

Exam.Code:5153
Sub. Code: 14373

2125
B.Sc. Data Analytics (FYUP)
Third Semester
Paper: Computer Organization

Time allowed: 3 Hours

Max. Marks: 90

NOTE: Attempt five questions in all, including Question No. 9 (Unit-V) which is compulsory and selecting one question each from Unit I - IV.

x-x-x

UNIT - I

1. a) Convert $(11110)_2$ into a decimal number. (6)
- b) Convert $(111010.1001)_2$ into an octal number. (6)
- c) Convert $(66)_{10}$ into a hexadecimal number. (6)
2. a) Find $(1101)_2 + (1011)_2 = ?$ (6)
- b) Solve $(101)_2 * (11)_2 = ?$ (6)
- c) Explain how information are represented in computers as fixed and floating point? (6)

UNIT - II

3. a) Explain logic gates and its different types in detail. (9)
- b) Differentiate between Multiplexer vs Demultiplexer in detail. (9)
4. What is Flip flop? Explain its different types in detail. (18)

UNIT - III

5. a) Explain memory hierarchy in detail. (9)
- b) Explain virtual memory with purpose and advantages in detail. (9)
6. What is interrupt in computer? Explain its types with programmed and interrupt driven data transfer in detail. (18)

UNIT - IV

7. a) Explain system maintenance and various components of computers in detail. (9)
- b) How can maintain effectively display and other peripherals used in computer? (9)
8. What is virus and its different types? How can prevent and detect virus in computer? Explain in detail. (18)

P.T.O.

(2)

UNIT - V

9. Elaborate: -

- a) RAM and ROM
- b) ASCII
- c) Half adder
- d) Encoder
- e) 1's vs 2's complement method
- f) Cache memory

(3+3+3+3+3+3)

x-x-x