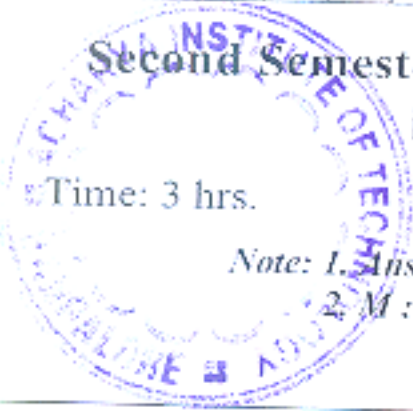


CBCS SCHEME

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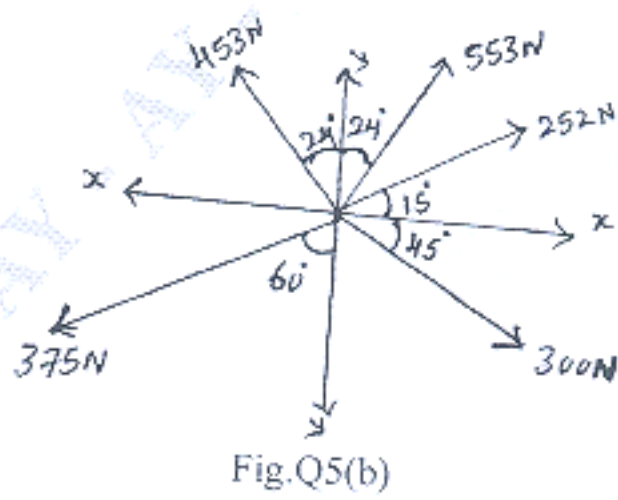
Second Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
Introduction to Civil Engineering

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
 2. M : Marks, L: Bloom's level, C: Course outcomes.*

Module - 1			
Q.1	a.	List out different branches of civil engineering and explain any 4 branches.	M 10 L L1 C CO1
	b.	List out basic materials of construction and explain any 4 materials.	10 L1 CO1
OR			
Q.2	a.	Explain briefly the structural elements of a building.	10 L1 CO1
	b.	Write the advantages and disadvantages of R.C.C.	10 L1 CO1
Module - 2			
Q.3	a.	Write a short note on : i. Smart city concept ii. Clean city concept.	10 L1 CO2
	b.	Explain the causes at urban flooding and discuss the engineering and non-engineering measures used to mitigate urban flooding.	10 L1 CO2
OR			
Q.4	a.	Explain the importance of water supply and sanitary system.	10 L1 CO2
	b.	What is solid waste management? Explain the sources and origin of solid wastes.	10 L1 CO2
Module - 3			
Q.5	a.	State and explain the law of parallelogram of forces.	10 L2 CO3
	b.	Find the magnitude and direction of the resultant force system in Fig.Q5(b).	10 L3 CO3



OR

Q.6 a. Determine the magnitude, direction and position of the resultant force with reference to the point A for the non-coplanar force system in Fig.Q6(a).

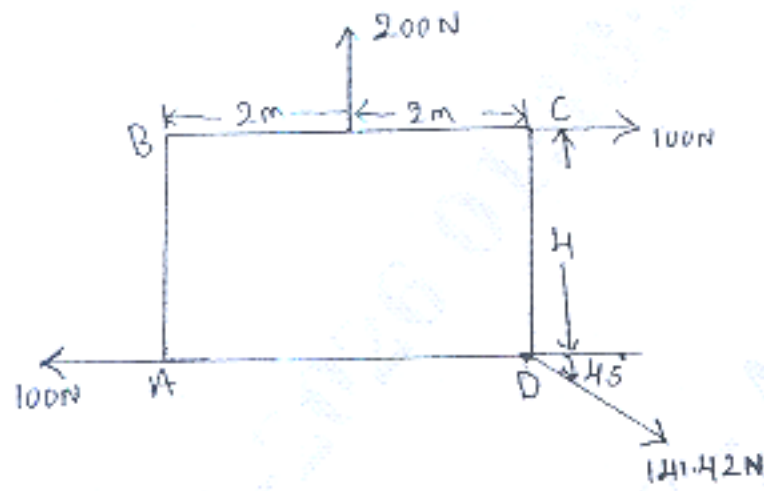


Fig.Q6(a)

b. Compute the tension in the strings AB, BC and CD shown in Fig.Q6(b).

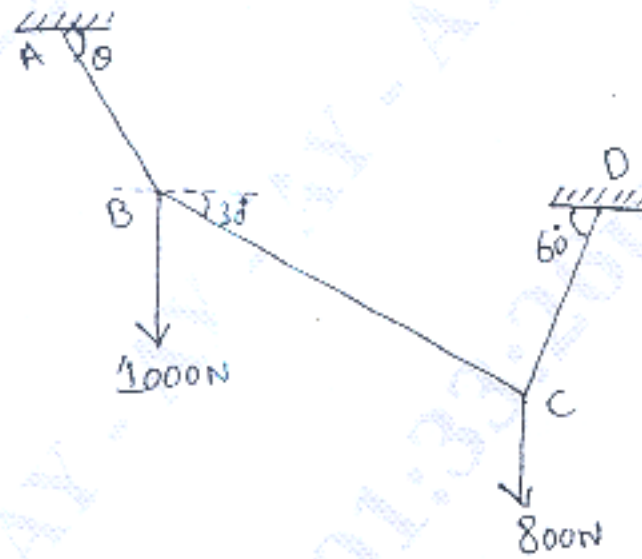


Fig.Q6(b)

Module - 4

Q.7 a. Find the Centroid of a semicircle using first principle.

b. Locate the Centroid of the Fig.Q7(b).

