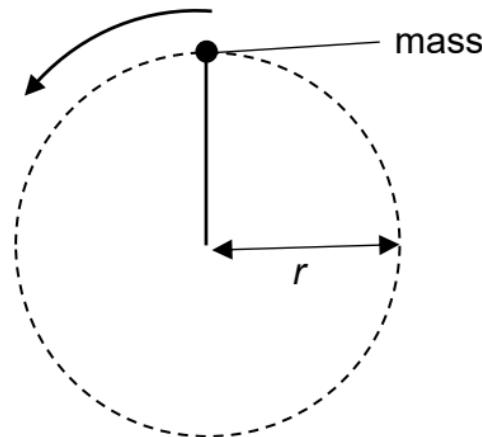


- 9 A small mass is attached to a light string and rotates in a vertical circle of radius  $r$ .



Taking  $g$  to be acceleration of free fall, what is the centripetal acceleration of the mass when it is at the lowest point of motion if the speed of the mass at the highest point just allow the mass to complete the circular motion?

A  $g$

B  $2g$

C  $4g$

D  $5g$

- 10 Two satellites P and Q orbit the Earth due to the gravitational field of the Earth. P and Q are at