Roll No…….. **Total No. of Printed Pages: [01]**
Total No. of Questions: [09]

B.Sc. IT (Semester – 4th)
EMBEDDED SYSTEM
Subject Code: BITE1416
Paper ID: [130419]

Time: 03 Hours **Maximum Marks: 60**

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A **(2 marks each)**

Q1. Attempt the following:
   a. What are the application of an embedded system?
   b. Name some DSP used in embedded system.
   c. Define embedded microcontroller.
   d. Difference between CISC and RISC.
   e. Define device driver
   f. What is watchdog timer?
   g. What is debugging?
   h. Difference between timers and counter
   i. What are the various types of memory in embedded system?
   j. What are the two essential units of a processor on an embedded system?

Section – B **(5 marks each)**

Q2. What is an embedded system? What are the components of embedded system?
Q3. Classify the processor in embedded system and explain them with a diagram.
Q4. What are the functional and real-time requirements of an embedded system?
Q5. Explain in detail about the building process of an embedded system
Q6. Explain followings:
   a. In-Circuit Emulator.
   b. Target Hardware Debugging

Section – C **(10 marks each)**

Q7. Explain the selection of processor and memory for an embedded system application with a suitable diagram.
Q8. Explain the concept of washing machine application in embedded system with a suitable diagram.
Q9. Illustrate with functional description about the different phase of Embedded Life cycle Model.