

(Pages : 3)

N – 6237

Reg. No. :

Name :

Fourth Semester M.Sc. Degree Examination, June 2022

Physics

Special Paper II

PH 243 E : ADVANCED ELECTRONICS – II

(2020 Admission)

Time : 3 Hours

Max. Marks : 75

PART – A

Answer any **five** questions. Each question carries **3** marks.

1. What is DMA controlled data transfer?
2. Compare serial and parallel data transfers.
3. How an ASCII code is different from EBCDIC code and Bar Codes?
4. Explain any two applications of Neural Networks.
5. Explain Neuro-Fuzzy System with example. What are the different types of Neuro-Fuzzy System?
6. Give the block diagram of a pulsed radar.
7. Why a pulsed radar is advantageous over a CW radar?
8. Discuss the DECCA navigator system.

(5 × 3 = 15 Marks)

P.T.O.

PART – B

Answer **all** questions. Each question carries **15** marks.

9. Discuss 8086 architecture, with a properly labelled diagram.

OR

10. Give the block diagrams on 8257 and explain the various parts.
11. What are informed search algorithms? Explain the A* search algorithm in detail with an example.

OR

12. What are embedded systems? Explain with two examples in detail.
13. Describe satellite link models and foot prints.

OR

14. Make brief note on error detection, control and correction in communication networks.

(3 × 15 = 45 Marks)

PART – C

Answer any **three** questions. Each question carries **5** marks.

15. Given that BX = 2500H, SI = S000H, Displacement = 1000H, IP = 2000H
Determine the effective address for the following addressing modes :

- (a) Immediate
- (b) Register using SI
- (c) Direct
- (d) Register indirect using BX

16. Write a 8086 assembly language program for 8 bit subtraction.

17. Write a program to add two 16 bit numbers.
18. Explain rule based expert systems, Also give the examples export systems.
19. Distinguish between polar and geosynchronous satellites.
20. For a total transmit power (P_t) of 1500 W, determine the energy per bit (E_b) for a transmission rate of 20 Mbps.

(3 × 5 = 15 Marks)

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