Parallel Axis Theorem

1. Calculate the moment of inertia of
2. A rod of mass 6 kg and length 4 m, about a perpendicular axis at one end [32]
3. A spherical meteorite, of mass 4000 tonnes and radius 5m, about a diameter [4x107]
4. The turntable in a microwave oven, of mass 250g and diameter 20cm, about its vertical axis

[1.25x10-3]

1. A hollow beach ball, of mass 100g and radius 15cm, about a diameter [1.5x10-3]
2. A rectangle, ABCD has mass 5 kg. AB=6m and BC=4m. Find its moment of inertia about
3. A line through E in the plane ABCD and perpendicular to AB, where E is on AB and AE=1m [35]
4. A line through F in the plane ABCD and perpendicular to BC, where BF=1m [11 ]
5. A uniform circular disc has mass 1.5kg and radius 0.4m. The point A is on the disc at a distance 0.2m from the centre. Calculate the moment of inertia of the disc about an axis through A perpendicular to the disc. [0.18]
6. Calculate the moment of inertia of a rod of mass 6kg and length 4m, about
7. An axis passing through its center and perpendicular to the rod [8]
8. An axis 1m from its end and perpendicular to the rod [14]
9. Find the moment of inertia of a uniform disc of radius a about an axis perpendicular to its plane passing through a point on its circumference . [ ma2]
10. A uniform sphere has mass 2 kg and radius 50cm. B is the mid-point of radius OA where O is the centre of the sphere. Find the moment of inertia of the sphere about an axis passing through B and parallel to its diameter. [0.325]