

S.No. 18058 D

P 8 PYE 1

(For candidates admitted from 2008 – 2015 batch)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2020.

Physics – Elective

MICROPROCESSOR AND COMMUNICATION ELECTRONICS

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20)

Answer ALL questions.

1. What are the parts of microprocessor?
2. Give some examples for logical group.
3. Add the following two binary numbers 101+010.
4. Convert the decimal number $(0.1\ 22)_{10}$ into hexa equivalent.
5. What is difference between memory mapped I/O and I/O mapped I/O?
6. Which Interrupt has the highest priority?
7. Write the advantages of fiber optics communication.
8. Write short notes for frequency modulation.
9. What is ground station?
10. What is the role of NCS in remote stations?

SECTION B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain the concept of segmented memory? What are its advantages?

Or

- (b) Explain the pin configuration of 8086 microprocessor.

12. (a) Write the hexadecimal number system.

Or

- (b) Write an ALP to generate square wave using 8085 microprocessor.

13. (a) Compare the interface of 8085 with 8086.

Or

- (b) Discuss the signal transfer and block transfer mode of DMA transfer.

14. (a) Briefly explain point-to-point links.

Or

- (b) Explain the principle of pulse modulation.

15. (a) What is the working principle of satellite? Briefly explain it.

Or

- (b) Discuss the SS/TDMA concepts.

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

16. What do you mean by addressing modes? What are the different addressing modes supported by 8085? Explain each of them with suitable examples.
17. Explain the BCD arithmetic and Excess-3 in detail.
18. What is the advantage of DMA controlled data transfer over interrupt driven or program controlled data transfer? Why are DMA controlled data transfers faster?
19. Elaborate in detail modulation and demodulation.
20. Elaborately discuss about satellite communication and explain the Network Control Station (NCS).