

No Preview
Available

Total No. of Question : [4]

Registration No. :

--	--	--	--	--	--	--	--	--	--

Programme Name : F.Y.B.Tech
Regular F.Y.B.Tech Sem.I ESE (March.2022-23)
I SEMESTER (2022 BATCH)
221FYL104-Elements of Civil Engineering & Mechanics

Duration : 2 Hours

Marks : 50

(Q1) All Questions are compulsory [20.0]

(1.1) Draw a neat diagram of components of sub-structure and super-structure and explain their functions in brief [6.0]

CO :- 104.1

Blooms Taxonomy :- Understand

(1.2) Write a Note on GIS and its applications [7.0]

CO :- 104.2

Blooms Taxonomy :- Understand

(1.3) Enlist and explain any one Construction Equipment used in construction . [7.0]

CO :- 104.3

Blooms Taxonomy :- Apply

(Q2) All Questions are compulsory [10.0]

(2.1) Explain various system of forces [4.0]

CO :- 104.4

Blooms Taxonomy :- Apply

OR [2.1 / 2.2]

(2.2) State the Varignons theorem and Law of Polygon of forces. [4.0]

CO :- 104.4

Blooms Taxonomy :- Apply

(2.3) A simply supported beam of span 6 m carries UDL of 3 kN/m on entire span. It is subjected to concentrated load of 15 kN at 2 m from the right support. Find the support reactions [6.0]

CO :- 104.4

Blooms Taxonomy :- Apply

(Q3) Attempt any two questions. [10.0]

(3.1) Define impact and explain various types of impact..

[5.0]

CO :- 104.5

Blooms Taxonomy :- Apply

(3.2) State the law of conservation of momentum and Newton's law of collision of elastic bodies.

[5.0]

CO :- 104.5

Blooms Taxonomy :- Apply

(3.3) A 80 N body moving to the right at a speed of 3 m/s strikes a 10 N body that is moving to the left at a speed of 10 m/s. The final velocity of 10 N body is 4 m/s to the right, calculate the coefficient of restitution and final velocity of 80 N body.

[5.0]

CO :- 104.5

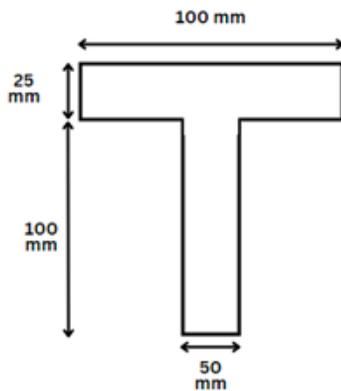
Blooms Taxonomy :- Apply

(Q4) All Questions are compulsory

[10.0]

(4.1) Find Moment of Inertia of this object given below:

[6.0]



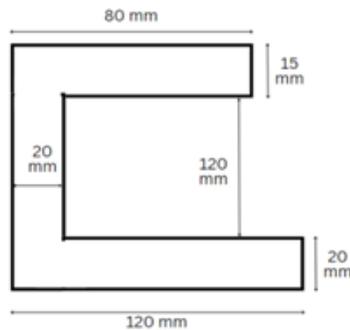
CO :- 104.6

Blooms Taxonomy :- Apply

OR [4.1 / 4.2]

(4.2) Find Moment of Inertia of this object given below:

[6.0]



CO :- 104.6

Blooms Taxonomy :- Apply

(4.3) State parallel axis theorem and perpendicular axis theorem.

[4.0]

CO :- 104.6

Blooms Taxonomy :- Apply
