Exam.Code:0041
Sub. Code: 1003

1129

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. I which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Attempt the following:-

a) What are logic gates?

b) What are interrupts?

c) Explain the use of subroutines in assembly language.

d) What is Bus?

e) How is dynamic RAM different from static RAM?

f) What are peripheral devices? Give example. (6x2)

UNIT – I

II. a) Discuss evolution of computers through different generations.

b) What is instruction pipelining? Explain the process. (2x6)

III. a) What are flip flops? Discuss designing of master-slave flip flop with the help of state table and circuit diagram.

b) What is Register Transfer Language? Why is it required? Discuss different micro-operations that can be represented using register transfer language. (2x6)

IV. a) What are counters? Where are these used? Discuss designing of a simple counter and explain its working.

b) Explain register organization of a simple computer along with the purpose of each register. (2x6)

UNIT – II

V. a) Differentiate between machine and assembly languages.

b) What are various important physical components of a computer system? (2x6)

P.T.O.

VI. a) Differentiate between vector and priority interrupts.

b) Explain virtual memory organization along with its advantages. (2x6)

VII. a) Explain the process of DMA based data transfer.

b) What are virus? How do they harm our computer system? (2x6)

x-x-x