

Mark schemes

Q1.

A

*from P to O***[1]****Q2.**

B

$$2\pi^2 m f^2 r^2$$

[1]**Q3.**

B

$$0.57 \text{ m s}^{-1}$$

[1]**Q4.**

B

$$\frac{T}{\sqrt{2}}$$

[1]**Q5.**

C

$$T \quad T\sqrt{2}$$

[1]**Q6.**

A

$$19$$

[1]**Q7.**

D

$$\frac{v^2}{rg}$$

[1]

Q8.

B

the kinetic energy of the mass

[1]

Q9.

C

[1]

Q10.

C

[1]