

End Term Examination

CSN-101

Time Duration: 3 Hrs

Maximum Marks: 100

- Notes:**
- i) Begin each answer on a fresh page.
 - ii) If any copying is detected at evaluation stage, all involved will get zero in the test.
 - iii) All parts of any particular question must be attempted together.
 - iv) There should not be any answers without question number or wrong number.
 - v) Write the page number of answer on the first page.
 - vi) If any data is missing in any question, assume it and do the solution with proper explanation.
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1. Convert the following number to hexadecimal (6 marks)
 - a. $(110100110)_2$
 - b. $(3654766.45)_8$
 - c. $(9853812.59)_{10}$
2. What is the main memory of the computer? Explain the types of main memory? (8)
3. Write a 8085 program to check whether a number is prime or not. (8)
4. What differences can you state between the HLT And HOLD states? (5)
5. Explain the Program Counter and Stack Pointer (5)
6. Write an algorithm to convert the fraction decimal number to binary number. (6)
7. Draw a flowchart to find the Sum of the Series up to n terms (6)
$$1 + x/1 + x^2/2 + x^3/3 + \dots + x^n/n$$
8. Draw and explain the architecture of 8085 microprocessor (6)
9. Write an assembly language program in 8085 microprocessor to find the square of 8 bit number and store the output at address 3050. (8)
10. Write an assembly language program in an 8085 microprocessor to count even numbers in a series of 10 numbers. (8)
11. Write an assembly language program to find the Sum of the series upto n terms
$$1 + (1+2) + (1+2+3) + (1+2+3+4) + \dots + (1+2+3+4+\dots+n)$$
 (8)
12. Wonder mart Roorkee has launched a promotion for its card customers. According to the promotion, the customers will receive a gift voucher worth ₹500 with their monthly bill if they spend ₹15,000 more than their last month spending and their last month bill is not less than ₹10,000. Draw a flow chart showing the above process. (8)
13. Explain different types of networks (6)
14. What are the communication protocols and explain the TCP/IP protocol suite? (6)
15. What is the OSI Reference model? Define the 7 different layers of the OSI Reference Model (6)