

BCA (12-14) D-15
COMPUTER ARCHITECTURE
PAPER-BCA-233

Time Allowed: 3 Hours

Maximum Marks: 80

Note: Attempt five questions in all, selecting at least one question from each Unit.
Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. Answer the following questions in brief:
 - (a) Differentiate between Demand paging and Pre-paging.
 - (b) Distinguish between dedicated and multiplexed mode of a Data channel.
 - (c) What is I/O bus?
 - (d) What are Adder and Logic processor?
 - (e) Distinguish between Logic and Arithmetic shift.
 - (f) What is FINUFO?
 - (g) What are GPRs?
 - (h) Explain use of Stack for storing parameters.

UNIT-I

2.
 - (a) Explain the working of Dot-matrix printer.
 - (b) What is the internal buffering? Give its implementation details.
3.
 - (a) What is Handshaking? Explain it with the help of a suitable diagram.
 - (b) What is internal interface? Explain Processor and Memory interface.

UNIT-III

4.
 - (a) Explain the step required for multiplication operations in ALU.
 - (b) Explain the steps required for shifting operation in ALU.
5.
 - (a) What is carry storage adder? Explain the scheme for repeated additions Using Carry storage adders.
 - (b) How can you improve speed of Multiplication? Explain some techniques.

UNIT-III

6.
 - (a) What is Interleaved memory? What are its advantages?
 - (b) Discuss problems of management of Memory hierarchies.
7.
 - (a) What is Virtual memory? Discuss its organization with the help of its block Diagram.

- (b) Explain set-associative mapping scheme used in Cache memories.

UNIT-IV

- 8.
 - (a) Explain indirect base and immediate addressing modes.
 - (b) What are zero and one addressing schemes? Compare them.
- 9.
 - (a) What is Microprogrammed control? Explain its working with the help of its block diagram.
 - (b) Explain implementation of Stack.