|  |  |  |
| --- | --- | --- |
|  | **BAHRIA UNIVERSITY, (Karachi Campus)**  *Department of Software Engineering*  **Assignment III - Fall 2024** |  |

COURSE TITLE: **NUMERICAL ANALYSIS** COURSE CODE: **GSC-321**

Class: **BSE-VII (A,B)** Time Allowed:  **1 Week.**

Course Instructor: **Engr. Zoobia Zeeshan** Max. Marks: **5 marks**

Submission Date: **16-12-2024**

**Question No. 1 [CLO3: 10 Marks]**

**Analyze** the solution of the differential equation: dy/dx= y⋅cos(x) + x2, y(0)=1 , y(0) = 1

for x=0 to x=0.4 with a step size h=0.2 using both Euler’s method and the 4th-order Runge-Kutta method. Compare the results and discuss the accuracy of each method.

**Note:**

* Strictly follow the given deadline.
* Assignment must be submitted in handwritten form.