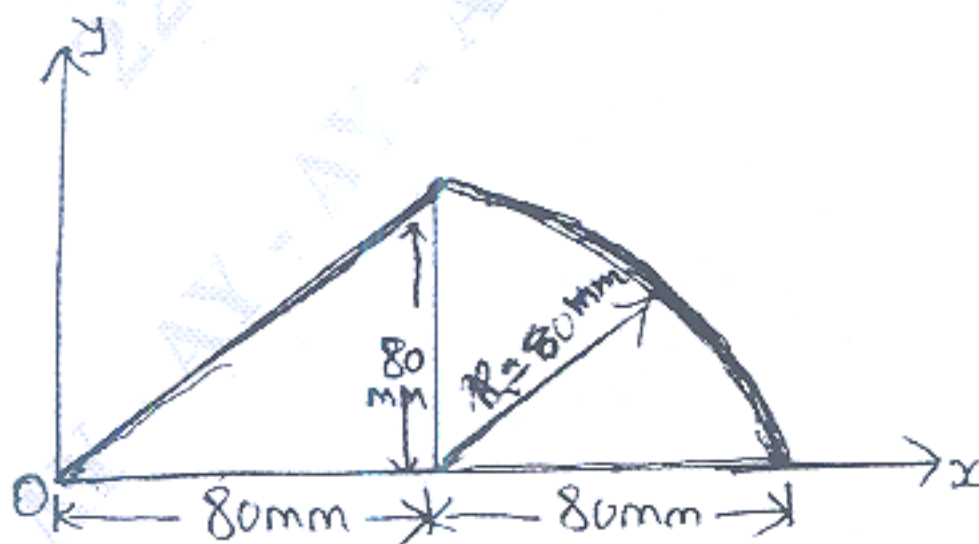


Fig.Q7(b)

OR

Q.8 a. Find the Centroid of a triangle from first principle. 8 L3 CO4

b. Determine the Centroid of a shaded area shown in Fig.Q8(b). 12 L3 CO4

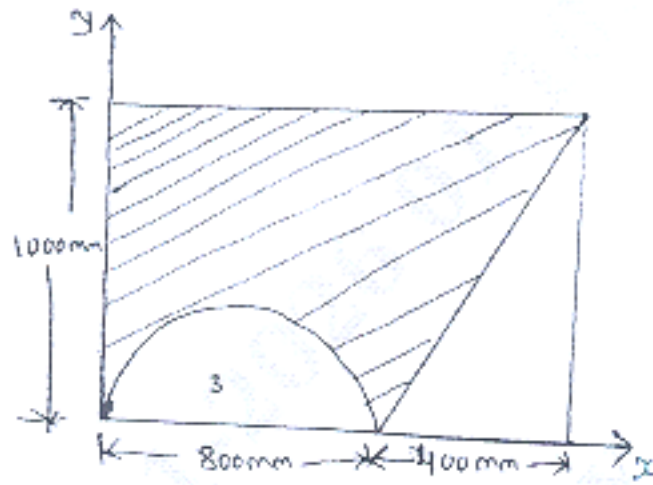


Fig.Q8(b)

Module - 5

Q.9 a. State and prove parallel and perpendicular axis theorem. 10 L2 CO5

b. Determine the moment of inertia along the horizontal axis and vertical axis passing through the Centroid of a section shown in Fig.Q9(b). 10 L3 CO5

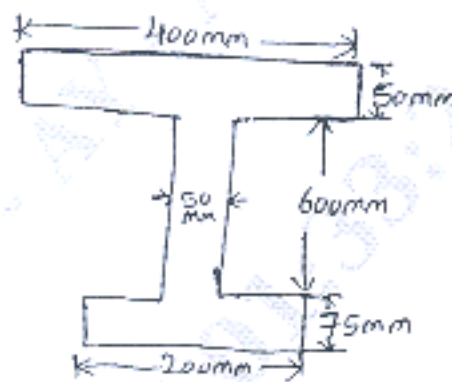


Fig.Q9(b)

OR

Q.10 a. Derive an expression for moment of inertia of a circle along its Centroidal axis. 10 L2 CO5

b. Determine the moment of inertia and radius of gyration of the shaded area shown in Fig.Q10(b), about the base AB. 10 L3 CO5

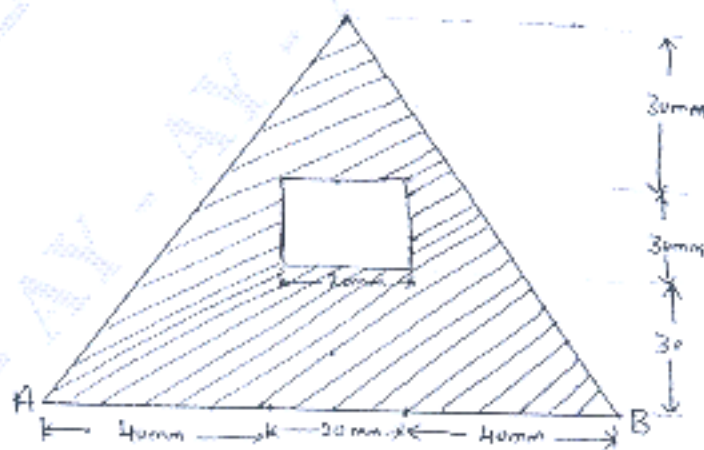


Fig.Q10(b)
