C   Reg. No. : [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5x 1 = 5 Marks)

1. The memory address reflecting the current top of the stack is remembered   CO1- U
    and modified after each addition or removal Such an address is called_____

    (a) Program Counter   (b) Return address   (c) Stack pointer   (d) Indexed mode

2. Integrate the concurrent development of both the hardware and the software   CO1- U
    using the methodology called-------------

    (a) Intellectual property   (b) Co-Design   (c) Prototyping   (d) Internet of Things

3. Effective approach for determining the necessary stimuli for both
    test and troubleshooting is based on -------   CO1- U

    (a) path sensitizing   (b) path synthesizing   (c) debugging   (d) testing

4. _____ is the basic building block of software written under an RTOS.   CO4- U

    (a)Pointer   (b) Task   (c) counter   (d)state

5. Which design can be used to reduce the energy consumption of the embedded   CO5- U
    system?

    (a) simulator   (b) Compiler   (c) emulator   (d)debugger

PART – B (5 x 3= 15 Marks)

6. Express the following decimal numbers in the bases Indicated.Decimal:1100   CO2-App
    (a) Binary
    (b) Octal
    (c) Hexadecimal

7. Define spiral model? CO2- U

8. Define Scan Design Testing? CO1- U

9. What is a real-time operating system? CO4- U

10. What is the difference between enabling/disabling and masking/unmasking an interrupt? CO6- Ana

PART – C (5 x 16= 80Marks)

11. (a) What are the addressing modes? Illustrate the following sequence of instructions and identify each addressing modes?
(i) MOVE OPR1, #BH
(ii) MOVE R2, *R3
(iii) MOVE *OPR1, *OPR0 CO2- App (16)

Or

(b) What is meant by the expression RTL? How does the RTL view of a microprocessor is applied in Embedded system? CO2- U (16)

12. (a) Describe the steps that comprise the Co-Design life-cycle model. CO1- U (16)

Or

(b) With the neat block diagram, describe about Traditional Embedded Systems Development. CO1- U (16)

13. (a) Discuss in detail about the strategy for applying module debug and test. CO1- U (16)

Or

(b) Describe briefly about Path Sensitizing. CO1- U (16)

14. (a) Discuss in detail about Priority Schedule. CO1- U (16)

Or

(b) With a neat block diagram describe about operating system architecture. CO1- U (16)

15. (a) Explain briefly about bitwise operator? CO1- U (16)

Or

(b) Identify and describe each of the steps involved in a function call? CO1- U (16)