

B.Sc. Sem.-5 Examination

302 - Electronics

Time : 2-30 Hours]

November-2025

[Max. Marks : 70

Instructions : (1) All question carry equal marks.

(2) All questions are compulsory.

- 1 (a) Explain about 3 bit Synchronous counter in detail. 7
 (b) Explain about mod 5×2 , mod 10 counter in detail. 7
- OR**
- 1 (a) Explain about 3 bit Synchronous Up-down counter in detail. 7
 (b) Explain about Moore model and Mealy model in detail. 7
- 2 (a) Draw a signal diagram of IC 8085 and explain in detail. 7
 (b) Draw the timing diagram of memory write cycle and explain in detail. 7
- OR**
- 2 (a) Explain about "Generating Control Signals" in detail. 7
 (b) Draw the Flag register and discuss each Flag in detail. 7
- 3 (a) Explain about Data transfer, Arithmetic and Logical instructions in detail. 7
 (b) Give timing diagram of IN instruction and explain in detail. 7
- OR**
- 3 (a) Give comparison between memory mapped I/O and peripheral I/O. 7
 (b) Give status of S, Z and CY Flags when contents of A=91H and C=3BH are added. 7
- 4 Write a program for data transfer of 16 bytes, stored in memory location DO20H to new location DO70H. (Choose your own 16 bytes of data). 14
- OR**
- 4 A Set of 3 readings is stored in memory locations starting at CO70H. Arrange them in Ascending order. Data (H) 91, 31, 45. 14
- 5 Answer the following (Any seven) : 14
- (1) What is "Glitch"?
- (2) What is an excitation map?
- (3) Define Asynchronous counter?
- (4) Give the full form of ALE and ALU.
- (5) IN instruction is a byte instruction and OUT instruction is a byte instruction.
- (6) What is 'MOD' counter. Why they are required?
- (7) What is the difference between MOV and MUI Instructions?
- (8) The 8085 microprocessor uses bit Data bus and bite address bus.
- (9) Which two instructions can make content of register A Zero?
- Explain the following instructions
- (10) RLC
- (11) INXH
- (12) HLT