322312(22)

APR-MAY

B. E. (Third Semester) Examination, 2020

(Old Scheme)

(CSE Branch)

COMPUTER FUNDAMENTALS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Part *(a)* is compulsory in all questions and solve any two from rest three.

1. (a) What is system software?   2

   (b) Explain various input and output unit in brief.   7

(c) What is operating system and differentiate between single & multi user operating system? 7

(d) Draw a block diagram of a computer. Explain the function of the blocks. 7

2. (a) What is TCP/IP? 2

(b) What do you mean by transmission mode? Explain asynchronous, synchronous & isochronous mode. 7

(c) What do you mean by Internet? Discuss its merits & demerits. 7

(d) Explain CRT with its block diagram & explain raster & random scan system. 7

3. (a) What is 1's & 2's complement? 2

(b) Solve the following : 7

(i) $(76543)_8 = (\ )_2$

(ii) $(123A)_{16} = (\ )_{10}$

(iii) $(21)_{10} = (\ )_2$

(c) What is Hamming Code? Explain with example. 7

(d) What is Fixed point arithmetic? Explain with example & also define the reflection code. 7

4. (a) State any two buses used in computer. 2

(b) Draw neat & clean diagram of 4 bit arithmetic circuit. Explain with example. 7

(c) What is logic micro operation? Explain with suitable example. 7

(d) Draw a block diagram of arithmetic logic shaft unit and explain with suitable example. 7

5. (a) What is interrupt? 2

(b) What do you understand of addressing mode? Explain any three addressing modes. 7

(c) Draw the block diagram of instruction cycle & explain the various steps of instruction cycle. 7

(d) Explain with suitable example of accumulator logic. 7