

B.E. (Information Technology) Eighth Semester (C.B.S.)
Elective - III : Embedded Systems

P. Pages : 2

Time : Three Hours



TKN/KS/16/7705

Max. Marks : 80

- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Assume suitable data wherever necessary.
 9. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) What is embedded system? Explain components of embedded system hardware. **7**
b) Write examples and application of embedded system. **6**

OR

2. a) Explain how to get processor embedded into a system. **7**
b) Explain hardware units and devices in a system. **6**
3. a) Define the following terms. **10**
i) Cross compiler. ii) Cross Assemblers.
iii) Host Machine. iv) Target Machine.
- b) Write in brief about in – circuit formulator. **3**

OR

4. a) "Locating program components properly". How does locator resolve this issue in the embedded Environment? Explain. **10**
b) Explain PROM programmer. **3**
5. a) What are the three states of an RTOS task? Explain. **6**
b) Explain Message Queue, Mailboxes, and pipes. **7**

OR

6. a) Write short note on **any four**. **13**
i) Semaphore. ii) Deadly Embrace (Deadlock).
iii) OS Security issue. iv) Task Scheduler.
v) ISR.

7. Explain UART, USART Bus in detail and differentiate between them. 14

OR

8. Explain different wireless Devices. 14

9. a) Explain Assembly language programming with advantages. 6

b) Explain High level Language programming with advantages. 7

OR

10. a) Write advantages and disadvantages of Java in embedded programming. 6

b) Write advantages and disadvantages of C++ in embedded programming. 7

11. a) Explain Architecture of 8051 with diagram. 7

b) Explain Addressing modes with example. 7

OR

12. a) Explain I/O ports of 8051. 7

b) Explain in brief the 8051 TMOD and TCON register. 7
