

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – PHYSICS

MICROPROCESSOR ARCHITECTURE AND PROGRAMMING

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 Each microprocessor recognizes and processes a group of bits called
(i) Word (ii) Program
(iii) Digit (iv) CPU
- 2 The microprocessor can be divided intosegments for the sake of clarity
(i) 4 (ii) 2
(iii) 5 (iv) 3
- 3 I/O includes ...types of devices
(i) 3 (ii) 2
(iii) 4 (iv) 1
- 4 00111100 is an instruction that increments the number in the register called the accumulator by
(i) 0 (ii) 8
(iii) 1 (iv) 3
- 5 Which of the following is not an instruction of 8051 instructions?
(i) Arithmetic instructions (ii) Boolean instructions
(iii) Logical instructions (iv) None of the above

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a What is microprocessor?
OR
b Define microprocessor 8085 instruction.
- 7 a Write a simple program for addition with carry.
OR
b Explain Looping and counting.
- 8 a Explain the features of 8086 Microprocessor.
OR
b Write short note stack memory.
- 9 a Comparison between 8085 and 8051.
OR
b Explain about counters.
- 10 a What is data transfer instruction?
OR
b Explain about machine control instructions.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Discuss the architecture of 8085 with neat block diagram.
OR
b Explain assembly language programs with examples.
- 12 a Discuss the basic concepts in programmable devices .
OR
b Write a program & explain the working of largest of number in an array.
- 13 a Explain Register organization of 8086 microprocessor.
OR
b Discuss the architecture of 8086 with neat block diagram.
- 14 a Explain the memory organization in 8051.
OR
b Discuss the types of microcontrollers.
- 15 a Explain about Arithmetic and Logical instructions.
OR
b Discuss the addressing modes of 8051 Instruction set.

Z-Z-Z

END