D4BCS2301

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2025
(Regular/Improvement/Supplementary)

COMPUTER SCIENCE
GBCS4A03T: MICROPROCESSORS ARCHITECTURE AND PROGRAMMING

Time: 2 ½ Hours   **Maximum Marks: 80**

SECTION A: Answer the following questions. Each carries *two* marks.
(Ceiling 25 marks)

1. Distinguish between SOD and SID signal?
2. What is timing diagram?
3. Comment on special purpose registers.
4. What is interfacing?
5. State the purpose of 6-byte pre-fetch queue.
6. What is an assembly language?
7. What is OUT port-address instruction?
8. What is operand?
9. Define subroutine?
10. What is Instruction decoder and machine cycle encoder?
11. Comment on indexing.
12. Define ISR?
13. Compare 8086 and 8088?
14. What is Electrically Erasable Programmable Read Only Memory?
15. What is Segmentation?

SECTION B: Answer the following questions. Each carries *five* marks.
(Ceiling 35 marks)

16. Distinguish between register addressing and register indirect addressing.
17. Write a note on call and return instruction with example.
18. Explain interrupts in 8085?
19. Describe BIU of 8086?
20. How does a Microprocessor works?
21. Write short notes on physical address calculation?
22. Explain interrupt control signals.
23. Explain the various techniques to specify data for instructions.

SECTION C: Answer any *two* questions. Each carries *ten* marks.
24. With a neat diagram, explain the architecture of a computer system.
25. Explain 8086 machine cycle.
26. Write an account on the architecture of 8254 with diagram.
27. Explain in detail about addressing modes of 8086.

(2 x 10 = 20 Marks)