

Question Paper consists of FIVE units, each carrying 14 marks
Each unit has TWO questions; either of them should be answered
All parts of a question must be answered at one place

- 1.a) Write an algorithm to add the magnitudes and attach the sign of A to the result. When the signs of A and B are identical. (7M)
- 1.b) With a neat Flow chart explain Floating Point Multiplication. (7M)
- (OR)
- 1.c) Explain about fixed point representation. (7M)
- 1.d) Draw and explain the basic block diagram of a digital computer. Also list the different types of computers. (7M)

- 2.a) What are instruction formats? Explain the different instruction types with example? (7M)
- 2.b) Explain about general register organisation. (7M)

- (OR)
- 2.c) Draw and explain the state diagram of Instruction Cycle. (7M)
- 2.d) Explain BUS interface unit and Memory unit in detail. (7M)

- 3.a) Explain how index register and immediate addressing modes work. (7M)
- 3.b) Explain about STACK Organisation with example. (7M)

- (OR)
- 3.c) Write an ALP code to rotate Stepper motor clock wise direction two times and anti-clock wise direction 4 times. (7M)
- 3.d) Explain different types of Addressing modes. (7M)

- 4.a) Discuss the DMA operation with neat diagram in detail. (7M)
- 4.b) Describe in detail about IOP organization. (7M)

- (OR)
- 4.c) What is meant by Interrupt and explain in detail about Priority interrupts? (7M)
- 4.d) Draw and explain with a neat sketch Cache memory organisation. (7M)

- 5.a) Explain about RISC Pipeline and Array processor in detail. (7M)
- 5.b) What are Symmetric Multiprocessors? Explain. (7M)

- (OR)
- 5.c) Explain inter process and inter processor arbitration. (7M)
- 5.d) Explain the Characteristics of multiprocessors. (7M)
