

# Circular Motion Paper Questions

## Jan 2002—Jan 2010 (old spec)

- 2 (a) A particle that moves uniformly in a circular path is accelerating yet moving at a constant speed.

Explain this statement by reference to the physical principles involved.

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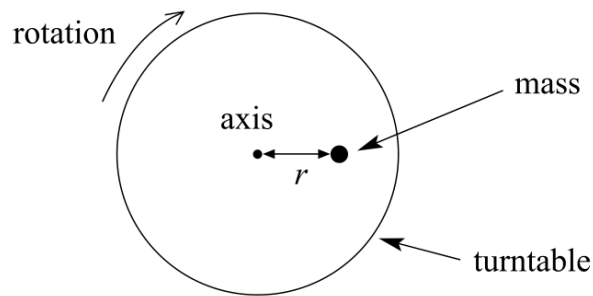
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**Q2 Jun 2007**

*(3 marks)*

(b)

**Figure 2**



A 0.10 kg mass is to be placed on a horizontal turntable that is then rotated at a fixed rate of 78 revolutions per minute. The mass may be placed on the table at any distance,  $r$ , from the axis of rotation, as shown in **Figure 2**.

If the maximum frictional force between the mass and the turntable is 0.50 N, calculate the maximum value of the distance  $r$  at which the mass would stay on the turntable at this rate of rotation.

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*(4 marks)*