

S.Y.B.SC. (COMPUTER SCIENCE) SEM –III (2014 COURSE) :
SUMMER - 2018
SUBJECT: COMPUTER ORGANIZATION & MICROPROCESSORS

Day: **Saturday**
Date: **21/04/2018**

S-2018-0847

Time: **12.00 NOON TO 02.00 PM**
Max. Marks: 40

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat labeled diagrams **WHEREVER** necessary
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Q.1 Answer any **TWO** of the following: **(10)**

- a) Explain the Flash-type of ADC with necessary diagram.
- b) What is virtual memory? Explain paging concept with neat diagram.
- c) Explain the following addressing modes with examples: i) Direct addressing mode ii) Immediate addressing mode

Q.2 Answer any **TWO** of the following: **(10)**

- a) Draw block diagram for DMA controller. Explain the function of each block.
- b) Write an assembly language program to find the Smallest number in given array.
- c) With neat diagram explain the general purpose register organization.

Q.3 Answer any **TWO** of the following: **(10)**

- a) Explain synchronous serial communication in detail.
- b) What is Cache memory? How does it help to enhance the system performance?
- c) Explain the following parameters for DAC:
 - i) Linearity
 - ii) Accuracy
 - iii) Resolution
 - iv) Monotonicity
 - v) Reproducibility

Q.4 Answer any **FIVE** of the following: **(10)**

- a) Explain any two assembler directives.
- b) Draw block diagram of PPI.
- c) Explain the following instructions:
 - i) MOV AX, CX
 - ii) XOR AX, BX
- d) Give two points of difference between RISC and CISC.
- e) Define the following:
 - i) Address bus
 - ii) Data bus
- f) Explain the concept of polling.
- g) List any four features of Pentium.