

**Total Points 20****Total Time 30 Minutes****Student ID :-****Student Group**

1. The ball is thrown with the velocity defined by the function  $V = 2\sin(t) + \cos(4t)$ , Initial position of ball is zero and find the position  $P(t)$  of ball after time  $t$  using RK.

Write answer up to 4 significant digits.

Results	Time step $t=0.1$	Relative Error Assuming $t=0.0001$ most accurate	$t=0.001$	Relative Error Assuming $t=0.0001$ most accurate.
<b>P(2)</b>				
<b>P(2.7)</b>				
<b>P(2.9)</b>				

2. How many times the velocity of ball was zero and write the time at which velocity ball was zero by using bisection method.