

**DELHI PUBLIC SCHOOL JAMMU**  
**SESSION (2024-25)**  
**FINAL EXAMINATION**  
**SAMPLE PAPER**

**Class: VII**

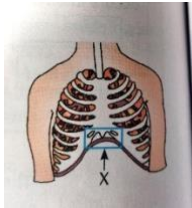
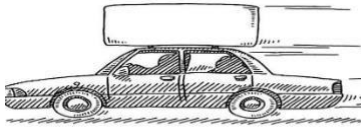
**Subject: SCIENCE**

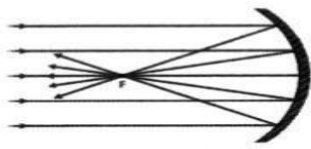
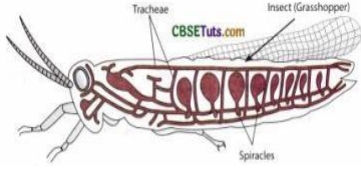
**General Instructions:**

**Time: 3 hours**

**Max Marks: 80**

- All the questions are compulsory
- The question paper has 5 sections A, B, C, D and E
- Section A has 20 Multiple Choice Questions (MCQs) carrying 1 mark each
- Section B has 6 Short Answer-I (SA-I) type questions carrying 2 marks each
- Section C has 7 Short Answer-II (SA-II) type questions carrying 3 marks each (50-80 words)
- Section D has 3 Long Answer (L(A) type questions carrying 5 marks each (80-120 words)
- Section E has 3 Case-Study based questions (4 marks each) with subparts
- Few internal choices has been provided

SN	Section – A Multiple Choice Questions	Marks
1	Which of the following can be used to form a real image? a) Concave mirror only    b) Convex mirror only    c) Plane mirror only    d) concave and convex mirrors	1
2	_____ is an underground water pipe system which carries away dirty waste water. A)Sewerage                      b) Sewage                      c) Manhole                      d) Sewage	1
3	The figure shows a human respiratory system. The structure X in the diagram forms the floor of the chest cavity. Which one of the following correctly identifies the structure X?  (a) Inhalation – X contracts    b) Exhalation – X flattens    c) Exhalation – X contracts    d) Both a &b	1
4	The layer of vegetation in a forest just below the canopy is called _____. (a) Understorey    (b) Forest floor    (c) Crown    (d) None of these	1
5	Select the related word from the given alternatives. Alveoli : Respiration:: Xylem : _____ a)Circulation    (b) Excretion    (c) Translocation    (d) Transpiration	1
6	Which of these instruments is likely to help in measuring the speed of an object? (a) Anemometer.    (b) Speedometer    (c) Thermometer    (d) None of these	1
7	The distance between the optical centre and focus of the lens is called _____. (a) Focal length    (b) Principal Focus    (c) Pole    (d) None of these	1
8	Which one of the following is a step of the wastewater treatment plant? (a) Aeration    (b) Filtration    (c) Chlorination    (d) All of these	1
9	What is depicted in the picture below:  (a) Rectilinear motion    (b) Rotatory motion    (c) Oscillatory motion    (d) circular motion	1

10	Forests are also known as _____. (a) Green kidney (b) <del>Green</del> lungs (c) Green heart (d) None of these	1
11	Convert 72 km per hour into metre per second (a) 72m/s (b) 20m/s (c) 36m/s (d) 12m/s	1
12	The muscular tube through which store urine is passed out of the body is called _____. (a) Kidney (b) Ureter (c) Urethra (d) Urinary bladder	1
13	Which of the following measures the distance moved by a vehicle? (a) Odometer (b) Speedometer (c) Thermometer (d) All of these	1
14	What type of mirror is depicted in the picture ?  (a) Converging (b) Diverging (c) Both a& b (d).None of these	1
15	What is depicted in the picture:  (a)Tracheal system of an insect (b) Respiration in frog. (c) Respiration in Fish d)None of these	1
16	Which one of the following is not a consequence of deforestation? (a) Increase in CO <sub>2</sub> (b) Excess rainfall (c) Increase in soil erosion (d) Increase in earth 's temperature	1
<b>(Q17-Q20) Assertion and Reason Based Questions</b> In the following questions, a statement of assertion ((A) is followed by a statement of reason (R). Mark the correct choice as: a. Both assertion (A) and reason (R) are true and (R) is the correct explanation of (A). b. Both assertion (A) and reason (R) are true and (R) is not the correct explanation of (A). c. Assertion (A) is true but reason (R) is false. d. Assertion (A) is false but reason (R) is true.		
17	<b>Assertion (A):</b> Exchange of gases in lungs is an essential part of respiration. <b>Reason (R):</b> Alveoli is the site of exchange of gases in our lungs.	1
18	<b>Assertion (A):</b> Screen is the surface where we obtain real images of objects. <b>Reason (R):</b> Screen is an essential component for obtaining real images.	1
19	<b>Assertion (A):</b> Modern day watches use quartz crystal instead of pendulum for measuring time. <b>Reason (R):</b> Quartz clocks or watches measure time more accurately.	1
20	<b>Assertion (A):</b> Forest help in maintaining the balance between different gases in nature. <b>Reason (R):</b> Loss of forest cover leads to fewer clouds and hence less nitrogen in air	1
<b>Section-B</b>		
21	Which type of lenses are used in the microscope which help us see the microbes?	2
22	What are the two functions performed by sweating?	2
23	You must have noticed old dried leaves that fall to the ground What do you think happens to these leaves in a few days  <b>OR</b> In a forest, the number of carnivores become more than the herbivores. Give two possible consequences of it.	2

