Roll No. ……

980

Printed Pages:

BCA / D-12
COMPUTER ARCHITECTURE-I
Paper-BCA-233

Time allowed: 3 hours Maximum marks: 80

Note: Attempt **five** questions in all, selecting **one** question from each section. **Question no. 1 is compulsory**.

1. Describe
- (i) Punched Card
- (ii) Video Standards
- (iii) Use of Program Counter
- (iv) Cycle Stealing
- (v) Hit Ratio
- (vi) Accumulator Based CPU
- (vii) Relative addressing
- (viii) PCI

8 x 2 = 16

Unit-I

2. Explain:
- (i) Joystick
- (ii) Touch Pad
- (iii) Bar Code Reader
- (iv) Laser Printer

4 x 4 = 16

2. (i) Discuss asynchronous Data transfer technique.
(ii) Describe various types of Wire Buses used in Computers. 2 x 8 = 16

Unit-II

4. (a) Explain Booth's multiplication algorithm using suitable example.
(b) Explain various techniques to increase the speed of addition. 2 x 8 = 16

5. Perform
(a) 48/10 – 32/10 using 2's complement 8-bit notation.
(b) Explain various types of Flags used in CPU. 2 x 8 = 16

Unit-III

6. (a) Describe various techniques to alleviate speed mismatch between CPU and memory.
(b) What do you mean by locality of reference? Explain types. 2 x 8 = 16

7. (a) What do you mean by virtual memory? Explain its uses.
(b) Differentiate between Cache and virtual memory. 2 x 8 = 16

Unit-IV

8. (a) Explain various instruction formats with suitable examples.
(b) Describe basic structure of CPU? 2 x 8 = 16

9. (a) What is a stack? Explain its use in executing a subroutine.
(b) What is microprogramming? Explain. 2 x 8 = 16