

1127

B.Sc. (Hons.) Bio-Informatics

Third Semester

BIN-3003: Computer Operational System and Organization

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Part.

x-x-x

I. a) complete microcomputer system consists of

- i) Microprocessor
- ii) Memory
- iii) Peripheral equipment
- iv) All of above

b) CPU does not perform the operation

- i) Data transfer
- ii) Logic operation
- iii) Arithmetic operation
- iv) All of above

c) What are pseudo operations?

d) Write microinstruction for arithmetic operations in registers.

e) What is the significance of a bus?

f) List major logic operations.

f) Write short note on diagnostic on PC.

g) Give applications of RAM.

(8x1½)

UNIT – I

II. Explain Von Neumann architecture on detail with diagram. Elaborate the building blocks of computer system. (12)

III. What is a flip-flop? Discuss the operations of 4-to-1 multiplexer with the help of circuit diagram. (12)

IV. Elaborate the CPU organization with large registers with suitable example. Explain the concept of Instruction pipelining. (12)

P.T.O.

(2)

UNIT - II

- V. Explain interrupt and I/O programming with suitable example. Write an assembly language program to input two numbers from memory, add them and store result to memory. (12)
- VI. Elaborate vector and priority interrupts. Write a note on virtual memory organization. (12)
- VII. Explain functional description of various cards of a PC. How PC can be protected from virus attacks. (12)

x-x-x