

## Worksheet: Gravitation

Tamil Nadu State Board · Class 11 · Physics · 5 questions · 13 marks

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Score: \_\_\_\_\_ / 13

**Q1.** Find  $g$  at a height equal to  $R$  above Earth's surface. [2 marks]

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**Q2.** Why is  $g$  zero at the centre of the Earth? [2 marks]

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**Q3.** Find the orbital velocity of a satellite at 300 km height ( $R = 6400$  km,  $M = 6e24$  kg). [3 marks]

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**Q4.** Calculate the escape velocity on the Moon ( $g = 1.62$  m/s<sup>2</sup>,  $R = 1740$  km). [3 marks]

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**Q5.** If Earth's period is 1 year at radius  $R$ , find the period of a planet at radius  $4R$ . [3 marks]

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