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	Name: Shreering Mhatre
	class: Mechanics Prochical
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	submitted to: Arunabh Panday Sir
	Submitted to
-	Experiment No-1
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	Determination of support Reactions
	of simple and compound beams
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\* Questions -

su) what is meant by the equilibrium of a force system? what are the physical and analytical conditions of equilibrium?

Instruct Proping

Ans > Equilibrium is defined as the condition of a body, which is subjected to a force system whose resultant force is equal to zero. It means the effect of the given force system is zero and the particle or rigid body is eaid to be in equilibrium.

Physical and analytical conditions of equilibrium.

i) som of all external forces on the system is

ii) sum of all torque on the system is zero.

(32) what are the different types of supports and their corresponding reactions?

Ans-) The different types of supports and their corresponding reactions are-

O Roller support:
Beams end is supported on rollers. Reaction is at right angle. Roller can be treated as frictionless.

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1 Hinged Support:
At a hinged end, a beam cannot move in any
direction support will not develop any resisting
moment, but it can develop reaction in any
direction. In hinged support there are tho
reaction is acting, one is vertical and another
is horizontal.i.e., RH and RV
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a to a said and said and and
a Dund Connext:
3 Fixed Sapport: At such support the beam end is not free
to translate or votate at fixed end there are
three reaction a norizontal reaction (RH), a
vertical reaction (Rv), and momentum (M)
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This is called company dearn.

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(3) what do you mean by ud1 & uv1?

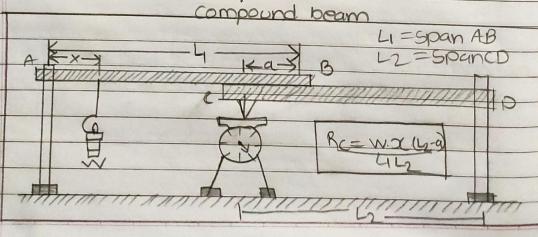
Ans Judl - udl in engineering means uniformly distributed load, this is where a load is evenly spread over a beam, meaning the rate of loading is uniform across the length of the beam.

ovi- uvi in mechanical engineering means "uniformly varying load". This means that the load varies areas the length of the beam. "The load is zero at one ord and increases uniformly to the other ord".

This type of load is called a trangular load

(34) what is a compound beam? Illustrate by an example.

Ans) Place a wooden beam horizontally with its one end resting on the pan balance. Take anothe wooden bream horizontal with its one end resting on pan balance and othe end beneath the first wooden beam's end. This is called compound beam.



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05)	what is meant by F.B.D. of a body?	
Ans >	F.B.D mones (F a)	
AIG	F.B.D means Free Body Diagram? is a diagrammatic representation of the isolated eystem twated as a single body. It shows all forces applied to the system by mechanical contact with other bodies, which are imagined to be removed.	
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