

SAMPLE PAPERS
PRACTICAL SKILLS TEST - STANDARD IX

PHYSICS

Sample – 1

Aim: To establish the relation between the volume of a solid and the volume of the liquid displaced by that solid.

Procedure:

- (i) Measure the length, breadth and thickness of the given solid (say, a glass chip) and write down your observations.
- (ii) Calculate its volume.
- (iii) Find the volume of water displaced by it, using the overflow vessel and measuring cylinder.

Question:

- (i) State the relation between your observations in (ii) and (iii).
 - (ii) If you use kerosene, instead of water, will there be any change in the above relation?
 - (iii) Does the density of the liquid have any impact on the above the relation? If so, mention it.
 - (iv) Instead of a solid with a regular shape, if you use a solid with an irregular shape, what would be its impact on the above relation?
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Sample - 2

Aim: To find relation between density of a solid and the location / position of the solid when it is introduced in water.

Apparatus: Three small identical bottles (Bottle A-empty, Bottle B-half filled with and Bottle C-completely filled with sand), other apparatus and material.

Procedure and findings:

Proceed as follows and write down the answers to the questions.

- (1) Introduce bottle 'A' in water. Observe whether it sinks in water or floats over it and note down your observation.
 - (2) Repeat the above procedure using bottle 'B'.
 - (3) Repeat the above procedure using bottle 'C'.
 - (4) Mention the difference in position of bottles 'A', 'B' and 'C' in water.
 - (5) Is there any difference in masses of 'A', 'B' and 'C'? If so, mention it.
 - (6) Is there in any difference in densities of 'A', 'B' and 'C'? If so mention it giving reasons for the same.
 - (7) From your observations, state the relation between the density of the bottle and its position in water.
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Sample - 3

Aim: Study of Magnetic field.

Note: Do the procedure as given below. Note down the observations as per the procedure. Answer the questions given below.

Procedure:

- 1) Keep the given magnetic needle on the table. See its direction.
- 2) Keep the magnetic needle near point A of the given coil. See its direction.

3) Connect the coil to the cell. Observe the deflection of the red part of the magnetic needle. Disconnect the cell from the coil.

4) Keep the magnetic needle at point B of the coil. See its direction.

5) Now let the magnetic needle be at point B only and connect the cell to the coil. Observe the deflection of the red part.

Keep the cell connected.

6) Hold the given wooden stick in the coil. Observe the deflection of the red part.

7) Hold an iron nail/pin in the coil. Observe the deflection of the red part.

Question:

1) When the coil is connected to the cell why does the magnetic needle deflect?

2) Give reasons for the effect on the deflection in the magnetic needle when magnetic and non- magnetic substances are kept in the coil.

3) On connecting the cell, the effect on the red part of the magnetic needle at points A and B is same or different?

On this basis, what conclusion you will draw about the magnetic field at both points.

CHEMISTRY

Sample – 1

Aim: To observe the reactions between different chemicals and to explain those giving reasons.

Apparatus and material: Test tubes, three bottle 'A', 'B' and 'C' containing chemicals as stated below:

- (i) Bottle A-Potassium carbonate.
- (ii) Bottle B-Magnesium chloride
- (iii) Bottle C-Hydrochloric acid.

Procedure and Observations:

- (1) Take a little solution from bottle A in a test tube and add to it a little solution from bottle B. Observe the change.
- (2) To the above mixture in the test tube add a little solution from bottle C. Observe the change. Go on adding the solution drop by drop till the reaction is complete.

Observations Table:

Activity	Observed Change	Balanced Chemical Equation
(1) Soln. A+B		
(2) Soln. (A+B) + C		

Questions :

- (1) State the reason for the change in activity (1)
 - (2) State the reason for the change in activity (2)
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Sample – 2

Aim: To find relation between the speed (rate) of a chemical reaction and the concentration of the chemical used in the reaction.

Instruction: Proceed using the apparatus and material on your table, note observations and answer the questions given below.

Procedure:

- (1) (a) Take little lime water in a small test tube.
- (b) Remove the stopper (fitted with a thistle funnel and a delivery tube) from the large test tube, put a little powdered calcium carbonate in it and re-fix the stopper.
- (c) Insert the free end of the delivery tube in the lime water taken in the small test tube.
- (d) Pour a little dilute hydrochloric acid into the large test tube through the thistle funnel.
- (e) Note the time taken for the change in lime water.
- (2) (a) Proceed as above taking the same quantity of lime water and powdered calcium carbonate in the test tubes.
- (b) Instead of dilute hydrochloric acid add equal quantity of concentrated hydrochloric acid and again note the time for the change in lime water.

Questions:

- (1) What change do you observe in the lime water? Why?
 - (2) Do you observe any difference in time in the two reactions?
 - (3) Is there any difference in the speed of the two reactions?
 - (4) How will you analyze your answer to Q.3 ?
 - (5) Write the balanced equations of the chemical reaction involved.
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Sample - 3

Aim: To identify the solution.

Note: Given are three solutions A, B and C. X is another solution given which is either of A, B or C. do the following procedure.

Prepare a table as given below and note down the observations. Also answer the questions given below.

Procedure:

- 1) Take some solution A in a test tube. Add some solution B in it. Observe the changes taking place while the mixture is formed and note it. Also note if there is no change.
- 2) Similarly, prepare mixtures as given in the observation table and note down the observations.

Observation

No.	Solution in the test tube	Observation of the changes
1	A + B	
2	A + C	
3	B + C	
4	X + A	
5	X + B	
6	X + C	

Questions :

- a) Which is the solution X?
- b) Give reason to the answer of question (a)

c) The substance formed after mixing solution A and B is soluble or insoluble. Give reasons

d) On mixing solutions B and C the products formed are in which state of matter? Solid, liquid or Gas? Give reasons.

BIOLOGY

SAMPLE - 1

Q.1. Observe the experiment. Fill in the blanks in the following sentence. (Write only proper words on the answer sheet)

_____ gas is evolved during _____.

Q.2. Observe the specimens. Write the alphabet for the following.

I) Exotic specimen

II) Specimen with nonfunctional mature ovary.

Q.3. Identify the given part of the plant.

Q.4. what is the respiratory organ of the given sample?

Q.5. What is the function of the organelle, shown by arrow.

Q.6. Classify according to the mode of nutrition.

(Depending upon the source of energy and carbon)

Q.7. Write the method of vegetative reproduction seen in the given sample.

Q.8. Write the habitat of the given sample.

Q.9. Classify the given specimen.

Q.10. Identify the pointed part.

SAMPLE – 2

Q.1. Complete the sequence to show the hierarchy of classification.

Q.2. Observe the specimens. Write the alphabet for the following.

I) Non-symbiotic specimen.

II) Nitrogen fixing specimen.

Q.3. what is the excretory organ of the given sample?

Q.4. (a) How long does the specimen kept before you, take to complete its life cycle?

(b) What are such plants are called?

Q.5. (a) Three specimens are kept before you. Find the odd man out based on the origin.

(b) Give reason for your answer.

Q.6. (a) State the body covering of the specimen kept before you.

(b) Name its habitat.

Q.7. Write the division of the specimen A and B

Q.8. Identify the acid present in specimen A and B

Q.9. Find the odd one out with respect to the layers of the pericarp and state the reason for it.

Q.10. Out of the given specimens which one is the richest source of vitamin B?
