

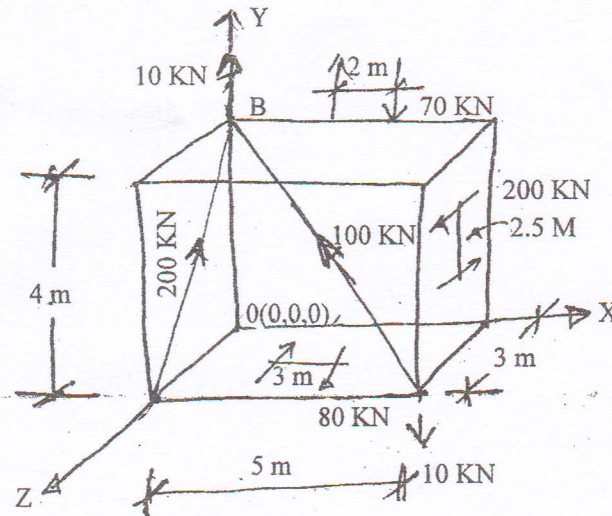
2073 Shrawan

Exam.	New Back (2066 & Later Batch)		
Level	BE	Full Marks	80
Programme	BEL, BEX, BCT, BAME, BIE, B. Agri. B. Arch.	Pass Marks	32
Year / Part	I / I	Time	3 hrs.

**Subject:** - Applied Mechanics (CE401)

- ✓ Candidates are required to give their answers in their own words as far as practicable.
- ✓ Attempt All questions.
- ✓ The figures in the margin indicate Full Marks.
- ✓ Assume suitable data if necessary.

1. What do you understand by a Rigid Body? Why it is necessary to assume a body as 'perfectly rigid' for your present study? [3]
2. Write down the concept of rigid bodies and deformable bodies. What is Free Body Diagram and why it is used during analysis of structure? [8]
3. Determine the resultant force and moment of the following system about the point 'O' as shown in figure below. [10]



4. Two blocks A and B of 40 N and 20 N respectively are in equilibrium position as shown in figure below. Calculate the force P required to move block A. Take  $\mu = 0.3$  for all surface. [5]

