Roll No.　　　　　　　　　　　　　　　　　　Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CSE) / (IT)　(Sem.–3)
# COMPUTER ARCHITECTURE
Subject Code : CS-201
Paper ID : [A0451]

Time : 3 Hrs.　　　　　　　　　　　　　　**Max. Marks : 60**

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

   a) What is computer organization?

   b) What is the necessity of connecting variety of memory devices to a computer?

   c) What do you mean by hardware interrupt?

   d) How virtual memory is useful in memory hierarchy?

   e) List the functions of 8255.

   f) Compute $(1010010)_2 - (1000111)_2$ using 2's complement.

   g) What is control memory?

   h) An 8-bit register contains the binary value 10000101. What is the register value after arithmetic shift left?

   i) What do you understand by the terms "loosely coupled" and "tightly coupled" in parallel computers?

   j) What is the role of shift registers in digital computers?

SECTION-B

2. What is the significance of LINPACK benchmark specifications?

3. Explain the working of superscalar processor.

4. Compare hardwired control with micro programmed control structure.

5. Explain about I/O processor.

6. Write a short note on SPMD architecture.

SECTION-C

7. Explain in detail the characteristics of RISC and CISC architecture.

8. Write an algorithm for multiplication.

9. Write a short note on :

   a) 8251 chip

   b) Cache memory