

## Mark schemes

**Q1.**

C

$$\frac{R}{2}$$

[1]

**Q2.**

B

$$10^4 \text{ m}$$

[1]

**Q3.**

D

*The work done moving from **Q** to **R** and moving from **Q** to **S** is the same.*

[1]

**Q4.**

B

$$\left(\frac{M}{R}\right)^{\frac{1}{2}}$$

[1]

**Q5.**

B

$$\sqrt{\frac{GM}{(R+h)}}$$

[1]

**Q6.**

D

*Signals from the satellite can be sent to at any point on the Earth's surface during one orbit.*

[1]

**Q7.**

D

[1]

**Q8.**

B

**[1]****Q9.**

B

**[1]****Q10.**

C

**[1]****Q11.**

D

**[1]**