

ARJUNA (NEET)

Motion in Plane

DPP-01

- If initial velocity of object $\vec{u} = 8\hat{i} + 6\hat{j}$ and Final velocity is $\vec{v}_F = 6\hat{i} + 8\hat{j}$ then find change in velocity.
 (A) $-2\hat{i} + 2\hat{j}$ (B) $2\hat{i} + 2\hat{j}$
 (C) $-2\hat{i} - 2\hat{j}$ (D) $2\hat{i} - 2\hat{j}$
- Initial velocity is $3\hat{i} + 4\hat{j}$ and acceleration $0.4\hat{i} + 0.3\hat{j}$ then find velocity after 10 sec.
 (A) $-7\hat{i} + 7\hat{j}$ (B) $7\hat{i} - 7\hat{j}$
 (C) $7\hat{i} + 7\hat{j}$ (D) None
- Position of object $\vec{r} = t^2\hat{i} + t\hat{j}$ then find acceleration of object.
 (A) $2\hat{i}$ (B) \hat{i}
 (C) $-2\hat{j}$ (D) \hat{j}
- Velocity of object $\vec{v} = 2t\hat{i} + t^2\hat{j}$ then find acceleration at $t = 1$ sec.
 (A) $2\hat{i} - 2\hat{j}$ (B) $2\hat{i} + 2\hat{j}$
 (C) $2\hat{i} + 3\hat{j}$ (D) $3\hat{i} - 2\hat{j}$
- Initial velocity is 8 m/s in north and acceleration 2m/s^2 in east then find speed at $t = 4$ s.
 (A) $8\sqrt{2}$ m/s (B) $6\sqrt{2}$ m/s
 (C) $-8\sqrt{2}$ m/s (D) $5\sqrt{2}$ m/s
- Position vector of object $\vec{r} = \sin(t)\hat{i} + \cos(t)\hat{j}$ then path of object will be.
 (A) 1 (B) 2
 (C) 3 (D) 4
- Initial velocity of object is 2m/s in east and acceleration 1.5 m/s^2 in north then find magnitude of displacement in 2 seconds.
 (A) 2 (B) 3
 (C) 5 (D) 4
- Projectile motion is a :
 (A) non uniform with non-uniform acceleration
 (B) non uniform with uniform acceleration
 (C) uniform motion
 (D) can't say
- In projectile motion which of the following remains same.
 (A) speed
 (B) velocity
 (C) acceleration
 (D) only magnitude of acceleration
- In projectile motion when object is at maximum height.
 (A) speed maximum
 (B) speed minimum
 (C) position maximum
 (D) acceleration minimum

ANSWERS KEY

1. (A)
2. (C)
3. (A)
4. (B)
5. (A)
6. (A)
7. (C)
8. (B)
9. (C)
10. (B)



Note - If you have any query/issue

Mail us at support@physicswallah.org



support@physicswallah.org