DHANALAKSHMI SRINIVASAN COLLEGE OF ARTS & SCIENCE FOR WOMEN (AUTONOMOUS)

(For Candidates admitted from 2020-2021 onwards)

PG DEGREE EXAMINATIONS APRIL - 2021

M.Sc., - PHYSICS

MICROPROCESSOR AND COMMUNICATION ELECTRONICS

Time: 3 Hrs   Max.Marks: 75

PART - A

CHOOSE THE CORRECT ANSWER   (10X1=10)

1. 8085 microprocessor is an 8-bit microprocessor designed by?

   a) IBM   b) Dell   c) Intel   d) VAX

2. Registers capable of shifting in one direction is _____

   a) Universal shift register   b) Unidirectional shift register

   c) Unipolar shift register   d) unique shift register

3. The operation performed by data transfer instructions are on

   a) Bit data   b) Byte data   c) 16-bit data   d) all of the above

4. Perform BCD addition of $(23)_{BCD} + (20)_{BCD}$

   a) 00110100   b) 01000011   c) 10011   d) 11100

5. The 8255 ports works in the I/O mode

   a) Programmable I/O ports   b) set pins   c) reset pins   d) none of these

6. Strobed input/output mode is also known as

   a) mode 0   b) mode 1   c) mode 2   d) mode 3

7. Demodulation is done in…

   a) Receiving antenna   b) Transmitter   c) radio receiver   d) transmitting antenna

8. Simulation is used to determine

   a) Bit error rate   b) symbol error rate   c) bit error   d) symbol error

9. The loss of power of a satellite downlink signal due to earth's atmosphere is called

   a) Atmosphere loss   b) path loss   c) radiation loss   d) RFI

10. A helical antenna is used for satellite tracking because of ….

   a) Circular polarization   b) maneuverability   c) beam width   d) gain

PART- B

11. a) Explain the function of the ALE pin.

(OR)

b) Discuss the address bus of 8085 microprocessor.

12. a) Write an assembly language program to searching an array of a given number.

(OR)

b) Explain the time delay using one register

13. a) Discuss the IN and OUT instruction

(OR)

b) Draw the block diagram of the 8255A programmable peripheral interface.

14. a) Explain about a semiconductor laser.

(OR)

b) Derive an expression for amplitude modulation technique.

15. a) Write a short on electromagnetic radiation

(OR)

b) Explain the working of satellite communication

PART-C

ANSWER ANY THREE QUESTIONS (3X10=30)

16. Draw and explain the architectures of 8085 microprocessor.

17. Write an assembly level language of ascending order and descending order.

18. Explain the control signals necessary in the memory mapped I/O.

19. Explain the principles of AM, FM, PM

20. Draw and explain the block diagram of network control station (NCS).