

PART B — (5 × 16 = 80 marks)

11. (a) What are the different types of CPU organization? Explain with relevant diagrams. (16)

Or

- (b) (i) With examples explain the different types of instruction formats. (6)
(ii) Explain the different types of Addressing modes with suitable examples. (10)

12. (a) With flow chart and numerical example explain Booth's multiplication algorithm. (16)

Or

- (b) With relevant diagram and expressions, explain the operation of carry look ahead adder. (16)

13. (a) Explain with relevant diagrams, the design of microprogrammed control unit. (16)

Or

- (b) Explain with flow chart, the instruction pipelining. (16)

14. (a) With relevant block diagrams, explain the concept of

- (i) Associative memory (8)
(ii) Virtual memory. (8)

Or

- (b) Write notes on
(i) Magnetic memories (8)
(ii) Optical memories. (8)

15. (a) Explain the IOP organization and communication between CPU and IOP. (16)

Or

- (b) With block diagrams, explain data transfer using DMA controller. (16)