

Easy

Assistant Engineer (Electrical), Class-2 2025

Building Department

- A

$$= \frac{r(t)}{t}$$
- B

$$= \frac{r(t)}{t^2}$$
- C

$$r(t) = \int_0^t u(t) dt$$

Correct
- D

$$= \frac{2r(t)}{t^2}$$

Correct Answer: C

Full Detailed Explanation

Given,  $r(t) = \int_0^t u(t) dt$ ,  $u(t)$  is the velocity of the particle at time  $t$ .  
Differentiating both sides with respect to  $t$ , we get  
 $\frac{dr(t)}{dt} = u(t)$   
At  $t = 0$ ,  $r(0) = 0$