Total No. of Questions – [2]

Total No. of Printed Pages: 02

G.R. No.	

PAPER CODE	V124 - 3113

March 2024 (INSEM) EXAM

F.Y.B. TECH. MECHANICAL (SEMESTER - II)

COURSE NAME: ENGINEERING MECHANICS

COURSE CODE: ME12233

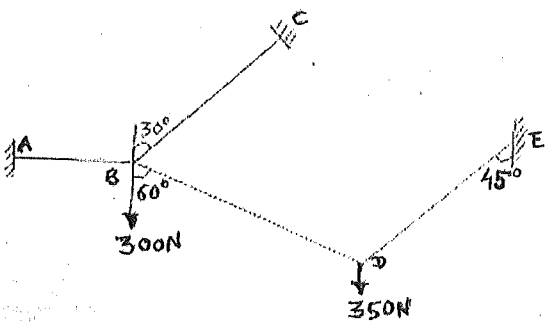
(PATTERN 2023)

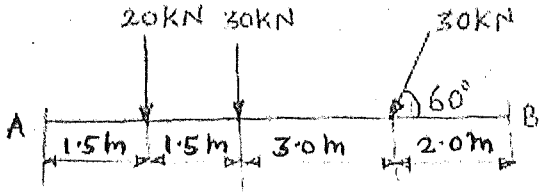
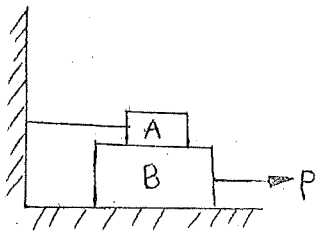
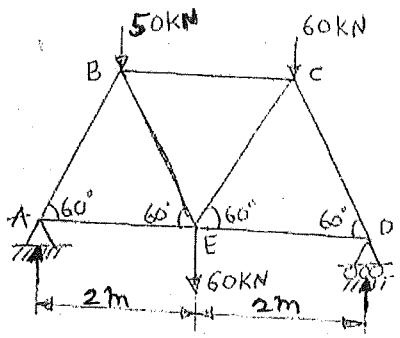
Time: [40 min]

[Max. Marks: 20]

(*) Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data wherever required**
4) **Solve any two sub questions from Question 1 and 2**

Question No.	Question Description	Marks	CO mapped	Blooms Taxonomy Level
Q.1	a) Classify different types of force systems with examples.	[5]	1	2
	b) A system of connected flexible cables shown in figure is supporting two vertical forces 300 N and 350 N at point B and D. Determine the forces in various segments of the cable. 	[5]	1	3
	c) A system of loads acting on a beam is shown in figure. Determine the resultant of the loads and horizontal distance of resultant from point A.	[5]	1	3

				
Q2	a) Classify different types of trusses with examples.	[5]	2	2
	b) Block A weighing 1000 N rests over block B which weighs 2000 N as shown in figure. Block A is tied to wall with a horizontal string. If the coefficient of friction between A and B is ¼ and between B and the floor is 1/3, what should be the value of P to move the block B if P is horizontal. 	[5]	2	3
	c) Determine the forces in the members AB, AE, DE and CD of the truss shown in figure. 	[5]	2	3

Note BT Level: 1. Remember 2. Understand 3. Apply 4. Analyse 5. Evaluate 6. Create