WALCHAND COLLEGE OF ENGINEERING
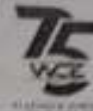(Government Aided Autonomous Institute)

Visharambag, Sangli – 416415

First Year B.Tech. All Branch

MSE, EVEN SEMESTER, AY 2023-24

Engineering Mechanics (6CV101)

MSE

PRN: _____

Day & Date: Wednesday, 28/02/2024   Time : 11.30 am to 01.00 pm

Max Marks: **30**

IMP: Verify that you have received question papers with correct course code, branch etc.

Instructions
- a) All questions are compulsory.
- b) Writing question number on answer book is compulsory otherwise answers may not be assessed.
- c) Assume suitable data wherever necessary.
- d) Figures to the right of question text indicate full marks.
- e) Mobile phones, smart gadgets and programmable calculators are strictly prohibited.
- f) Except PRN anything else writing on question paper is not allowed.
- g) Exchange/Sharing of stationery, calculator etc. not allowed.

Text on the right of marks indicates course outcomes (Only for faculty use)   Marks

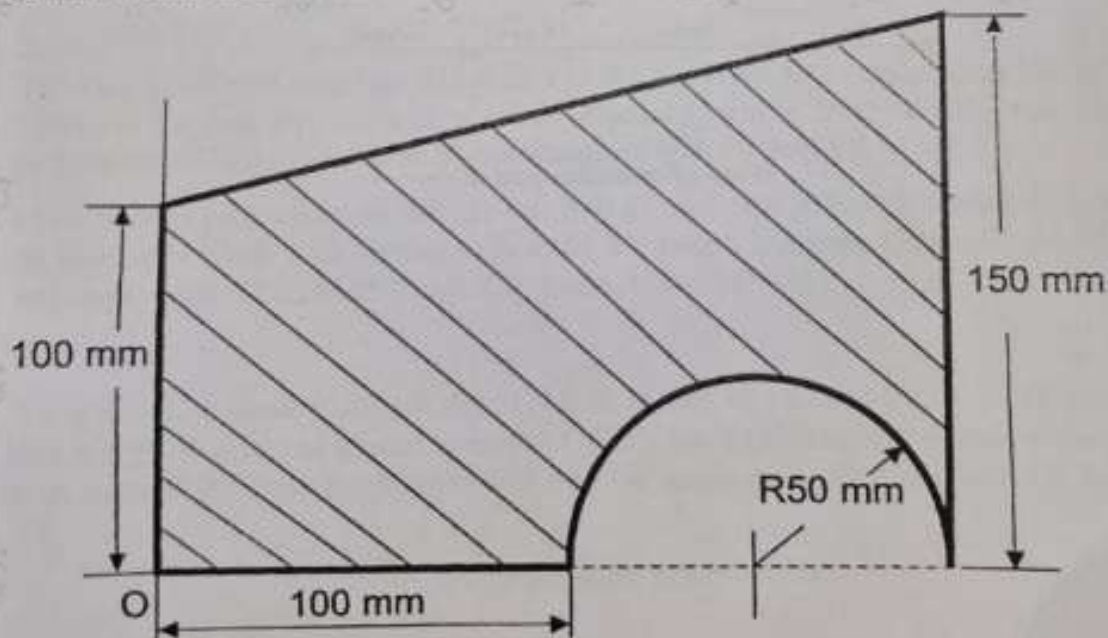|		Marks	
A)	Classify the system of forces with neat sketches.	4	CO1
B)	Find the angle between two equal forces of magnitude 300 N each, if their resultant is 150 N.	4	CO2
C)	Find the centroid of the shaded area as shown in Fig.1.	4	CO2

Fig.1

640BCAEA1BFD98BBEA3872A7362B68AE

Q2 A) Explain the types of loads and supports with neat sketches. 4

B) Find the reactions at support A for the following beam loaded and supported as 6 shown in Fig.2.
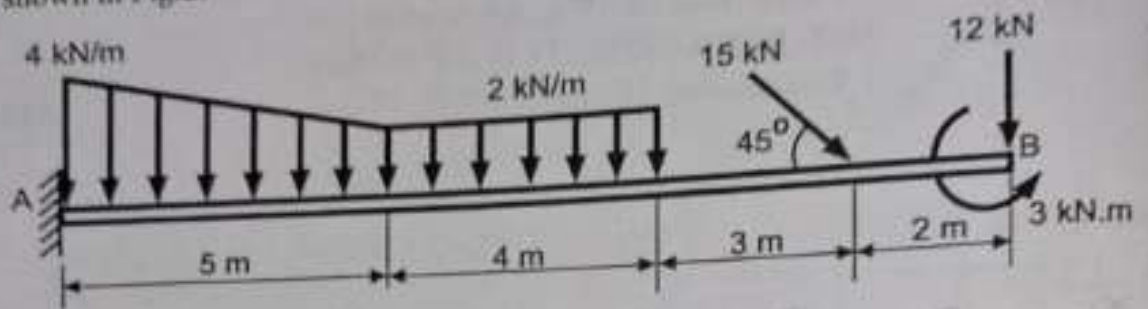

Fig.2

Q3 A) Write the assumptions made in the analysis of trusses. 2

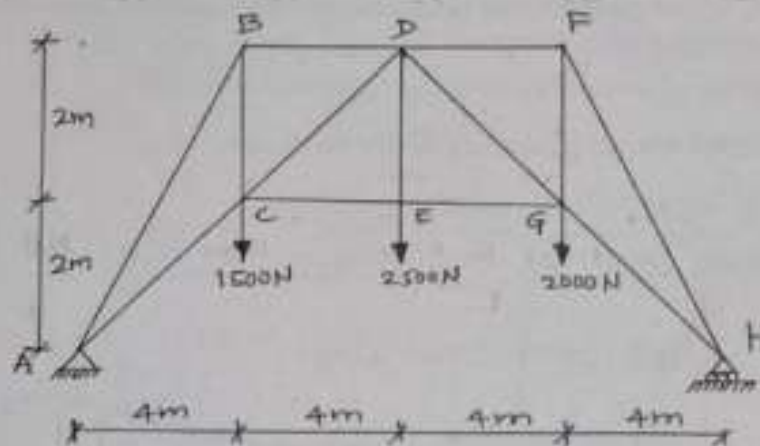**B)** Find the force in the members BD, CD & CE shown in Fig.3 by using method of 6 section.

Fig.3

· · · · · *End of question paper* · · · · ·