



**DELHI PUBLIC SCHOOL**  
**SAIL TOWNSHIP, RANCHI**  
**ANNUAL EXAMINATION (2017-18)**

**Class:- VII**  
**Time- 2½ Hrs.**

**Subject:- Science**  
**F. M:- 80**

**PHYSICS**

- Q.1 Choose and write the correct option:** **[1×4= 4]**
- (a) Which of the following is a correct statement?  
(i) Every objects move with a constant speed  
(ii) The basic unit of time is second  
(iii) The time period of a simple pendulum is constant  
(iv) The speed of a train is expressed in m/h
- (b) Who discovered that when a compass needle is kept nearer to an electric circuit in which current is flowing, deflects  
(i) Galileo      (ii) Newton      (iii) Hans Christian Oersted      (iv) Faraday
- (c) Which of the following is a scalar quantity?  
(i) Force      (ii) distance      (iii) velocity      (iv) displacement
- (d) Which of the following is not a method to increase the strength of an electro magnet?  
(i) increase the number of windings      (ii) increase the current  
(iii) increase the resistance of the wire      (iv) use soft iron as the core.
- Q.2 Answer in short:**
- (a) What are vector quantities? [1]  
(b) Mention two problems associated with the heating effect of electric current. [1]
- Q.3 Answer as directed:**
- (a) (i) What are the factors on which time period of a pendulum depend?  
(ii) Calculate the time period of a pendulum if it oscillates 20 times in 32 seconds. [2]
- (b) What is fuse? How does it work? [2]
- (c) (i) Write any two factors on which the heating effect of electricity depend.  
(ii) When the current is switched on through a wire, a magnetic needle kept nearby deflects from its north south direction. Why? [2]
- Q.4 Answer in detail:**
- (a) Describe the working of an electric bell. [3]  
(b) A train is travelling at a speed of 110 km/hr. How long will it take to complete a journey of 605 km, without any stoppage in between? [3]  
(c) What is a circuit diagram ? Draw an open and closed circuit diagram consisting of a battery, bulb and a switch. [3]
- Q.5. Choose and answer any one of the following:**
- (a) Draw the Distance -Time graph for the motion in the following cases.  
(i) car moving with constant speed  
(ii) car parked on a road side

**P.T.O**

- (b) Construct Distance -Time graph for the following data and calculate the speed graphically.  
Also calculate the distance travelled in 4.5 min [2+ 3= 5]

Distance in km	10	20	30	40	50	60
Time in min.	1	2	3	4	5	6

OR

- (a) Describe a simple pendulum with a labelled diagram  
(b) Represent the composition of different gases in atmosphere in a pie chart  
Nitrogen 78%, Oxygen 21%, other gases 1% [2+ 3= 5]

### CHEMISTRY

**Q.1 Choose and write the correct option:** [1×3= 3]

- a) Micro organisms act upon the dead plants to produce  
(i) Sand (ii) Mushroom (iii) Humus (iv) Wood  
b) The uppermost branches and leaves of tall trees acting like a roof is the  
(i) Canopy (ii) Understorey (iii) Herb layer (v) Shrub layer  
c) Plastic is a ..... Waste  
(i) Biodegradable (ii) Non biodegradable (iii) Metallic (iv) Foul

**Q.2 Answer in short:** [1×3= 3]

- a) Why care should be taken while handling acids and bases?  
b) When is world water day celebrated?  
c) Name two water borne diseases.

**Q.3 Answer as directed:** [2x5=10]

- (a) (i) Define neutralization reaction.  
(ii) Write the word equation for the reaction between sodium hydroxide and hydrochloric acid.  
(b) There are two solutions, Solution 'A' and solution 'B'. phenolphthalein turns pink in 'B' but remains colourless in 'A'  
(i) What can be the nature of 'A'?  
(ii) What is the nature of 'B'?  
(iii) Suggest the colour of turmeric solution in 'B'.  
(c) (i) What is the importance of the process of decomposition in the forest?  
(ii) Mention two uses of humus  
(d) (i) Define sewage.  
(ii) State the difference between aerobic bacteria and anaerobic bacteria.  
(e) (i) Why should oils and fats be not released in the drain? Explain  
(ii) Name any two alternative arrangements for sewage disposal.

**Q.4 Answer in detail:** [3x2=6]

- A. (a) Name one strong acid and a weak acid.  
(b) What colour do the following indicators turn when added to a base?  
(i) Red litmus solution (ii) China rose indicator  
(iii) Phenolphthalein (iv) Turmeric solution  
B. (a) Draw a flow chart to show how forests help in maintaining the balance of carbon dioxide and oxygen in atmosphere.  
(b) State any four ill effects of deforestation.

- Q.5. Choose and answer any one of the following:** [5x1=5]
- (a) Name the technique of watering plants which minimize the wastage of water
  - (b) Draw a labelled diagram of the above technique
  - (c) State one advantage and one disadvantage of this method

**OR**

- (a) Draw a labelled diagram of water table, ground water and aquifer.
- (b) How the ground water is recharged?
- (c) Which natural process continuously converts some of the saline sea water into fresh water?
- (d) What is hardness of water?

### **BIOLOGY**

- Q.1 Choose and write the correct option--** [1x 2=2]

- (a) Which of these seeds are disperse by wind –
  - (i) cotton and maple
  - (ii) cotton and xanthium
  - (iii) madar and xanthium
  - (iv) lotus and maple
- (b) Aquatic animals excrete waste in the surrounding water in the form of –
  - (i) urea
  - (ii) uric acid
  - (iii) ammonia
  - (iv) nitrogen

- Q.2 Answer in short:** [1x3=3]

- (a) Where are pollen grains produced? What do they contain?
- (b) What is role of the septum in the heart?
- (c) Why do we get muscle cramps after a heavy exercise?

- Q.3 Answer as directed:** [2x4= 8]

- (a) Draw and label a diagram showing spore formation in fungi.
- (b) How is cellular respiration different from breathing? (2 points)
- (c) Draw a diagram to show different regions of the soil profile and label them.
- (d) Plants do not have respiratory organs but still they breathe. How?

- Q.4 Answer in detail:** [3x3= 9]

- (a) Write three points of difference between sandy and clayey soil.
- (b) Define the following terms related to processing of wool-
  - (i) shearing
  - (ii) scouring
  - (iii) sorting
- (c) Sohan is a chain smoker. His friend, Amit, always warns him about the dangers of smoking cigarettes and urges him to quit it as soon as possible.
  - (i) Why is smoking injurious to health?
  - (ii) Which harmful chemical is present in cigarette smoke? Which organ does it affect ?
  - (iii) What values does Amit show?

- Q.5 Choose and answer any one of the following-** [1x5= 5]

- (a) Draw a well labeled schematic diagram to show circulation in humans.
- (b) Explain double circulation in humans.

**OR**

- (a) Name the four main blood vessels associated with the heart and write the function of each.
- (b) Draw a diagram to show transpirational pull in plants.