

No Preview
Available

Total No. of Question : [4]

Registration No. :

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Programme Name : F.Y.B.Tech
Regular F.Y.B.Tech. ESE Sem. I (A.Y.2023-24) Dec.2023
I SEMESTER (2023 BATCH)
231FYL104-Elements of Civil Engineering and Mechanics

Duration : [- - -]

Date : -

Day : -

Marks : 50

Instructions :

(Q1) Attempt the following [20.0]

(1.1) Explain the importance of Civil Engineering in society . [6.0]

CO :- 104.1

Blooms Taxonomy :- Remember, Understand

(1.2) Define the term Remote Sensing and differentiate between GIS and GPS . [7.0]

CO :- 104.2

Blooms Taxonomy :- Understand, Apply

(1.3) Enlist the Equipments used for Construction and Explain any one in detail . [7.0]

CO :- 104.3

Blooms Taxonomy :- Understand

(Q2) Attempt the following [10.0]

(2.1) Explain Varignons theorem in detail . [4.0]

CO :- 104.4

Blooms Taxonomy :- Understand, Apply

(2.2) Enlist the types of beams and supports and Explain types of beams in detail . [6.0]

CO :- 104.4

Blooms Taxonomy :- Understand, Apply

OR [2.2 / 2.3]

(2.3) State and Explain Lamis Theorem in detail . [6.0]

CO :- 104.4

Blooms Taxonomy :- Understand, Apply

(Q3) Attempt the following

[10.0]

(3.1) Define Impact and Explain types of Impact .

[3.0]

CO :- 104.5

Blooms Taxonomy :- Understand, Apply

OR [3.1 / 3.2]

(3.2) Explain the term Coefficient of Restitution .

[3.0]

CO :- 104.5

Blooms Taxonomy :- Understand, Apply

(3.3) A ball A weights 100kg moves on the x-axis in its positive direction with a velocity of 4 m/s . Another ball B of weight 80 kg moving on the same axis but in opposite direction approaches it with a velocity of 6 m/s. The value of coefficient of restitution is 0.7 .Calculate velocities of two Balls after the impact .Also Calculate loss of Kinetic Energy that takes place. [7.0]

CO :- 104.5

Blooms Taxonomy :- Understand, Apply

(Q4) Attempt the following

[10.0]

(4.1) Explain Parallel axis theorem in detail .

[5.0]

CO :- 104.6

Blooms Taxonomy :- Understand, Apply

OR [4.1 / 4.2]

(4.2) Differentiate between Centroid and Center of Gravity .

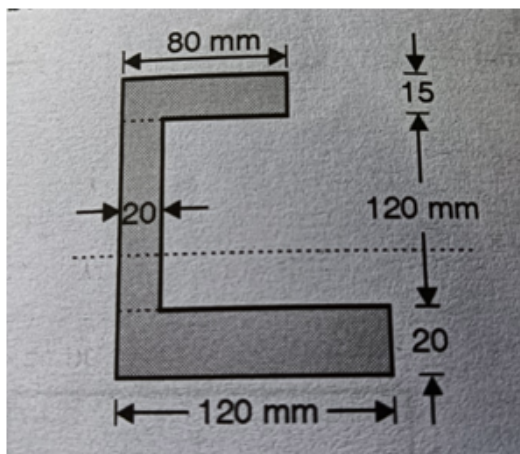
[5.0]

CO :- 104.6

Blooms Taxonomy :- Understand, Apply

(4.3) Determine location of centroid of Lamina shown in figure .

[5.0]



CO :- 104.6

Blooms Taxonomy :- Understand, Apply
