**BMS COLLEGE OF ENGINEERING**

**Bull Temple Road, Bangalore-560019**

**BASIC ELECTRONICS & COMMUNICATION ENGINEERING**

**UNIT 4 – Embedded systems**

1. What is an embedded system? List the differences between general purpose systems and embedded system. (10 Marks)
2. Explain the classification of embedded systems based on generation, complexity, deterministic behavior, triggering and performance requirements (10 Marks)
3. List the major areas of applications in embedded system with an example. (6 Marks)
4. Describe the elements of embedded system with a neat diagram. (8 Marks)
5. Differentiate between Microprocessor and Microcontroller. (6 Marks)
6. Describe the differences between RISC & CISC architecture. (6 Marks)
7. Compare and comment on Von Neumann versus Harvard Architectures with relevant figures. (6 Marks)
8. Using suitable diagrams explain instrumentation and control systems. (10 Marks)
9. Define actuator and discuss briefly the LEDs. (6 Marks)
10. Explain the different configurations of 7-segment LED Display. (8 Marks)
11. Define sensors and give its classification with examples. (5 Marks)
12. Define transducers and give the classification of transducers with examples. (5 Marks)
13. Describe how characters are displayed in 7 segment display in common anode configuration along with the Binary and hexadecimal equivalents. (10 Marks)
14. Describe how characters are displayed in 7 segment display in common cathode configuration along with the Binary and hexadecimal equivalents. (10 Marks)
15. To display 2022 in a seven-segment, how many 7-segment displays are required? And also write the Binary and hexadecimal equivalent code for each. (10 Marks)
16. To display AbCd in a seven-segment, how many 7-segment displays are required? And also write the Binary and hexadecimal equivalent code for each. (10 Marks)