

G-4/440/21

Roll No.

M.Sc. IV Semester Examination, 2021**PHYSICS****Paper IV**

(Microprocessor and Communication)

Time : 3 Hours]

[Max. Marks : 80

Note : All questions are compulsory. Question Paper comprises of 3 sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.

SECTION A**1×8=8****(Objective Type Questions)**

Choose the correct answer :

1. The instruction, MOV AX, 1234 H is an example of :
 - (a) Register addressing mode
 - (b) Immediate addressing mode
 - (c) Based indexed addressing mode
 - (d) Direct addressing mode.
2. The ROM is a :
 - (a) Sequential circuit (b) Combinational circuit
 - (c) Magnetic circuit (d) Static circuit.

P.T.O.

3. Which stack is used in 8085 microprocessor ?
 - (a) FIFO (b) FILO
 - (c) LIFO (d) LILO
4. Carry flag is not affected after the execution of :
 - (a) ADD B (b) SBB B
 - (c) INR B (d) ORA B
5. In unit impulse function :
 - (a) Pulse width is zero
 - (b) Area of pulse curve is unity
 - (c) Height of pulse goes to infinity
 - (d) All of the above.
6. The adaptive delta modulation avoids :
 - (a) Quantization error (b) Slop overload error
 - (c) Both (a) and (b) (d) None of the above.
7. How many propagation modes are present in single mode fibres ?
 - (a) One (b) Two
 - (c) Three (d) Five
8. Which one of the following is not a guided medium of transmission ?
 - (a) Fiber-Optic cable (b) Coaxial cable
 - (c) Twisted-pair cable (d) The atmosphere.

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SECTION B**6×4=24****(Short Answer Type Questions)**

Note : Attempt all questions from each unit with internal choice.

Unit-I

1. What is magnetic bubble memory ?

Or

Explain Bus and Star topology.

Unit-II

2. Explain Direct Addressing with example.

Or

Explain role of Address-Data Bus in 8085 microprocessor.

Unit-III

3. Explain PAM.

Or

Explain FSK.

Unit-IV

4. Explain Halide fibre.

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P.T.O.

Or

Explain single mode propagation in fibre communication.

SECTION C**12 × 4 = 48****(Long Answer Type Questions)**

Note : Attempt all questions.

Unit-I

1. Explain working and principle of Hard Disk Drive.

Or

Explain Evolution of Microprocessor.

Unit-II

2. Write and explain the program to find the smallest number in a data array.

Or

Draw and explain time diagram for I/O Write.

Unit-III

3. Explain Quantization of Signals.

Or

Write notes on DPSK and QPSK.

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Unit-IV

4. (a) Compare step and graded index fibre.
(b) Explain splicing and connectors in fibre optics.

Or

- (a) Explain HPSUU and HPSIR fibre.
(b) Explain number of modes and cut-off parameter.

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