

Question 1 [30 marks]

- a) Define the following terms as used in computer programming.
 - i) Program (2 marks)
 - ii) Data (2 marks)
 - iii) PROM (2 marks)
 - iv) System (2 marks)
 - v) Peripheral (2 marks)
- b) What is the Octal (base 8) equivalent for CF_{16} ? (3 marks)
- c) Differentiate between volatile and non volatile memory giving examples of each (4 marks)
- d) Describe how the following data input devices works
 - i) Punch cards (3marks)
 - ii) Bar code reader (3marks)
- e) Differentiate between Multiprocessing and multiprogramming (4 marks)
- f) With an example of each describe: Programming language and translator (3 marks)

Question 2 [20 marks]

- a) What are the disadvantages of a computer network? (3 marks)
- b) What is magnetic tape and how is it different from a magnetic disk? (5 marks)
- c) Discuss briefly 3 topologies of a network (6 marks)
- d) Convert the following numbers into Decimal (6 marks)
 - i. 1101102
 - ii. 25738
 - iii. 2AD16

Question 3 [20 marks]

- a) Briefly discuss the generations of computers (10 marks)
- b) Describe how an ink jet printer works (3 marks)
- c) With a use of diagram explain the fetch execute cycle (7 marks)

Question 4 [20 marks]

- a) What is an operating system (2 marks)
- b) Discuss 4 major functions of an operating system. (8 marks)
- c) Differentiate between an Intranet and Internet (4 marks)
- d) Define Register? Briefly describe 2 commonly used registers in computer system (6 marks)

Question 5 [20 marks].

- a) What are the steps involved in program development in their order? **(8 marks)**
- b) Explain 1 Dos internal commands and 1 dos external commands **(4 marks)**
- c) Discuss briefly spooling and batch processing **(4 marks)**
- e) Discuss the utility software and system software. **(4 marks)**