Model Question Paper (Model III)

MAHATMA GANDHI UNIVERSITY

V SEMESTER B.Sc. PROGRAMME EXAMINATION ...20

B. Sc. PHYSICS -INSTRUMENTATION (Model III)

PH5B61U- MICROPROCESSORS

Instructions:

- 1. Time allotted for the examination is 3 Hours.
- 2. Answer <u>all</u> questions in Part A. This contains 4 bunches of 4 objective type questions. For each bunch, Grade A will be awarded if all the 4 questions are correct, B for 3, C for 2, D for 1 and E for 0.
 - Answer any 5 questions from Part B, any 4 from Part C and any 2 from Part D.
- 3. Candidates can use(type of calculator/tables)

Part A (Objective type- weight 1 each)

Bunch I

Choose the correct answer from the bracket given below

- 1.----is a logic circuit which amplifies the current or power.
- (buffer ,counter) 2.---- is a non maskable interrupt.
 - (TRAP.INTR)
- 3.---- instruction is used to copy data from the accumalator into the memory location specified by the 16 bit operand.

(LDA 16 bit, STA 16 bit)

4. 8085 is a --- bit processor.

(8,16)

Bunch II

.Select the suitable word for the following statements, given in bracket.

(address bus, zero, eight, 16,8)

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5. ----- is a group of lines that are used to send a memory address from the MPU to the memory location or the periferal.

6. In memory mapped I/O, the MPU uses---- address lines to identify an I/O device.

7. ---- flag is set if the ALU operation result is zero.

8. The flag register is ---- bit wide , for an 8085 processor.

Bunch III

Write whether true or false

9. ROM is volatile type memory.

10 Encoder is a logic circuit that provides an appropriate code for each input signal.

11.Data bus is unidirectional

12. ADD B is a 1 byte instruction.

Bunch IV

Match the following.

13. I/O mapped I/O interrupt request

14. INTR memory location

15.Stack 1 byte instruction

16.POP Rp IN and OUT instructions

Part B (Short answer questions-weight 1 each)

- 17. Define machine cycle.
- 18. What is the function of accumulator?
- 19. Specify the four control signals used in 8085 processor.
- 20. What is flag?

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- 21. What is meant by peripheral mapped I/O?
- 22. Define opcode and operand with examples.
- 23. What is immediate addressing?
- 24. What is the difference between JMP and CALL instruction?

Part C (Short Essays / Problems-weight 4 each)

- 25. Write four instructions to clear the accumulator.
- 26. What you meant by the software interrupts?
- 27. Explain the flow control instructions in 8085 processor programming.
- 28. List out the priority of interrupt signals in detail.
- 29. What is a PPI?
- 30. How can we interface an A/D converter with 8085 processor?

Part D (Essay type questions-weight 4 each)

- 31. With neat block diagram explain the architecture of 8085 processor.
- 32. With neat sketches explain the keyboard interface.
- 33. Explain the classification of instructions in 8085 processor.
