



INDIAN SCHOOL SOHAR
TERM II EXAMINATION (2022-23)
SCIENCE

CLASS: VIII
DATE: 12 /3/2023

MAX. MARKS: 80
TIME: 3 HOURS

General Instructions:

- i. This question paper consists of 39 questions in 5 sections.
- ii. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- iii. **Section A** consists of 20 objective type questions carrying 1 mark each.
- iv. **Section B** consists of 6 Very Short questions carrying 02 marks each. Answers to these questions should in the range of 30 to 50 words.
- v. **Section C** consists of 7 Short Answer type questions carrying 03 marks each. Answers to these questions should in the range of 50 to 80 words.
- vi. **Section D** consists of 3 Long Answer type questions carrying 05 marks each. Answer to these questions should be in the range of 80 to 120 words.
- vii. **Section E** consists of 3 source-based/case-based units of assessment of 04 marks each with sub-parts.

SECTION – A		
Select and write one most appropriate option out of the four options given for each of the questions 1 - 20		
Q.No	Questions	Marks
1	An element is soft and can be cut easily with a knife. It is very reactive and cannot be kept in the air. It reacts vigorously with water. This element is most likely to be: (a) magnesium (b) potassium (c) phosphorous (d) aluminium	1
2	The structural and functional unit of life called cell was discovered by: (a) Robert Boyle (b) Charles Darwin (c) Robert Koch (d) Robert Hooke	1
3	Fertilization results immediately in the formation of: (a) a zygote (b) an embryo (c) an egg (d) a foetus	1
4	The hormone which is associated with puberty in male is: (a) oestrogen (b) adrenaline (c) testosterone (d) insulin	1
5	Which of the following is NOT an effect of force? (a) A force can change the speed of a moving object. (b) A force can change the direction of a moving object. (c) A force can change the composition of an object. (d) A force can change the shape and size of an object.	1
6	A big wooden box is being pushed on the ground from East to West direction. The force of friction due to ground will act on this box towards: (a) north to west (b) south to east (c) east to west (d) west to east	1
7	Sound can travel through: (a) gases only (b) solids only (c) liquids only (d) solids, liquids and gases	1
8	The angle between an incident ray and the plane mirror is 30°. The total angle between the incident ray and the reflected ray will be: (a) 30° (b) 60° (c) 90° (d) 120°	1
9	A vessel is dumped in open for a long time and a green coating is formed on its surface. The vessel must be made of: (a) zinc (b) magnesium (c) iron (d) copper	1
10	The parts which are NOT present in an animal cell are: A. Cell membrane B. Chloroplast C. Cell wall D. Mitochondria (a) A and B (b) B and C (c) A and D (d) B and D	1

11	Which of the following is NOT an advantage of friction? (a) It enables us to draw in a paper. (b) It enables us to hold things. (c) It causes wear and tear in machine parts. (d) It enables vehicles to move on the ground.	1
12	Which of the following produces diffused reflection of light? (a) mirror on a dressing table (b) water surface of a pond (c) a polished metallic surface (d) wooden table top	1
13	A musical instrument is producing a continuous note. This note cannot be heard by a person having a normal hearing range. This means the note must be then passing through: (a) water (b) wax (c) vacuum (d) empty vessel	1
14	Which of the following is NOT an example of muscular force? (a) a porter carrying a load on a wheel-barrow (b) an apple falling from a tree (c) a child riding a bicycle (d) a person drawing water from a well	1
15	Pimples and acne are formed due to the increased activity of: A. adrenal gland B. sebaceous glands C. thyroid gland D. sweat gland (a) A and B (b) B and C (c) A and C (d) B and D	1
16	Which of the following is NOT a viviparous animal? (a) rat (b) pigeon (c) rabbit (d) cat	1

Q. no 17 to 20 are Assertion - Reasoning based questions.

These consist of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below:


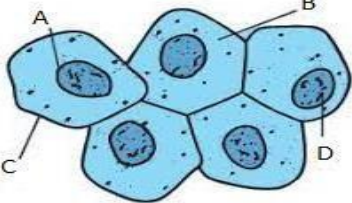
- (a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true and R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is False but R is true.

17	Assertion (A): Everyone should have a bath at least once every day. Reason (R): It is more necessary for teenagers because the increased activity of sweat glands sometimes make the body smelly.	1
18	Assertion (A): To prevent the contact of phosphorus with air, it is stored in water. Reason (R): Phosphorus is a very reactive non-metal and catches fire if exposed to air.	1
19	Assertion (A): The force of friction will increase if the two surfaces are pressed harder. Reason (R): The substances which reduce friction are called lubricants.	1
20	Assertion (A): A tissue is a group of similar cells performing a specific function. Reason (R): The size of the cells has direct relation with the size of the body of the animal or plant.	1

