



**DELHI PUBLIC SCHOOL, RANCHI**  
**ANNUAL EXAMINATION (2016-17)**

**Class: VII**  
**Time: 3hrs.**

**Subject: General Science**  
**M.M: 90**

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- Q.1. Answer following** **[1 x 5=5]**
- (i) Which form of heat transfer is used during
    - (a) An x-ray examination of human body
    - (b) In microwave oven?
  - (ii) Express 36 km/hr into m/s.
  - (iii) Which will not cause irregular reflection?
    - (a) Tissue paper    (b) Rough piece of wood    (c) still water    (d) An old newspaper.
  - (iv) The most accurate clock is
    - (a) A digital clock    (b) An atomic clock    (c) An alarm clock    (d) a wall clock
  - (v) A fuse is a
    - (a) Safety device    (b) Energy saving device
    - (c) Insulating device    (d) Energy giving device.
- Q.2. Answer in brief:** **[2 x 4=8]**
- (i) If you are given the choice in winter of using either one thick blanket or two thin blankets joined together, what would you choose? Why?
  - (ii) (a) Which type of mirror is used as rear - view mirror in vehicles and why?  
(b) Draw a ray diagram to support your answer.
  - (iii) (a) What do you mean by frequency of a vibrating body?  
(b) How is the frequency of a simple pendulum affected on the surface of moon as compared to the surface of Earth? Give reason for the same.
  - (iv) (a) Name the effects of electric current.  
(b) What are the factors which affect the amount of heat produced by a current carrying a conductor?
- Q.3. Answer these:**
- (i) Give reasons: **[3 x 4=12]**
    - (a) Why are radiators of cars painted black?
    - (b) Why metallic pans used for cooking have plastic or wooden handles?
    - (c) Why is room heaters placed on the floor of the room?
  - (ii) (a) What is lateral inversion? Describe by giving an example.  
(b) How will you get real image of Sun with a concave mirror?

- (iii) (a) What do you mean by speedometer?  
(b) An ant walked up a distance of 12m in 15s. What was the speed of the ant?
- (iv) (a) What do you mean by short circuiting and over loading?  
(b) Why can't we use copper as heating element?

Q.4. The distance travelled by a car with respect to time is shown in a table given below. Plot distance- time graph and answer the questions given below following the data given in the table:

Time taken (h)	0.5	1.0	1.5	2.0	2.5	3.0
Distance travelled (km)	25	50	75	100	125	150

- (i) What is the distance travelled at time 1.25h?
- (ii) Which type of motion is shown by the vehicle?
- (iii) Calculate the speed of vehicle in km/h and m/s from the graph. [5x1=5]

OR

- (i) What do you mean by an electromagnet?
- (ii) What are the two ways by which you can change the strength of an electromagnet?
- (iii) Briefly describe the working of an electric bell with the help of its well labelled diagram.

### CHEMISTRY

Q.1. Very short answers: [1X5=5]

- (i) Define infiltration?
- (ii) What is aeration?
- (iii) The acid present in curd is
  - (a) Acetic acid
  - (b) Lactic acid
  - (c) Oxalic acid
  - (d) Tartaric acid
- (iv) The gas produced when baking soda is mixed with vinegar
  - (a) Carbon dioxide
  - (b) Hydrogen
  - (c) Nitrogen
  - (d) Oxygen
- (v) Which oil is used to make vicks?
  - (a) Sunflower oil
  - (b) Eucalyptus oil
  - (c) Olive oil
  - (d) Mustard oil

Q.2. Short answers: [2X4=8]

- i. (a) What is meant by acid rain?  
(b) State any two ill effects of acid rain.
- ii. (a) Define rusting.  
(b) Write the chemical formula of rust.  
(c) Explain - ships suffer a lot of damage from rusting in spite of being painted.

- iii. (a) Write one difference between hard water and soft water.  
(b) Name any two salts responsible for the hardness of water.
- iv. The Department of Environment is to decide whether some portion of forest in your area could be cleared for a housing complex. Explain to the department what would happen if forests disappear. (Any two points)

**Q.3. Long answers:** [4X3=12]

- i. (a) Explain - Calamine solution is applied on the skin when an ant bites.  
(b) State two differences between acid and base.  
(c) Name the base found in lime water and soap.
- ii. Liquefied petroleum gas (LPG) exist as a liquid in the cylinder, when it comes out from the cylinder it becomes a gas (change A) then it burns (change B)  
a) Out of these two changes A & B, which is a chemical change and why?  
b) Define a physical change. Give one example.
- iii. (a) Explain the importance of decomposers in a forest.  
(b) State any four environmental roles of forests.
- iv. (a) State the difference between aerobic bacteria and anaerobic bacteria.  
(b) As a responsible citizen what we can do to reduce the load of pollutants in waste water. (Mention any two points.)

**Q.4. Very long answers:** [1X5=5]

- i. (a) Draw a well labelled diagram of groundwater, aquifer and water table.  
(b) List any two ways to conserve water.  
(c) State the reasons leading to depletion of water table. (Any two points)

**OR**

- ii. (a) Draw a labelled diagram of drip irrigation.  
(b) Define drip irrigation.  
(c) State one advantage of drip irrigation.  
(d) Define rain water harvesting.

### BIOLOGY

**Q1. Answer in short** [1x5=5]

- (i) What are spores ?  
(ii) Why is shearing of sheep done in summer season?  
(iii) Write two characteristics of the A horizon of the soil profile.  
(iv) Why is smoking injurious to health?  
(v) Write one point of difference between vena cava and the aorta.

- Q.2. Answer the following questions briefly [2x4=8]**
- (i) Define symbiotic relationship. Explain with the help of an example.
  - (ii) Draw a well labelled diagram showing fertilization in a flower.
  - (iii) What is moulting? Name two varieties of silk fiber.
  - (iv) Give two points of difference between clayey and sandy soil.

- Q.3. Answer the following questions [3x4=12]**
- (i) Name any three types of teeth in humans and write the function of each.
  - (ii) Write the names of any three animals living in the tropical forests and also mention one adaptation in each.
  - (iii) Mohini has got the habit of inhaling through her mouth. Her brother keeps on reminding her not to do so and inhale through her nose.
    - (i) Why should we not breathe in air through our mouth?
    - (ii) What happens to the air when we inhale through the nose?
    - (iii) What values does Mohini,s brother show ?
  - (iv) Define transpiration. How is it important for plants? [2 points]

- Q.4. Answer any one of the following in detail [5]**
- (i) What is double circulation in humans?
  - (ii) Why do arteries have thicker walls than veins?
  - (iii) Draw a schematic diagram to show circulation in human beings.

**OR**

- (i) Why is excretion of waste necessary in living beings?
- (ii) Name the organs which make the human excretory system and write the function of each.
- (iii) Draw a neat and well labeled diagram of the human excretory system.