

5. If $x = 3 + \sqrt{8}$ then find the value of $x^2 + \frac{1}{x^2}$.

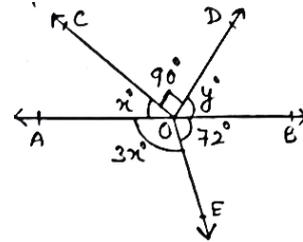
6. If $2^x = 3^y = 12^z$ then show that $\frac{1}{z} = \frac{1}{y} + \frac{2}{x}$.

7. Represent $\sqrt{9.3}$ and $\sqrt{11.3}$ on the number line.

8. Plot the following point on graph paper (-2,4) (3,-1) (-2,0) (1,1) (-4,-6) (0,6) (-8,4) (0,0) and (3,-2)

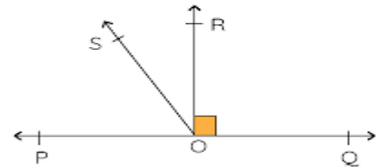
9. Two complementary angles are such that
Twice the measure of the one is equal to three
Times the measure of the one is equal to three
Times the measure of the other.

Find the measure of larger of two angles.



10. In fig POQ is a line, ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR.

Prove that $\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$.



Science:-

Chemistry

- 1) Prepare portfolio on any topic of your choice from prescribed syllabus.
- 2) Complete activities in lab manual.

Biology

Note- Write answers of questions A and B on A4 size sheet.

A) Very short answer questions

1. Name the components by which plasma membrane is composed of.
2. What is hypotonic solution?
3. Which type of solution has higher solute concentration than that of cell sap?
4. What is the main component of cell wall?
5. What is endocytosis?
6. Where are genes located?
7. Name any two structures found in animal cells but not in the plant cells.
8. Which organelle is involved in the formation of lysosomes?
9. What is the function of endoplasmic reticulum?
10. What is plasmolysis?

B) Assertion and Reason

. For question numbers 1 to 10, two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below:

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- (c) Assertion is true but the Reason is false.
- (d) Assertion is false but the Reason is true.

1. Assertion (A): When RBCs are placed in a hypotonic solution they swell up and burst.

Reason (R): When water enters a cell, endosmosis takes place.

2. Assertion (A): Endoplasmic reticulum helps in membrane biogenesis.

Reason (R): The proteins and lipids synthesised by ER help in formation of membrane.

3. Assertion (A): Plastids are the largest cell organelle in plants.

Reason (R): They prepare and store food for plant.

4. Assertion (A): Vacuole is filled with cell sap which consists of water, minerals, dissolved sugars etc.

Reason (R): Vacuole provides turgidity to the plant cell.

5. Assertion (A) : Lysosomes are digestive organelle where macromolecules are hydrolysed.

Reason (R): Lysosomes help in intracellular digestion.

6. Assertion (A): All organisms are composed of cells and product of cells.

Reason (R): All cells arise from pre-existing cells.

7. Assertion (A): Cell is an open system.

Reason (R): Cell receives a number of materials including energy containing nutrients from outside.

8. Assertion (A): Endoplasmic reticulum without ribosomes on its surface is called smooth endoplasmic reticulum (SER).

Reason (R): SER is mainly involved in protein synthesis.

9. Assertion (A): Powerhouse of a cell is mitochondria.

Reason (R): Protein synthesis takes place in mitochondria.

10. Assertion (A): Meiosis results in production of haploid cells.

Reason (R): Meiosis occurs in green cells, which produce gametes.

C) Draw the following diagrams on a chart paper and learn theory also.

1) Nucleus 2) Mitochondria 3) Plant cell 4) Chloroplast 5) Golgi body

Physics-

1- Do all the numerical problems given in NCERT text book of chapter motion including all solved examples.

2- Make a portfolio file on motion in a straight line.

Covering the topics – Motion and rest, Scalar and vector quantity, Uniform and Non- Uniform motion, Distance and displacement, speed, velocity, acceleration, Equation of motion, and give the graphical Representation of motion.

Social Science:-

1. Prepare a project on disaster management.

2. Collect detail information about forest, society and colonialism in 19th and 20th century.

3. Prepare 20 objective questions each from these 4 chapters.

1) French Revolution

2) India size and location

3) What is democracy, why democracy

4) People as resource

Information Technology:-

1. Make a portfolio on types of all networks with examples.

2. Types of communication and their uses.

3. BPO with its uses in international and national level also write down some BPO companies on global level.

Note: - ★ **Make separate file for each subject.**

★ **Use drawing papers for pasting the picture and use lining papers for writing**