

(3 Hours)

[Total Marks : 60]

- N.B.** (1) All questions are **compulsory**  
 (2) **Figures to the right indicate maximum marks to question/sub question**  
 (3) **Draw neat diagrams wherever necessary**

Attempt **any two** of the following :-

12

1. (a) State the types of **topologies** used in computer network. Explain with suitable diagram, **STAR** topology.  
 (b) Explain the development of computer through its generations clearly giving improvements in hardware design and user friendliness.  
 (c) Explain (i) static RAM (ii) dynamic RAM

2. Attempt **any two** of the following :-

12

- (a) Describe the use and importance of **flag register** with reference to 8085 microprocessor.  
 (b) Explain (i) **Latch** (ii) **Buffer**.  
 (c) Draw the **functional block diagram** of 8085 microprocessor.

3. Attempt **any two** of the following :-

12

- (a) Explain **five interrupts** available in 8085 microprocessor  
 (b) Explain the effect of the following instructions :  
 (i) DCX B (ii) MVI B ,40H (iii) LXI H, C300H  
 (c) Explain with suitable examples, implied **and register addressing mode** used in 8085 microprocessor

4. Attempt **any two** of the following :-

12

- (a) Write a short note on **digital camera**.  
 (b) State the characteristics of a good search engine.  
 (c) What do you understand by **computer virus**? Discuss the various steps used to prevent damage to data from viruses.

5. Attempt **any four** of the following :-

12

- (a) With reference to 8085 , explain the **Accumulator** register.  
 (b) Convert  $(32)_{10}$  to **hexadecimal** number system.  
 (c) Write a short note **on any one** optical storage device.  
 (d) Explain the functions of following pins of 8085 microprocessor (i)HOLD  
 (ii) ALE  
 (e) Explain the USB port  
 (f) Write a short note on sound card