

CBCS SCHEME

BESCK204A



Second Semester B.E./B.Tech. Degree Examination, June/July 2025 Introduction to Civil Engineering

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			M	L	C
Q.1	a.	Briefly explain the following : i) Geotechnical engineering ii) Environmental engineering.	10	L1	CO1
	b.	Write short notes on : i) Structural engineering ii) Transportation engineering.	10	L1	CO1
OR					
Q.2	a.	Write short notes on : i) Bricks ii) Concrete.	10	L1	CO1
	b.	Briefly explain the following : i) Foundation ii) Beams	10	L1	CO1
Module – 2					
Q.3	a.	Write a note on : i) Smart city concept ii) Clean city concept.	10	L1	CO2
	b.	Briefly explain the urban air pollution management.	10	L1	CO2
OR					
Q.4	a.	Write short notes on energy efficient buildings.	10	L1	CO2
	b.	Briefly explain the following : i) Solid waste management ii) Flood control.	10	L1	CO2
Module – 3					
Q.5	a.	Explain the classification of force systems.	10	L1	CO3
	b.	For the coplanar concurrent force system given below, find the magnitude and direction of the resultant.	10	L2	CO3

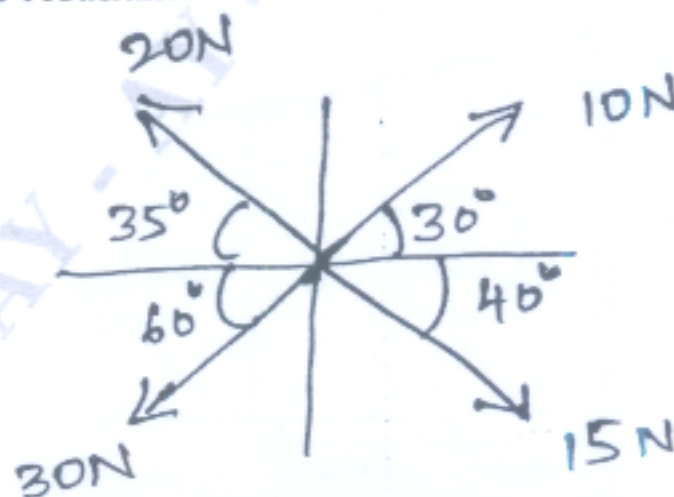


Fig.Q5(b)

OR

Q.6	a.	State and explain Varignon's theorem.	10	L1	CO3
	b.	Find the magnitude, direction and position of the resultant with respect to A for the Fig.Q6(b) shown below.	10	L2	CO3

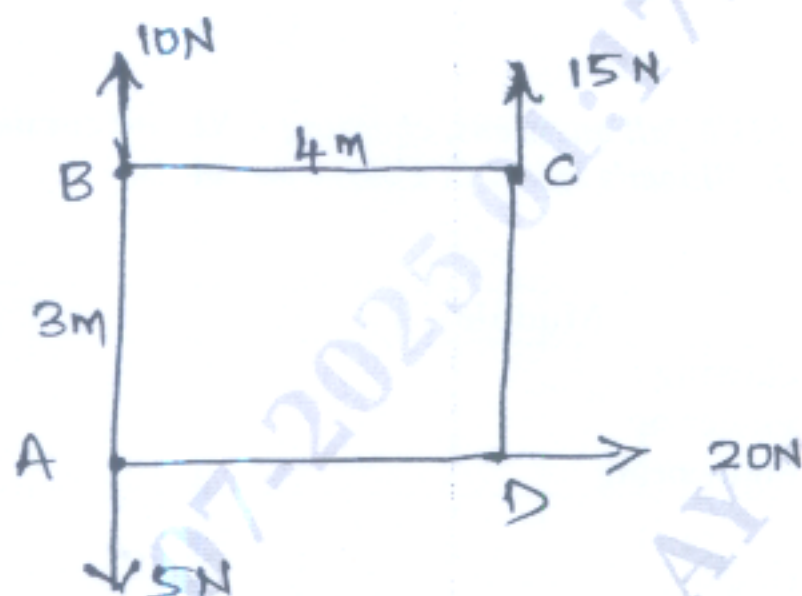


Fig.Q6(b)

Module - 4

Q.7	a.	Locate the centroid of a rectangular lamina using first principles.	10	L1	CO4
	b.	Find the centroid of the shaded area for the Fig.Q7(b) shown below.	10	L3	CO4

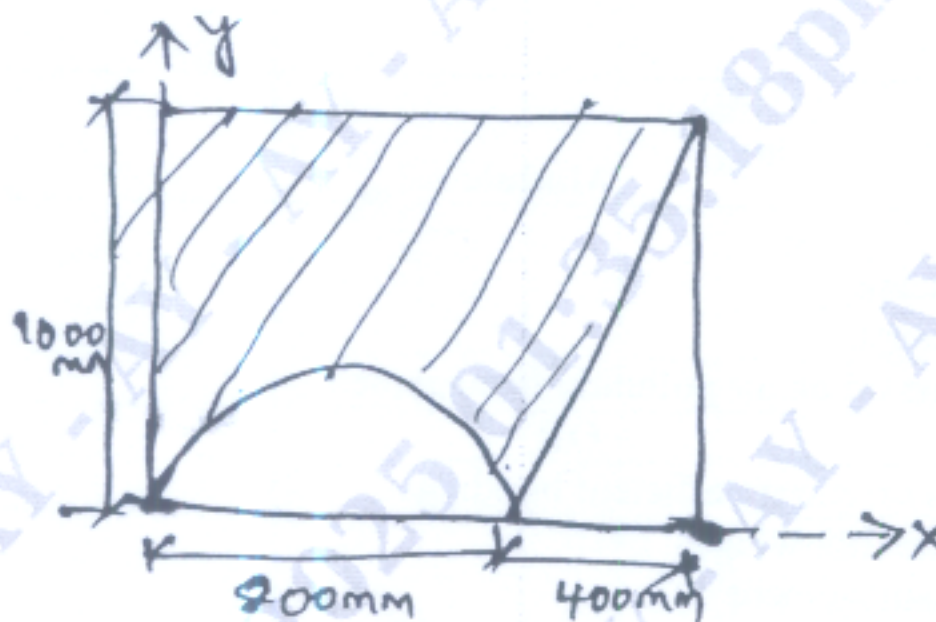


Fig.Q7(b)

