BRITISH COLUMBIA PHYSICS 12 (MPH--12) · UNIT B · 10 QUESTIONS

Dynamics and Circular Motion — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The graph shows centripetal force against mass for a speed of 4 m per s and a radius of 2 m. At a mass of 3 kg, the force, in newtons, is**

- A 8
- B 16
- C 24
- D 32

Understand It with Pulse | Flag a mistake

2 **If the distance between two masses is tripled, the gravitational force between them becomes**

A three times as large

B nine times as large

C one third as large

D one ninth as large

Understand It with Pulse | Flag a mistake

3 **If the orbital radius of a satellite increases by a factor of 9, its orbital period increases by a factor of**

A 3

B 9

C 27

D 81

Understand It with Pulse | Flag a mistake

4 **An object at rest on a flat surface has a net force of**

- **A** 0 N
- **B** 9.8 N
- **C** its weight
- **D** its mass

Understand It with Pulse | Flag a mistake

5 **For an object in uniform circular motion, the velocity at any instant points**

- **A** toward the centre
- **B** along the tangent
- **C** away from the centre
- **D** vertically downward

Understand It with Pulse | Flag a mistake

6 **If the distance from a planet centre is doubled, the gravitational field strength becomes**

- A twice as large
- B four times as large
- C unchanged
- D one quarter as large

Understand It with Pulse | Flag a mistake

7 **An 8 kg block rests on a flat surface. Using g = 9.8 m per s squared, the normal force on it, in newtons, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **A net force of 30 N acts on a 5 kg object. Its acceleration, in metres per second squared, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A geostationary satellite has an orbital period of**

- **A** 1 hour
- **B** 12 hours
- **C** 24 hours
- **D** 30 days

Understand It with Pulse | Flag a mistake

10 **The mass of an object on the Moon compared with its mass on Earth**

- **A** is the same
- **B** is about one sixth
- **C** is about six times
- **D** is zero

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**5.**	B	**9.**	C
2.	D	**6.**	D	**10.**	A
3.	C	**7.**	78.4		
4.	A	**8.**	6		

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