NEW STANDARD ACADEMY

Exam : NEET - JEE **Marks: 60**
Date : 28-08-23 **CLASS : 9TH M** **Time: 2 HRS**

PHYSICS

1. How can a person lie on a bed of nails without getting hurt?.
2. A force of 15 N is uniformly distributed over an area of 150 m^2. Find the pressure in pascals.
3. How much force should be applied on an area of 1 cm^2 to get a pressure of 15 Pa?.
4. A block weighing 1.0 kg is in the shape of a cube of length 10 cm. It is kept on a horizontal table. Find the pressure on the portion of the table where the block is kept.
5. Write mathematical relation between pressure and thrust ?
6. Define pressure of fluid.
7. What is meant by pressure ? Give some applications of pressure.

CHEMISTRY

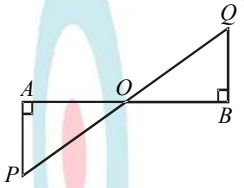
1. Differentiate between homogenous and Hetrogenous mixture with example.
2. Explain the following example
   a. Saturated SoLⁿ
   b. Diluted solution
   c. Concentrate SoLⁿ
   d. Non aqueous SoLⁿ
3. What is solubilty. Some factor determine
   a. Solid in liquid
   b. Gas in liquid
4. What is the characterstics of true solution.
5. Characterstics of compound in example.
6. What is the difference between Metal and Non-Metal five difference.

BIOLOGY

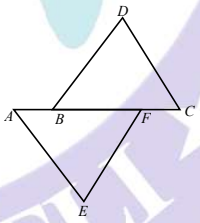
1. Differentiate between coelomate, acoelomate and pseudocoelomate with examples.
2. Mention any six characteristics of phylum coelenterata.
3. Give the zoological name of:
   (a)bath sponge (b) Venus flower basket
   (c) simple sponge. (d) fresh water sponge
4. Define a diploblastic and triploblastic with examples.
5. Tabulate the 4 differences between bryophyta and pteridophyta also give the example.
6. How do gymnosperms and angiospe the symmetry of these animals -Hydra Pila, sycon and tape worm.
7. What is bilateral symmetry? Give examples.

MATHS

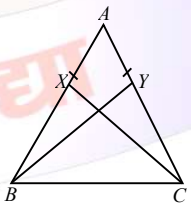
1. If the angles of a triangle are in the ratio 2 : 3 : 4, determine the three angles.
2. In Fig. PA ⊥ AB, QB ⊥ AB and PA = QB. If PQ intersects AB at O , show that O is the mid-point of AB as well as that of PQ.



3. In Fig. it is given that AB = CF, EF = BD and ∠AEF = ∠DBC. Prove that ΔAFE ≅ ΔCBD.

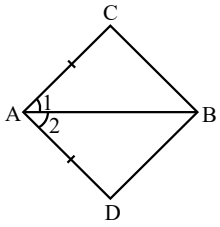


4. In Fig. X and Y are two points on equal sides AB and AC of a ΔABC such that AX = AY. Prove that XC = YB.

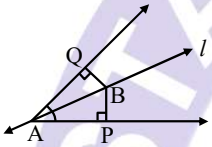


5. In quadrilateral ABCD,

AC = AD and AB bisects ∠A. Show that ΔABC ≅ ΔABD. What can you say about BC and BD ?



6. Line *l* is the bisector of an angle ∠A and B is any point on *l*. BP and BQ are perpendiculars from B to the arms of ∠A (see figure). Show that :



(i) ΔAPB ≅ ΔAQB

(ii) BP = BQ or B is equidistant from the arms of ∠A.

7. Simplify : $\sqrt{m^2n^2} \times \sqrt[6]{m^2n^2} \times \sqrt[3]{m^2n^2}$

8. Determine a and b if $\frac{5+\sqrt{3}}{7-4\sqrt{3}} = 94\ a + 3\sqrt{3}\ b$.

9. If $x = 7 + 4\sqrt{3}$, find the value of $\sqrt{x} + \frac{1}{\sqrt{x}}$.

10. Express the rational number $\frac{1}{27}$ in recurring decimal form by using the recurring decimal expression of $\frac{1}{3}$. Hence write $\frac{59}{27}$ in recurring decimal form.