OR

Q.8	a.	Locate the centroid of a semi circular lamina using first principle.	10	L1	CO4
	b.	Compute the centroid of the shaded portion for the Fig.Q8(b) shown below.	10	L3	CO4

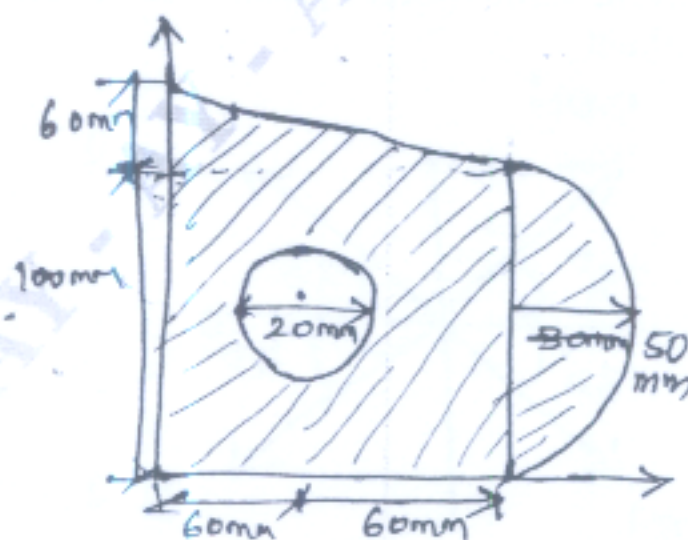


Fig.Q8(b)

Module – 5

Q.9

- a. State and prove parallel axis theorem.
 b. Calculate the moment of inertia of the Fig.Q9(b) shown below.

10

L2

CO5

10

L3

CO5

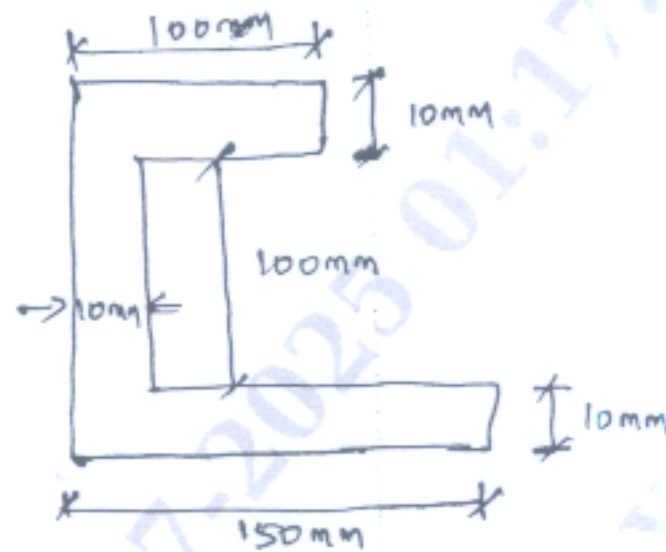


Fig.Q9(b)

OR

Q.10

- a. Derive the equation for moment of inertia of a triangular lamina.
 b. Determine the moment of inertia of the shaded portion about line MN for the Fig.Q10(b) shown below.

10

L2

CO5

10

L3

CO5

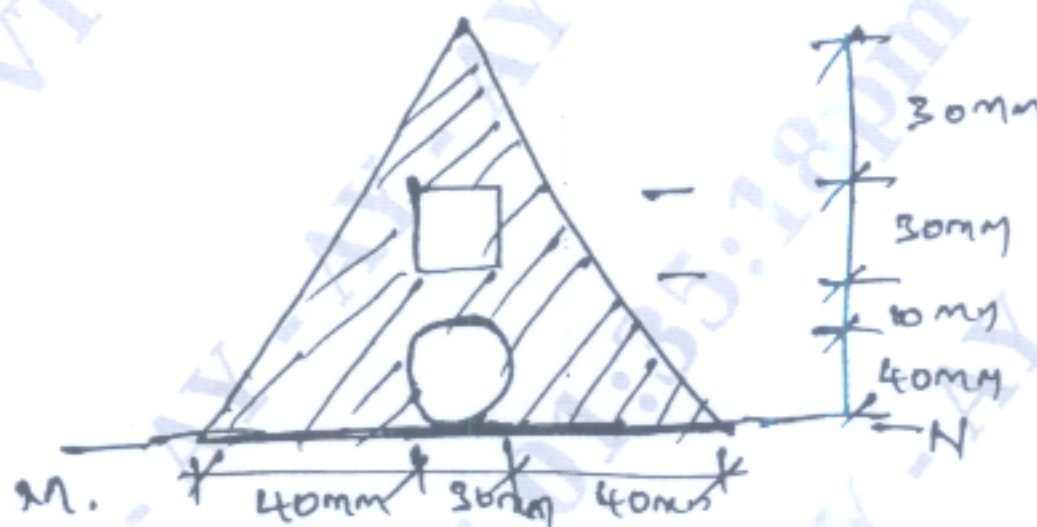


Fig.Q10(b)