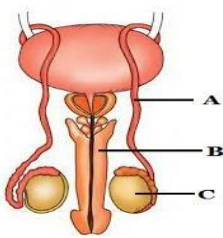
SECTION – B

Q. no. 21 to 26 are very short answer questions.

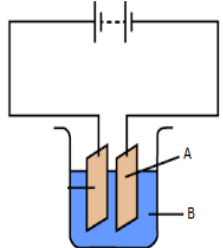
21	Name the property related to the following situations. (a) To allow metals to be hammered into thin sheets. (b) To enable metals to be drawn into wires. (OR) (a) If a metal coin is dropped on a hard floor, it produces a ringing sound. What is this property of metals known as? (b) Silver is used to make sweet decorating foil and aluminium is used to make food wrapping foil. Which property of these metals helps in making these thin foils?	2
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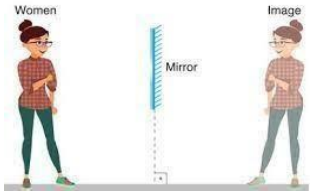
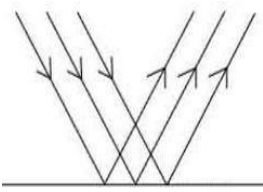
22	Identify the given structure and write its function.		2
23	What is metamorphosis? Give two examples of organisms showing metamorphosis.		2
24	Identify the labelled parts mentioned A, B, C and D.		2
25	What name is given to the onset and permanent stoppage of menstruation in human females? At what age do both occur? (OR) Discuss the importance of nutritional food in the diet of an adolescent.		2
26	What is the nature of the following oxides? (a) Magnesium oxide (b) Sulphur dioxide		2
SECTION - C Q.no. 27 to 33 are short answer questions.			
27	What happens when an iron nail is placed in copper sulphate solution? Write word equation of the reaction involved.		3
28	(a) An amoeba cell and a white blood cell in human blood can change its shape. What is the difference between an amoeba cell and a white blood cell? (b) Out of the bacterial cell and white blood cell, which one is (a) eukaryotic cell and (b) prokaryotic cell?		3
29	(a) What type of couple is helped to have babies by the <i>in vitro</i> fertilisation technique? (b) Describe the <i>in vitro</i> fertilisation technique of reproduction in humans. (OR) (a) Why does a female frog lay hundreds of eggs? (b) What is nucleolus?		3
30	(a) What is the relation between pressure, force and area? State the unit in which pressure is measured. (b) Explain why, school bags are provided with wide straps to carry them.		3
31	(a) What will happen if the water in which tadpoles are growing does not contain sufficient iodine? (b) Which hormone lowers the blood sugar level in humans? Name the gland which secretes this hormone.		3

32	<p>Give reasons:</p> <p>(a) Fine powder is sprinkled on carom board.</p> <p>(b) A knife with blunt end is rubbed against rough surface to make it sharp.</p> <p>(c) Threading is present on new vehicle tyres.</p> <p style="text-align: center;">(OR)</p> <p>Which part of a shoe wears away first? Give reason for your answer.</p> <p>(b) Why do brake pads of bicycles have to be replaced quite often?</p> <p>(c) Why cars, aeroplanes and rockets have streamlined shape?</p>	3
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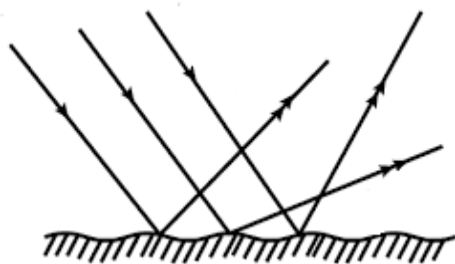
33	<p>(a) Identify the parts labelled A, B and C.</p> <p>(b) Mention the parts where:</p> <p>(i) Sperms are produced.</p> <p>(ii) Female gamete is produced.</p> <p>(iii) The part of the female reproductive system where embryo gets embedded.</p>		3
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SECTION – D
Q.no. 34 to 36 are Long answer questions

34	<p>(a) A conduction tester is made by a bulb. But it does not detect weak currents. How can we make another tester which can detect weak currents?</p> <p>(b) While testing the conductivity of certain liquids, it was observed that distilled water is a poor conductor of electricity and when a spoon full of salt dissolved in it shows good conductivity. What might be the reason behind this?</p> <p>(c) When the free ends of a conductivity tester (made by using a battery connected to a wire wound around a compass) are dipped into a solution, the magnetic needle shows deflection. Give the reason behind this.</p> <p>(d) Mention any two applications of electroplating.</p> <p style="text-align: center;">(OR)</p> <p>(a) The figure shows the electroplating of copper. Identify the parts labelled A and B.</p> <p>(b) While passing electricity through the solution, the free copper in the solution gets drawn to the electrode connected to the negative terminal of the battery and gets deposited on it. Explain how the loss of copper from the solution is compensated? Mention the changes that occur when an electric current passes through a conducting solution. (any two)</p> <p>(c) In case of a fire, before the firemen use the water hoses, they shut off the main electrical supply for the area. Explain why they do this.</p>		5
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35	<p>(a) Identify the phenomena depicted given below.</p> <p>(i) </p> <p>(ii) </p>	5
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(iii)



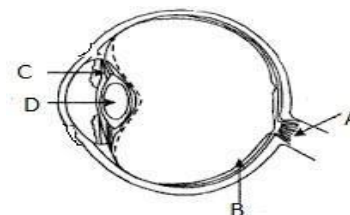
(iv)

(b) Rohan twisted the string and made the card twirl rapidly as shown in the figure. Though the bird and the cage are drawn on opposite sides of a card, we see the bird inside the cage on twirling the card rapidly. State reason for your observation.



