(b) Write short Notes on : 4

(i) Interrupt Driven Data Transfer

(ii) Programmed Data Transfer

Unit - IV

8. (a) Explain the OSI Reference Model with function of each layer in detail? 7

(b) Define the following: 4

(1) Simplex Communication

(2) Half-duplex Communication

(3) Full-duplex Communication

9. (a) How Many Network topologies you know discuss with the help of diagram? Discuss the working of BUS and STAR Topologies with their relative advantages and disadvantages. 7

(b) Explain the following: 4

(1) LAN

(2) Multimode Fiber

(3) Decibels

(4) Twisted Pair

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Roll No. _____

S-761

B.Sc. (Part-III) Examination, 2015

COMPUTER SCIENCE

Paper-II

Computer Architecture & Data Communication

Time Allowed : Three Hours] ***[Maximum Marks : 75***

Note : Answer five questions in all. Question No.1 is compulsory. Attempt one question from each of the four Units.

1. (a) Define “Computer Network”? Also Explain the advantages of Networking. 3

(b) What is the difference between broadcasting and multicasting 3

(c) Describe the role of Address bus and data bus in Microprocessors. 3

(d) What are the use of General Registers in 8086 Microprocessor.

(e) What do you mean by Embedded Microprocessor. 3

(f) What is the role of Accumulator in 8086 Microprocessor. 3

(g) What is the difference between CALL and JMP instructions in 8086 Microprocessors? 3

(h) Define RISC and CISC Processor in detail 3

(i) What are the functions of BUS interface Unit (BIU) in 8086 Microprocessor? 3

(j) Define BUS cycle, Machine cycle and Instruction cycle in Microprocessor? Also Explain STACK POINTER in detail? 4

Unit-I

2. (a) Draw and Explain Architecture of 8086 Microprocessor? 7

(b) Define Micro-processor? Discuss various generations of Microprocessor. 4

3. (a) Draw the Pin diagram of 8086 Microprocessor. Describe the function of each Pin in detail. 7

(b) Discuss the function of Execution Unit (EU) in 8086 Microprocessor. 4

Unit - II

4. (a) Why do we use Flag Registers in 8086 Microprocessor? Explain the Conditional Flags and Control Flags in detail? 7

(b) Why do we use segment Registers in 8086 Microprocessor explain? 4

5. (a) Explain Various addressing modes of 8086 Microprocessor with Example. 7

(b) Discuss the features of 8086 Microprocessor in detail. 4

Unit - III

6. (a) Draw the block diagram of DMA Controller and Explain its operation in detail? 7

(b) What are the main differences between Maskable and Non-Maskable interrupts? 4

7. (a) What are Major differences between synchronous Data transfer and Asynchronous Data transfer? Also Explain advantages and disadvantages of each in detail 7