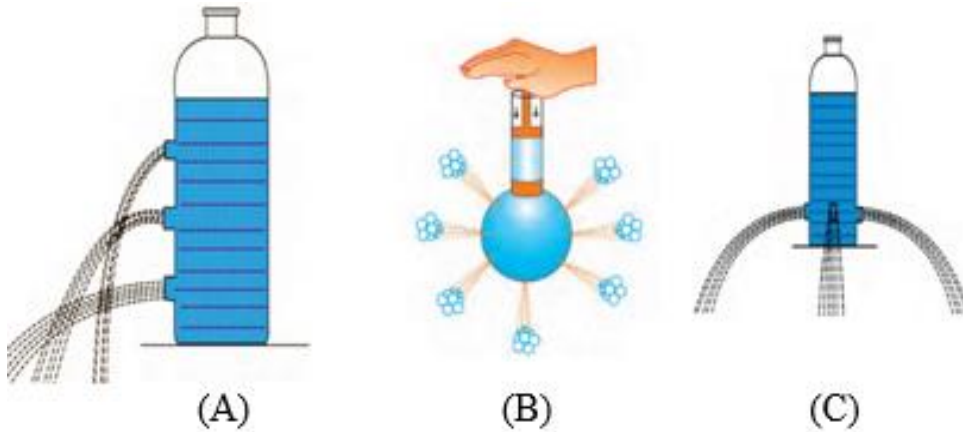
- (a) Why did the organism was not able to metamorphose and complete the life cycle?
- (b) Suggest the scientific solution so that the frog completes its life cycle.

- 23 Shyam being very inquisitive, took the thin layer of onion peel with a drop of water on the glass slide. He placed the coverslip on it and started observing the slide under a microscope. But he was unable to see the cells of onion peel properly. (2)  
What will you suggest to him so that he could observe the cells of onion peel properly? why?

- 24 Explain how deforestation is associated with global warming. (2)

### SECTION C

- 25 Observe the given figures A, B and C carefully. Identify the characteristic of liquid pressure depicted in each figure. Justify your answer with the scientific reason. (3)



- 26 When a person stops pedalling a bicycle, it gradually slows down and finally comes to a rest. On the basis of the above situation, answer the following questions: (3)  
(a) Which force is responsible for bringing the bicycle to rest?  
(b) Is it contact or non-contact force? Justify your answer.  
(c) Briefly explain, how does this force come into play in bringing the bicycle to rest?
- 27 Write one example for each of the following: (3)  
(a) A metal which is so soft that it can be cut with a knife  
(b) A non-metal which is the hardest substance.  
(c) A non-metal which exists as liquid at room temperature.
- 28 (a) Why is topsoil considered to be a non-renewable resource even though it is constantly being formed by weathering of rocks? (3)  
(b) List four things that you can do to prevent 'Energy Crisis'.
- 29 Write scientific reason for the following statements: (3)  
(a) A single cell can perform all the functions of life, still we are made up of many cells.  
(b) A plant cell has a large vacuole.  
(c) Cell membrane is one of the main functional regions of a cell.
- 30 (a) Name the gland which produces adrenaline and growth hormone. (3)  
(b) What is the cause of goitre in human beings?  
(c) List two changes in physical appearance in males, at the onset of puberty

## SECTION D

- 31 (a) What is electroplating? (5)  
(b) With the help of a suitable diagram, explain electrolytic refining of copper.  
(c) Write any one advantage and disadvantage of electroplating.
- 32 (a) Write audible and inaudible ranges of human ear. (5)  
(b) How is loudness of sound different from pitch of sound?  
(c) Draw two separate diagrams for the following cases:  
(i) two sound waves of same loudness but different pitches.  
(ii) two sound waves of same pitch but different loudness.
- 33 (a) Rohan took a match stick and observed it carefully. He kept it in the air for about half an hour but observed no change. But, when he rubbed it at the side of the box, it caught fire. He got confused and asked his teacher, whether he should place it in the category of combustible or non-combustible substances. What do you think the teacher must have suggested to him? Why? (5)  
(b) Water is used as a fire extinguisher. How does it help to put out the fire?  
(c) What type of combustion will it be if the ignition temperature of the fuel is lower than the room temperature?
- 34 (a) "Excess of everything is bad". Explain this with an example of carbon dioxide levels on earth. (5)  
(b) A lot of dry leaves are collected in your society garden and are burnt every day. Do you think that it is right to do so? If not, what should be done to dispose-off the dry leaves?  
(c) What type of combustion will it be if the ignition temperature of the fuel is lower than the room temperature?
- 35 (a) Schematically represent the sex determination in humans and explain it. (5)  
(b) Explain the role of estrogen hormone in human female.
- 36 Human activities such as deforestation, hunting and encroachment have led to degradation of forests and extinction of many species of plants and animals. Government of India has taken many steps to conserve forests and wildlife. In order to protect our flora and fauna, sanctuaries, national parks and biosphere reserves have been earmarked. The government has launched 'Project Tiger' to protect tiger population. (5)  
(a) Name one national park and wildlife sanctuary of Panchmarhi Biosphere Reserve.  
(b) What is the unique feature of 'Satpura Tiger reserve'?  
(c) 'Conservation of biodiversity is important to all of us'. Justify the statement by writing two scientific reasons.  
(d) Write one difference between sanctuaries and national parks.