(OR)

(a) Identify the parts labelled A, B, C and D.



(b) Identify the cells that help us see in bright and dim light.

(c) At the junction of the optic nerve and the retina, there are no sensory cells, so no vision is possible at that spot. What is that area known as?

36

(a) Draw a diagram to show the reflection of light from a plane mirror. Label the following on the diagram.

(i) Incident ray

(ii) Reflected ray

(iii) Normal

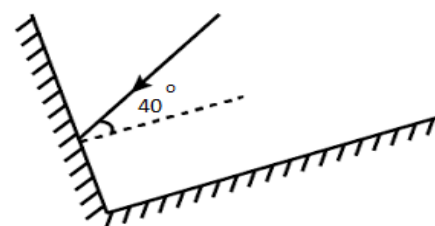
(iv) Angle of incidence

(v) Angle of reflection

(b) Two mirrors meet at right angles.

A ray of light is incident on one mirror at an angle of 40° as shown in the given figure.

Draw the reflected ray from the second mirror with the measurement of the angles.



SECTION - E

Q.no. 37 to 39 are case - based/data -based questions with 2 to 3 short sub - parts. Internal choice is provided in one of these sub-parts.

37

The discovery of electron microscope enabled the biologists to look at the interior organization of an extensive diversity of cells. Now, it turned out to be obvious that there were two fundamental types of cells, — prokaryotic cells (eg. bacteria) which lack a nuclear envelope; and eukaryotic cells which possess a well-defined nucleus in which the genetic material or DNA is separated from the cytoplasm. These could be easily differentiated by their size and internal organization. Prokaryotic cells are typically lesser in size and complexity than eukaryotic cells. The structurally less complex prokaryotic cells

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hold bacteria, while the more complex eukaryotic cells take account of protists, fungi, plants, and animals.

(a) X and Y are two types of cells. The cells X have a well-organized nucleus which is separated from the cytoplasm by the nuclear membrane. On the other hand, cells Y do not have a real nucleus, their nuclear material is in direct contact with the cytoplasm.

(i) What type of cells are X and Y?

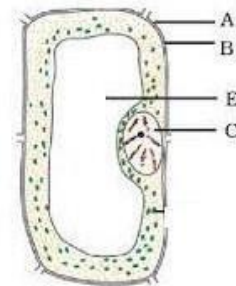
(ii) Give one example each of cells like X and Y.

(b) Cytoplasm + Nucleus----- > _____(Living substance of the cell)

(c) 'If your father has brown eyes, you may also have brown eyes. If your mother has curly hair, you might also end up having curly hair'. Name the unit of inheritance in living organisms which control the transfer of a hereditary characteristic from parentsto offspring.

(OR)

(c) Identify the parts labelled A, B, C and D.



38 In the farewell party for class X and XII students, some students from class VIII conducted a musical event. There they used different types of musical instruments. They played lovely musical notes by using flutes, drums, violins and guitars. While listening the programme, Abhinav wondered how the sound is produced from these musical instruments.

(a) Identify the sound producing parts of musical instruments like tabla, flute, sitar and drums.

(b) Name the part which produces sound in humans.

(c) Define the term frequency of oscillation. Mention its symbol.

(OR)

(c) Why the voices of men, women and children are different?

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39 Different species use very different strategies for this. Some rely entirely on environmental cues. Thus, in some animals like a few reptiles, the temperature at which fertilized eggs are kept determines whether the animals developing in the egg will be male or female. In other animals, such as snails, individuals can change sex, indicating that sex is not genetically determined. However, in human beings, the sex of the individual is largely genetically determined. In other words, the genes inherited from our parents decide whether we will be boys or girls.

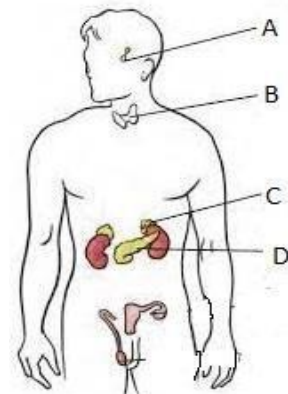
(a) With suitable diagrammatic representation, explain how is the sex of a baby determined?

(b) Identify the labelled parts and write one function of each.

(OR)

(b)'(i) Chips and packed or tinned snacks, though very tasty should never replace regular meals' Justify this statement.

(ii) List any two ways by which HIV transfers to a normal person from an infected person.



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