

**B.Tech. SEM -VI ( Computer) 2014 Course (CBCS) : WINTER - 2018**  
**SUBJECT: COMPUTER ORGANIZATION AND ARCHITECTURE**

**Day:** Friday  
**Date:** 16/11/2018

**W-2018-2463**

**Time:** 10.00 AM TO 01.00 PM  
**Max. Marks: 60**

**N.B:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat diagrams **WHEREVER** necessary.

- 
- Q.1** a) Draw & explain the block diagram of a simple computer with five functional units? (05)  
b) Explain three phases of instruction cycle. (05)

**OR**

- Q.1** a) With the help of block diagram, list the features of IBM 360/370. (05)  
b) Explain the single line bus structure. (05)

- Q.2** a) Explain Restoring division algorithm? (05)  
b) Represent 0.0625 in single precision IEEE format. (05)

**OR**

- Q.2** a) Draw of explain the flow chart for floating point addition and subtraction. (05)  
b) Represent 178.1875 in double precision floating point IEEE format. (05)

- Q.3** a) What is Microinstruction? With the help of typical example give details about different fields found in a microinstruction. (05)  
b) Write a short note on hardwired control. (05)

**OR**

- Q.3** a) What is micro-program sequencing? Explain with the help of suitable diagram. (05)  
b) Compare hardwired control versus micro-programmed control unit. (05)

- Q.4** a) Differentiate between Programmed and Interrupt-Driven I/O. (05)  
b) Explain role of bus controller in multiprocessor systems. (05)

**OR**

- Q.4** a) List and explain in short four types of I/O commands that an I/O module may receive when it is addressed by a processor. (05)  
b) Explain the concept of processor communication. (05)

- Q.5** a) Explain in short, key Characteristics of Computer Memory Systems. (05)  
b) Write short note on Virtual Memory. (05)

**OR**

- Q.5** a) Discuss working of translation mechanism. (05)  
b) Discuss RAID level 5 and 6. (05)

- Q.6** a) Explain SNOOPY PROTOCOLS. (05)  
b) Describe Virtual Processor in detail. (05)

**OR**

- Q.6** a) Discuss Flynn's classification for multiprocessor system. (05)  
b) Write short note on Inter Process Communication. (05)

\* \* \* \* \*