Answers to NCERT/CBSE PHYSICS Class 11(Class XII)textbook Exercise and Additional exercise
CHAPTER EIGHT GRAVITATION
EXERCISES

(For simplicity in numerical calculations, take g = 10 m s-2)
8.7 Does the escape speed of a body from the earth depend on (a) the mass of the body, (b) the location from where it is projected, (c) the direction of projection, (d) the height of the location from where the body is launched?

7.

Solution:

The escape velocity is given as $v_e = \sqrt{2gr}$

So following can be concluded,

(a)It does not depend on mass of object.

(b)As g varies with it height ,escape velocity varies as a function of location(altitude).

(c)It does not depend on direction of projection.

(d)It depends on height of projection of body.

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