

I. Answer the following:

5x5=25

1. i) A structural steel rod has a radius of 10mm and a length of 1.0m. A 100KN force stretches it along its length. Calculate

a) Stress b)Elongation and c)Strain on the rod.

Young's modulus of structural steel is $2.0 \times 10^{11} \text{ Nm}^{-2}$.

ii) State Hooke's Law.

2. Explain about Stress – Strain curve.

3. Explain the three Moduli of Elasticity.

4. a) The average depth of Indian Ocean is about 3000 m. Calculate the fractional compression, $\frac{\Delta V}{V}$, of water at the bottom of the ocean,

given that the bulk modulus of water is $2.2 \times 10^9 \text{ Nm}^{-2}$.

(Take $g=10 \text{ ms}^{-2}$).

b) Explain Poisson's Ratio

5. Write the applications of Elastic behavior of materials.

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TT -English

STD:XI (Con)

Marks:25

I. Answer the following questions:

4x2=8

1. What is pranayama? During which stage of pranayama does meditation take place?
2. What was depicted in the last painting made by Wo Daozi, the Chinese painter?
3. What do the books about Confucius and zhvangzi contain and what do they help in doing?
4. Why did the Flemish painter accept Quinten Mestys as a son-in-law?

II. Answer the following questions in detail:

5x2=10

5. Explain the concept of Shanshui painting.
6. What do you understand by the terms 'outsider art' and 'art brut' or 'raw art'? What is fundamental notion of Daoism?

III. Report Writing:

(7 Marks)

7. Recently you attended a seminar on Adult education organized by the CBSE. The seminar was held at VKT public school, Chennai. Write a report on the seminar in 150 words to be published in 'The Indian express', Chennai. You are Ashwin / Ashvita, a special correspondent of 'The Indian express'.