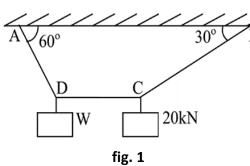


Enrolment No. HASMUKH GOSWAMI COLLEGE OF ENGINEERING, VAHELAL MID SEMESTER EXAMINATION, SEPTEMBER-2016 Subject Code: 2130003 Date: 24/Sep/2016

Subject Name: Mechanics of Solids Time: 10:00 TO 10:50 Date: 24/Sep/2016 Sem: 3RD Civil, Mech & Auto Total Marks: 20

Instructions :

 Attempt all questions. Make suitable assumptions wherever necessary. 		
A	 Fill in the blanks. The forces which meet at one point and have their lines of action in different planes are called If the shear force along a section of a beam is zero, the bending moment at the section is 	3
В	 Circle hasaxis of symmetry. Differentiate between the following : Coplanar concurrent and Coplanar non-concurrent system of forces. Resultant and Equilibrium 	3
A	A cord supported at A and B carries a load of 20kN at C and a load of W at D as shown in	3
В	Enlist the Centroid of various standard geometrical linear element along with sketches and values.	4
B	OR Determine magnitude and direction of resultant force for given system in fig 2 .	4
A	Calculate Support Reactions for beam shown in fig 3.	3
B	Draw Shear force diagram and Bending moment diagram for beam shown in fig 3 . OR	4
A B	Explain different types of beams and supports with neat sketches. Locate the centroid of a composite element w.r.t. point O as shown in fig. 4 .	3 4
	A B A B A B A A A	 A Fill in the blanks. A Fill in the blanks. 1. The forces which meet at one point and have their lines of action in different planes are called 2. If the shear force along a section of a beam is zero, the bending moment at the section is 3. Circle hasaxis of symmetry. B Differentiate between the following : Coplanar concurrent and Coplanar non-concurrent system of forces. Resultant and Equilibrium A cord supported at A and B carries a load of 20kN at C and a load of W at D as shown in fig 1. Find the value of W so that CD remains horizontal. B Enlist the Centroid of various standard geometrical linear element along with sketches and values. OR B Determine magnitude and direction of resultant force for given system in fig 2. A Calculate Support Reactions for beam shown in fig 3. B Draw Shear force diagram and Bending moment diagram for beam shown in fig 3. A Explain different types of beams and supports with neat sketches.



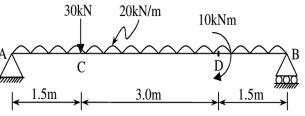


fig. 3

