**GE8292-ENGINEERING MECHANICS**

**UNIT-II EQUILIBRIUM OF RIGID BODIES**

10MARKS

1. A system of parallel forces is acting on rigid bar as shown in fig. reduce the system to (i) a single force (ii) a single force and a couple at A (iii) a single force and a couple at B.

 

1. Two vertical forces and a couple of magnitude 20KNm, acting on a horizontal rod, which is fixed at A. as shown in fig. (i) Determine the resultant of the system (ii) reduce to force couple system at A.

 

1. Reduce the given system of forces acting on the beam AB in fig. (i) An equivalent force couple system at A (ii) an equivalent force couple system at B.

 

1. Find the pin reaction of A and roller reaction at B. for the beam shown in fig.

 

1. Find the support reactions of a beam, shown in fig.

 

1. Determine the support reactions of the beam shown in fig.

 

1. Find the reactions at the supports A and B of the beam shown in fig.

 

1. Calculate the reactions R1, R2 and R3 for the two beams AB and CD supported as shown in fig. there being a hinge connecting B and C.

 

1. Determine the support reactions of simply supported beam, subjected to the loads as shown in fig.

 

1. A simply supported overhanging beam 20m long carries a system of loads and a couple as shown in fig. determine the reactions at supports A and B.

 