



**SHANTILAL SHAH ENGINEERING COLLEGE, BHAVNAGAR**  
**APPLIED MECHANICS DEPARTMENT**

Assignment No:

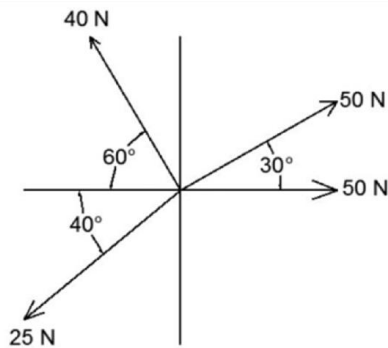
Date:

Sub Code

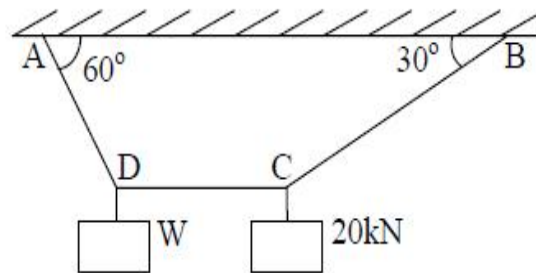
**Introduction, Fundamentals of Statics**

Title of Subject

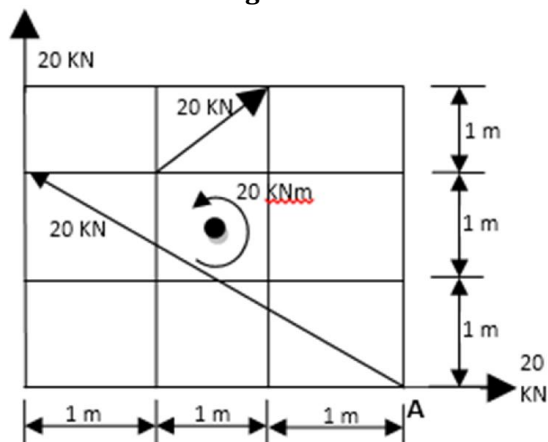
#	Questions
1.	Differentiate between Scalar and Vector quantity. Write S.I. units of following quantities and categorize it as a scalar or vector. 1) Density, 2) Velocity. 3) Volume, 4) Momentum, 5) Work
2.	Force is defined by its magnitude and other parameters. Name them.
3.	Define the following terms: (a) Statics (b) Dynamics (c) Kinetics (d) Kinematics (e) Rigid body (f) Deformable body (g) Particles
4.	Explain the law of parallelogram of forces and derive the equation for magnitude & direction of resultant force.
5.	Determine magnitude and direction of resultant force of the force system shown in <b>Figure - 1</b> .
6.	A cord supported at A and B carries a load of 20 kN at D and a load of W at C as shown in <b>Figure - 2</b> . Find the value of W so that CD remains horizontal.
7.	Find magnitude, direction and location of resultant of force system with respect to point 'A' shown in <b>Figure - 3</b> .



**Figure - 1**



**Figure - 2**



**Figure - 3**

Submission Date (B - Division)	07/08/2018
Submission Date (A - Division)	08/08/2018



SHANTILAL SHAH ENGINEERING COLLEGE, BHAVNAGAR  
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Assignment No: 02

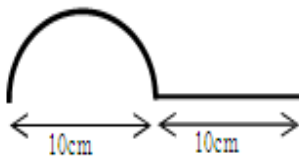
Date: 02/08/2018

**CENTRE OF GRAVITY & MOMENT OF INERTIA**

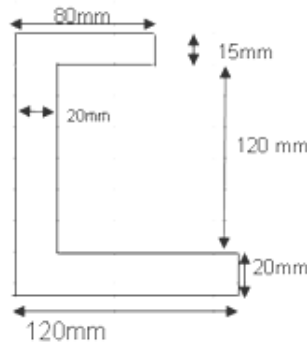
Sub Code 2130003

Title of Subject Mechanics Of Solids

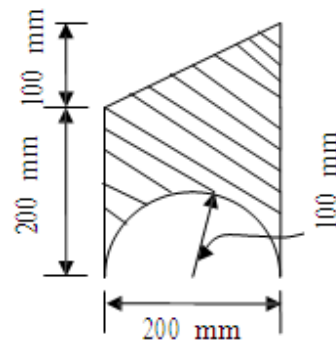
#	Questions
1.	State Pappus Guldinus theorem for surface of revolution. Also state Parallel and Perpendicular axis theorem
2.	Derive expression of moment of inertia of rectangular section by first principal.
3.	Determine the centroid of wire; bent as shown in <b>Figure - 1</b> .
4.	Determine the location of centroid and moment of inertia of the given lamina in <b>Figure - 2</b> about centroidal X axis.
5.	Find center of gravity and moment of inertia of a lamina shown in the <b>Figure - 3</b> .



**FIGURE - 1**



**FIGURE - 2**



**FIGURE - 3**

Submission Date (B - Division)	07/08/2018
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