Total No. of Questions – [4] Total No. of Printed Pages 01

G.R. No.	

U218-123 (T1)

OCTOBER 2018/ IN-SEM (T1)

S. Y. B. TECH. (COMPUTER ENGINEERING) (SEMESTER - I)

COURSE NAME: COMPUTER ORGANIZATION AND MICROPROCESSORS TECHNIQUES

COURSE CODE: CSUA21173

(PATTERN 2017)

Time: [**1 Hour**] [Max. Marks: **30**]

Instructions to candidates:

1) **Answer Q.1 OR Q.2 and Q.3 OR Q.4.**
2) **Figures to the right indicate full marks.**
3) **Use of scientific calculator is allowed**
4) **Assume suitable data wherever required**
5) **Draw suitable diagram wherever required**

Q. 1) a) Given x=0101 and y=1010 in two's complement notation (i.e. x=5, y= - 6), compute the product [p=x*y] with Booth's Algorithm. [6]

b) List and briefly define the main structural components of a computer. [6]

c) Describe IEEE754 standard for floating point numbers? [4]

OR

Q. 2) a) Solve Division of the following numbers using Restoring Division Algorithm: Dividend=1011, Divisor=0011. [6]

b) What is a bus? What are the functions of data, address and control bus? [6]

c) Compute the following using 2's Complement method (-12 +15). [4]

Q.3) a) Draw and explain the block diagram of an External Device. [6]

b) Distinguish between programmed I/O and interrupt driven I/O. [4]

c) Explain the classification of External Devices. [4]

OR

Q.4) a) Explain the function of I/O module. [6]

b) What is the general relationship among access time, memory cost and its capacity? [4]

c) Explain Interrupt driven I/O. [4]