

DAV BORL PUBLIC SCHOOL, BINA
PRACTICE PAPER , HALF YEARLY (2018-19)

Class: IX

Time Allowed: 3 hrs.

Subject: Science

Maximum Marks: 80

General Instructions :

1. The question paper comprises of **two Sections, A and B**. You are to attempt both the sections.
2. **All** questions are **compulsory**
3. Question numbers **1 to 2** in **Section-A** are **one mark** questions. These are to be answered in **one word** or in **one sentence**
4. Question numbers **3 to 5** in **Section-A** are **two marks** questions. These are to be answered in about **30 words** each.
5. Question numbers **6 to 15** in **Section-A** are **three marks** questions. These are to be answered in about **50 words** each
6. Question numbers **16 to 21** in **Section-A** are **five marks** questions. These are to be answered in about **70 words** each.
7. Question numbers **22 to 27** in **Section-B** are questions based on practical skills are two **marks** questions.

SECTION-A

- | | | |
|---|---|---|
| 1 | Draw a velocity-time graph for uniform acceleration. | 1 |
| 2 | What is epidermis of xerophytic plant covered with? | 1 |
| 3 | a) What is unsaturated solution? How can you make the saturated solution as supersaturated? or b) A sample of water under study was found to boil at 102°C at normal temperature and pressure. Is the water pure? Will this water freeze at 0°C? Comment | 2 |
| 4 | Rekha visited a Natural Gas Compressing Unit and found that gas can be liquefied under special conditions of temperature. While sharing her experience with the friends she got confused. Help her to recollect the conditions required for the same. | 2 |
| 5 | Give two points of difference between compound and mixture | 2 |

Or

Smoke and fog both are aerosol. In what way they are different from each other

- 6 An object of mass 2 kg is sliding with a velocity of 4 m/s along the surface of a vertical wall. What is the force required to keep the object moving with the same velocity? 3
- 7 A car having mass 700 kg is moving at a speed of 90 km/h. On applying brakes, its speed is reduced to 36 km/h in 10 s. Calculate the force applied by the brakes. 3
- 8 List down the types of Cells present in fluid connective tissue. 3
- 9 During arm wrestling, participants put their arms on the table, and wrestle with the palms. If the force exerted by both the players is equal, 3
- a) Where are balanced forces acting?
- b) Where is the action reaction pair acting?
- 10 Suppose an astronaut lands on the moon and drops an object from a height of 4.97m from the surface. How much time will it take to reach the moon's surface? 3
- 11 Name the names of tissue that has the power of division. 3
- List down all the subtypes of that tissue with the help of a relevant diagram.
- 12 Write a short note on Schlerenchyma. 3
- 13 Draw a well labeled diagram showing L.S of a tissue that helps in conduction of sucrose in plants. 3
- 14 Differentiate between any three types of muscular tissue by giving two points. 3
- 15 Describe the various separation techniques used to separate a mixture of camphor, salt and soil. 3

Or

Compare solution, suspension, and colloids in terms of (i) stability (ii) filterability (iii) tyndall effect.

- 16 (a) State the Universal law of gravitation. Give its expression. 5
- (b) What is the S.I unit of universal constant of gravitation 'G'?
- (c) An object weights 15 N on earth. Calculate its weight on moon.

17 (a) Ball is thrown upward with a velocity of 20 ms^{-1} . Calculate the maximum height attained, net displacement and total distance covered by the ball ($g=10 \text{ ms}^{-2}$) 5

(b) Differentiate between universal gravitational constant and acceleration due to gravity.

18 Comment on the following statements:- 5

(i) a) Evaporation brings cooling.

b) Rate of evaporation of an aqueous solution decreases with increase in humidity

c) Sponge though compressible is solid

(ii) Why does the temperature of a substance remain constant during its melting point or boiling point

OR

a) Write one similarity and one difference between evaporation and boiling.

b) State any four characteristics of particles of matter

19 Name the separation technique used to separate two miscible liquids. Draw a neat and labeled diagram of apparatus used and state the principle involved. 5

OR

How will you separate the components of blue black ink. Draw a neat and labeled diagram of apparatus used and state the principle involved.

20 Name any two cell organelle that had independent existence before many years, as they could produce their own proteins. Describe any one in detail with the help of relevant diagram. 5

21 List down the scientific names of any three Bees that help in producing honey. Write down their common name and any one property of each. 5

SECTION - B

22 State two precaution while measuring the volume of the cylinder. 2

23 Find the density of an object of mass 0.01 kg and volume 4 cc . 2

24 Name any two chemicals that are used in an experiment to observe the structure of stomata. 2

- 25 Iron fillings and sulphur were mixed together and divided into two parts 'A' and 'B'. Part 'A' was heated strongly while part 'B' was not heated. Dilute HCl was added to both the parts and evolution of gas was seen in both the cases. How will you identify the gases evolved? 2
- 26 Which of the following will show 'Tyndall effect' and why: (i) salt solution (ii) Milk (iii) Starch solution (iv) Copper sulphate solution. 2

Or

Arun has prepared a 0.01% (by mass) solution of sodium chloride in water. Which of the following correctly represents the composition of the solution

- a) 1.00g of NaCl and 100g of Water
 - b) 0.11g of NaCl and 100g of Water
 - c) 0.01g of NaCl and 99.99g of Water
 - d) 0.10g of NaCl and 99.90g of Water
- 27 Find out the percentage of water absorbed by raisins which was 40 grams initially. It gained 20 grams of water after absorption. 2