Section: Intro to Maths

**PTQ:**

**Spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

**Q1. An** **-particle of energy**  **J is scattered of an aluminium atom through an angle of 90. Calculate the distance of closest approach.**

**Atomic number of Al is 13,**



**and** 

1. 

2.

3.

4.

Question Type: passage

Answer: 4

Marks: 2

Negative: 1

Explanation:

**Q2. A spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

1.  GMeR

2.  2GMeR

3.  2-1 GMeR

4.  2+1 GMeR

Question Type: passage

Answer: 4

Marks: 2

Negative: 0.25

Explanation:

Section: Advanced Maths

**Q3. An orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

Question Type: integer

Answer: 3

Marks: 2

Negative: 1

Explanation:

**Q4. Calculate the distance of closest approach.**

**Atomic number of Al is 13,**



**and** 

1. 

2.

3.

4.

Question Type: scq

Answer: 2

Marks: 2

Negative: 1

Explanation:

**Q5. A car is moving at 30 *km / h*. The instantaneous velocity of the upper most points of its wheels is**

1. 60 km / h forward

2. 120 km / h forward

3. 60 km / h  backward

4. 120 km / h backward

Question Type: mcq

Answer: 2,4

Marks: 2

Negative: .25

Explanation:

Section: My Section

**PTQ:**

**Spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

**Q6. An** **-particle of energy**  **J is scattered of an aluminium atom through an angle of 90. Calculate the distance of closest approach.**

**Atomic number of Al is 13,**



**and** 

1. 

2.

3.

4.

Question Type: passage

Answer: 4

Marks: 2

Negative: 1

Explanation:

**Q7. A spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

1.  GMeR

2.  2GMeR

3.  2-1 GMeR

4.  2+1 GMeR

Question Type: passage

Answer: 4

Marks: 2

Negative: 0.25

Explanation:

**Q8. An orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

Question Type: integer

Answer: 3

Marks: 2

Negative: 1

Explanation:

**Q9. Calculate the distance of closest approach.**

**Atomic number of Al is 13,**



**and** 

1. 

2.

3.

4.

Question Type: scq

Answer: 2

Marks: 2

Negative: 1

Explanation:

**Q10. A car is moving at 30 *km / h*. The instantaneous velocity of the upper most points of its wheels is**

1. 60 km / h forward

2. 120 km / h forward

3. 60 km / h  backward

4. 120 km / h backward

Question Type: mcq

Answer: 2,4

Marks: 2

Negative: .25

Explanation:

**PTQ:**

**Spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

**Q1. An** **-particle of energy**  **J is scattered of an aluminium atom through an angle of 90. Calculate the distance of closest approach.**

**Atomic number of Al is 13,**



**and** 

1. 

2.

3.

4.

Question Type: passage

Answer: 4

Marks: 2

Negative: 1

Explanation:

**Q2. A spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

1.  GMeR

2.  2GMeR

3.  2-1 GMeR

4.  2+1 GMeR

Question Type: passage

Answer: 4

Marks: 2

Negative: 0.25

Explanation:

**Q2. A spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

1.  GMeR

2.  2GMeR

3.  2-1 GMeR

4.  2+1 GMeR

Question Type: passage

Answer: 4

Marks: 2

Negative: 0.25

Explanation:

**Q2. A spaceship is launched into a circular orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

1.  GMeR

2.  2GMeR

3.  2-1 GMeR

4.  2+1 GMeR

Question Type: passage

Answer: 4

Marks: 2

Negative: 0.25

Explanation:

**Q3. An orbit close to the Earth’s surface   of mass** Me **and radius R. what additional velocity has to be imparted to the spaceship to overcome the gravitational pull**

Question Type: integer

Answer: 3

Marks: 2

Negative: 1

Explanation:

**Q4. Calculate the distance of closest approach.**

**Atomic number of Al is 13,**



**and** 

1. 

2.

3.

4.

Question Type: scq

Answer: 2

Marks: 2

Negative: 1

Explanation:

**Q5. A car is moving at 30 *km / h*. The instantaneous velocity of the upper most points of its wheels is**

1. 60 km / h forward

2. 120 km / h forward

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4. 120 km / h backward

Question Type: mcq

Answer: 2,4

Marks: 2

Negative: .25

Explanation: