

Roll No.

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BCA (403) (S05/Old) (Sem. - 4th)**COMPUTER SYSTEM ARCHITECTURE****Time : 03 Hours****Maximum Marks : 75****Instruction to Candidates:**

- 1) Section -A is **Compulsory**.
- 2) Attempt any **Nine** questions from Section - B.

Section - A.**(15 × 2 = 30)****Q1)**

- a) Define the term instruction code.
- b) What information is there in DR, AC, IR and TR?
- c) What are register reference instructions?
- d) What are the major components of CPU?
- e) What is control word?
- f) Convert $A*B + C*D$ into reverse polish notation.
- g) What are the advantages and disadvantages of three address instructions?
- h) What is the task of MOV instruction?
- i) What is handshaking?
- j) Differentiate RAM and ROM.
- k) What is the difference between multiprogramming and timesharing systems?
- l) Define seek time and rotational latency time.
- m) What is the difference between logical address space and physical address space?
- n) Describe types of fragmentation.
- o) Define cache memory.

Section - B**(9 × 5 = 45)**

- Q2)** With the help of diagram explain stored program organization.
- Q3)** Explain the three basic computer instruction formats.
- Q4)** Explain Instruction cycle in detail.
- Q5)** What are the different operations performed on stack explain in detail?
- Q6)** What are addressing modes? Explain all types of addressing modes?
- Q7)** Differentiate control bus data bus and address bus.
- Q8)** Explain in detail memory mapped I/O and how it differs from isolated I/O.
- Q9)** Explain the difference between programmed I/O and interrupt initiated I/O.
- Q10)** Explain the memory hierarchy in computer system.
- Q11)** Explain ROM chip with the block diagram.
- Q12)** What are the differences between magnetic tapes and magnetic disks?
- Q13)** Explain the address mapping using pages and why the size of page is power of 2.

