

Roll No.

Y – 3639 (A)
B.C.A. (Fourth Semester) (SPECIAL) EXAMINATION,
August 2021
(SECOND CHANCE)
Paper – 402

ADVANCED COMPUTER ARCHITECTURE

Time : Three Hours

Maximum Marks : 80

Minimum Pass Marks : 32

Note—Attempt *all* questions.

Unit-I

1. Giving suitable example and/or diagrams, write explanatory short notes on any *four* of the following— 16
- (i) PCI Bus and its use.
 - (ii) Functions of digital computer system.
 - (iii) Interrupts and their functions/applications.
 - (iv) Multiple interrupts and their uses.
 - (v) Computer interconnection structure.
 - (vi) System buses and their applications.

Unit-II

2. Write explanatory short notes on any *four* of the following— 16
- (i) Magnetic core memory—its use and limitations.
 - (ii) Types of semiconductor memory and their use.
 - (iii) Virtual memory and its applications.
 - (iv) Comparison between magnetic core memory and semiconductor memory.
 - (v) Need and uses of chip packaging.
 - (vi) Cache memory and its mapping.

Unit-III

3. (a) List Input/output external devices (as least two for each) and explain the working and use of one device in each case. Give neat diagram. 8
- (b) What are I/O modules ? Giving neat diagram, explain the structure and function of any one I/O module. 8

P.T.O.

Unit-IV

4. (a) (i) With suitable examples, explain the difference between machine language, assembly language and high level language. 4
- (ii) Write an assembly language program for printing multiplication table of 7. 4
- (b) Draw a neat and labelled internal block-diagram of Intel 8086 microprocessor. Briefly explain function of its each part. 8

Unit-V

5. Write explanatory short notes on any *four* of the following— 16
- (i) I/O channels.
- (ii) Programmable peripheral interface.
- (iii) Comparison between 8086 and 8088 microprocessors.
- (iv) External interface.
- (v) Difference between procedures and subroutines.
- (vi) Difference between Loops and comparison operators in Assembly Language programming.