

1>

a>

<u>x(o) :-</u>	<u>Taylor 2nd order :-</u>	<u>Taylor 3th order :-</u>
1.1000000000000000e+00	1.0005000000000000e+00	9.996666666666666e-01
1.2000000000000000e+00	1.009035257402244e+00	1.008585295426023e+00

b>

<u>x(o) :-</u>	<u>Taylor 2nd order :-</u>	<u>Taylor 3th order :-</u>
5.0000000000000000e-01	6.154516420332130e-01	6.362849753665464e-01
1.0000000000000000e+00	1.235036178770939e+00	1.237684202127365e+00

2>

<u>x(o) :-</u>	<u>Taylor 2nd order :-</u>	<u>Actual Values:-</u>
1.0000000000000000e+00	0	0
1.1000000000000000e+00	3.397852285573807e-01	3.459198765397394e-01
1.2000000000000000e+00	8.521434492763468e-01	8.666425357596024e-01
1.3000000000000000e+00	1.581769505194711e+00	1.607215078180736e+00
1.4000000000000000e+00	2.580996649738161e+00	2.620359551235833e+00
1.5000000000000000e+00	3.910984559345664e+00	3.967666294227793e+00
1.6000000000000000e+00	5.643081035833021e+00	5.720961525596339e+00
1.7000000000000000e+00	7.860381603866422e+00	7.963873477844970e+00
1.8000000000000000e+00	1.065951448039274e+01	1.079362466049064e+01
1.9000000000000000e+00	1.415268209037690e+01	1.432308153589100e+01
2.0000000000000000e+00	1.846999448255634e+01	1.868309708188642e+01

<u>x(o) :-</u>	<u>Error:-</u>
1.0000000000000000e+00	0
1.1000000000000000e+00	6.134647982358687e-03
1.2000000000000000e+00	1.449908648325560e-02
1.3000000000000000e+00	2.544557298602523e-02
1.4000000000000000e+00	3.936290149767130e-02
1.5000000000000000e+00	5.668173488212913e-02
1.6000000000000000e+00	7.788048976331829e-02
1.7000000000000000e+00	1.034918739785482e-01
1.8000000000000000e+00	1.341101800978972e-01
1.9000000000000000e+00	1.703994455141000e-01
2.0000000000000000e+00	2.131025993300781e-01

3>

<u>X(o)</u>	<u>RK4</u>	<u>RK2</u>
0	5.000000000000000e-01	5.000000000000000e-01
2.000000000000000e-01	1.009000000000000e+00	8.140000000000001e-01
4.000000000000000e-01	1.666908333333333e+00	1.181540000000000e+00
6.000000000000001e-01	2.497268680555556e+00	1.597063400000000e+00
8.000000000000000e-01	3.531668813078704e+00	2.053846714000000e+00
1.000000000000000e+00	4.812488990880594e+00	2.543754523940000e+00
1.200000000000000e+00	6.396589396098130e+00	3.056942973967400e+00
1.400000000000000e+00	8.360257439764991e+00	3.581500998500554e+00

1.6000000000000000e+00	1.080584539835136e+01	4.103016208185671e+00
1.8000000000000000e+00	1.387067590945474e+01	4.604049611904662e+00
2.0000000000000000e+00	1.773899017851845e+01	5.063500030404641e+00

4>

<u>X(o)</u>	<u>RK2</u>	<u>Actual Values</u>
1.0000000000000000e+00	1.0000000000000000e+00	1.0000000000000000e+00
1.1000000000000000e+00	1.002267573696145e+00	1.004281727936202e+00
1.2000000000000000e+00	1.011643061235780e+00	1.014952314033742e+00
1.3000000000000000e+00	1.025634277263832e+00	1.029813688957985e+00
1.4000000000000000e+00	1.042750304348276e+00	1.047533919252519e+00
1.5000000000000000e+00	1.062048671207760e+00	1.067262354181873e+00
1.6000000000000000e+00	1.082907166113279e+00	1.088432686945791e+00
1.7000000000000000e+00	1.104900388802406e+00	1.110655052146264e+00
1.8000000000000000e+00	1.127729037211403e+00	1.133653556733305e+00
1.9000000000000000e+00	1.151177451082417e+00	1.157228433054669e+00
2.0000000000000000e+00	1.175087097025272e+00	1.181232218299282e+00

<u>X(0)</u>	<u>Error</u>
1.0000000000000000e+00	0
1.1000000000000000e+00	2.014154240057353e-03
1.2000000000000000e+00	3.309252797961237e-03
1.3000000000000000e+00	4.179411694152702e-03
1.4000000000000000e+00	4.783614904243949e-03
1.5000000000000000e+00	5.213682974112954e-03
1.6000000000000000e+00	5.525520832511344e-03
1.7000000000000000e+00	5.754663343858102e-03
1.8000000000000000e+00	5.924519521902649e-03
1.9000000000000000e+00	6.050981972252290e-03
2.0000000000000000e+00	6.145121274010013e-03