

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

B. Tech. (Sem. - 3rd)
COMPUTER ARCHITECTURE
SUBJECT CODE : CS - 201
Paper ID : [A0451]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

Section - A

Q1)

(10 × 2 = 20)

- a) What is the necessity of connecting variety of memory devices to a computer?
- b) Explain the role of a compiler.
- c) What a main memory of a computer consists of?
- d) If A = 101.101 and B = 110.100 both in binary evaluate B - A by 2's complement method?
- e) Where ASCII code is used in computers?
- f) Discuss the role of I/O processor.
- g) What do you mean by I/O channels?
- h) Mention the limitations of 8085.
- i) Role of microprogrammed control over hardwired control.
- j) What do you understand by transaction processing benchmarks.

Section - B

(4 × 5 = 20)

- Q2)** List the various memories in order of their features and discuss their comparison.
- Q3)** Discuss RISC Vs CISC.
- Q4)** With the help of circuits discuss look ahead carry generator. Show how it makes faster additions.
- Q5)** Write a note on 8251.
- Q6)** (a) What do you mean by parallel and distributed computers? Explain.
(b) Discuss cost/benefit concept of layers in architecture design.

Section - C

(2 × 10 = 20)

- Q7)** Discuss the various I/O data transfer techniques alongwith their merits and demerits.
- Q8)** Discuss :
(a) Virtual memory.
(b) Booth's algorithm for binary multiplication.
- Q9)** Write notes on any two of the following :
(a) 8255 chip.
(b) MIMD machines.
(c) Cache memory.