24	Rahul wanted that inspite of living in harsh soil, an earthworm possesses a thin and moist skin. He wants to know the reason .Do you have an answer to Rahul's question?	2
25	If a pendulum makes 40 oscillations in 5 seconds, calculate its frequency and time period. <b>OR</b> Define length of string and mean position of the pendulum.	2
26	Nitika is practicing for an upcoming athletic championship. While running, she sat down and started crying because of pain in her legs. Why did Nitika feel the pain in her legs while running. What should she do for relief?	2
	<b>Section-C</b>	
27	Draw ray diagram using candle as an object to differentiate between a concave and a convex mirror	3
28	What is the septic tank? How does it work? <b>OR</b> a) How does the discharge of wastewater pose a potential threat to aquatic life? b) What is eutrophication?	3
29	A car moves at a speed of 20 km per hour for 15 minutes and then at a speed of 60 km per hour for the next 15 minutes. Calculate the total distance covered by the car	3
30	Explain the three layers of a forest in detail.Give two examples of flora and fauna for each layer.	3
31	Why should we breathe through our nose and not through our mouth? Suggest some steps to keep the respiratory system healthy?	3
32	a) Draw a well labeled diagram of a human excretory system. b) Explain the process of dialysis.	3
33	a) Distinguish between combustion and respiration (4 points) b) What causes the drop in the breathing rate when we sleep?	
	<b>Section-D</b>	
34	Define the following terms: a) Refraction of light c) Centre of curvature of spherical mirror b) Concave lens b) Principal Focus of spherical lens d) Focal length of mirror <b>OR</b> a) How can we distinguish between plane mirror, concave mirror and convex mirror without touching them. b) What are the characteristics of image formed by a plane mirror? (4 points)	5
35	Sameer finds that the drain in the basin of his kitchen has a cover with small holes. a) What is the role of this cover in the basin? b) How does it help in treating waste water effectively? <b>OR</b> a) Define sewage? What are the four major sources of wastewater? b) Name the contaminants present in sewage with their examples.	5
36	(a) Draw a well labelled diagram of human heart (b) Define the following: (a) Ascent of sap b) Osmosis <b>OR</b> (a) What is blood? What are the functions performed by blood? (b) Explain the structure of a stethoscope with its diagram	5

	<p style="text-align: center;"><b>Section-E</b> <b>Case Study based Questions</b></p>	
37	<p><b><u>Read the followings paragraph and answer the following questions</u></b></p> <p>All organisms get energy from the food they eat. A food chain is a simple representation of the flow of energy in nature. The sun is the ultimate source of energy on the earth. Plants get light energy from the sun and change it into chemical energy during photosynthesis. So plants are the producers. When animals eat the plants ,this energy is transferred to the animals. For example, when a grasshopper eats grass, the energy from grass gets transferred to the grasshopper. When a frog eats grasshopper, the energy from the grasshopper gets transferred to the frog. When a snake eats this frog, the energy get transferred to this snake. When any of these organisms die, the energy passes to the decomposers, So energy is always transferred from producers to primary consumers and then to secondary consumers. The food chain always starts from the producers. Decomposers like fungi and bacteria play their role when organisms die.</p> <p>i) What is the primary source of energy ?</p> <p>a) Green Plants.      b) Soil      c) Sun      d) All of these</p> <p>ii) Which one of the following adds humus to the soil?</p> <p>a) Herbivores      b) Carnivores      c) Top carnivores      d) Decomposers</p> <p>iii) What is a food chain? Give one example of food chain .</p>	<p>4</p> <p>(1)</p> <p>(1)</p> <p>(2)</p>
38	<p><b><u>Observe the diagram given below and answer the questions that follows:</u></b></p> <p>(i) Name the gas produced in the digester tank.</p> <p>(a) Chlorine gas      b) Natural gas      c) Biogas      d) Oxygen</p> <p>(ii) Chemicals like _____ are added to kill germs .</p> <p>(a) Ozone      b) Chlorine      c) Both a nad b      d) None of these</p> <p>(iii) What is activated sludge? How is it used ?</p>	<p>4</p> <p>(1)</p> <p>(1)</p> <p>(2)</p>
39	<p><b><u>Read the following paragraph and answer the following questions:</u></b></p> <p>The principle of simple pendulum is used in pendulum clocks. The oscillations of the pendulum control the movement of the hands of the clock. A mechanical wrist watch does not have a pendulum. Instead it has a balance wheel that controls the movement of its hands. These days most of us use quartz clocks and watches. These watches measure time accurately. Quartz has a unique property of oscillating when subjected to a small amount of electric current. In these watches, an electric cell and quarts crystal are placed in an electric circuit. The quartz clocks are more accurate than pendulum clocks. For measuring short intervals of time, a stopwatch is used. It is started or stopped with the help of a push button and it is used to measure short intervals of time</p> <p>(i) Which of the following is used to measure short intervals of time?</p> <p>(a) Stop watch      (b) Balance scale      (c) Thermometer      (d) Sundial</p> <p>(ii) Which of the following does not have a pendulum?</p> <p>(a) Smart watch.      (b) Mechanical wrist watch      (c) Sundial      (d) All of these</p> <p>(iii) Explain how quartz clocks work?</p>	<p>4</p> <p>(1)</p> <p>(1)</p> <p>(2)</p>

1. How confident do you feel about your understanding of the topics covered in this assessment?	(A) Very Confident		(B) Somewhat Confident		(C) Not Confident	
2. How well do you think you prepared for this assessment?	(A) Very Well		(B) Somewhat Well		(C) Not Well	
3. What do you think you could have done differently to improve your performance on this assessment?	(A) Studied thoroughly		(B) Practiced more		(C) Asked for help from the teachers or peers.	