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1. A rough disc is rotating at a constant angular speed of 5 revolutions per minute about a vertical axis. The axis is perpendicular to the plane of the disc and passes through the centre of the disc. A particle, P, of mass m kg is placed on the disc at distance 0.2 m from the axis. The particle does not move relative to the disc. The coefficient of friction between P and the disc is μ.

Find the smallest possible value of μ.

(6)

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Question 1 continued

Q1

(Total 6 marks)