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N – 6244

Reg. No. :

Name :

Fourth Semester M.Sc. Degree Examination, June 2022

Physics

Special Paper II

PH 243 E — ADVANCED ELECTRONICS - II

(2018-2019 Admission)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer any five questions. Each question carries 3 marks.

- I. (a) What are the main features of 8086 microprocessor?
- (b) Differentiate microprocessor and microcontroller.
- (c) What are the components of an embedded system?
- (d) Write a short note on LISP.
- (e) What is meant by interfacing in a microprocessor?
- (f) What is the working principle of satellite?
- (g) Write a short note on ASCII code.
- (h) What do you mean by Universal Product Code?

(5 × 3 = 15 Marks)

P.T.O.

SECTION – B

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

- II. (A) Explain the Minimum mode operation of 8086 with timing diagrams

OR

- (B) (a) What is a programmable keyboard?
(b) Draw pin diagram and block diagram of 8279.

- III. (A). (a) With the help of a block diagram explain the working of D/A and A/D converter.

- (b) Write a note on free scale microcontrollers.

OR

- (B) What are the three fundamental classes of artificial neural network architectures? Explain them.

- IV. (A) Draw block diagram of a monochrome TV transmitter and briefly explain the operation of TV transmission.

OR

- (B) (a) Write the advantages and disadvantages of Satellite Communication.
(b) Compare LEO, MEO, GEO.

(3 × 15 = 45 Marks)

SECTION – C

Answer any **three** of the following questions. Each question carries **5** marks.

- V. (a) Write an assembly language program in 8086 to search the smallest data in an array.
(b) Write a machine level program for 8086 to add the content of 0300 register of the 2000 segment with the content of 0400 register in the 3000 segment and to store the answer in 0600 register of 5000 segment

- (c) Write the instruction, interpretation and comment of any 10 logic instructions of 8086.
- (d) Explain about the knowledge representation in AI.
- (e) In a satellite communication channel, the uplink C/N ratio is 86 dB Hz. down link value is 76 dB Hz. Calculate the overall C/N₀ ratio.
- (f) Explain LORAN and DECCA system of navigation.

(3 × 5 = 15 Marks)

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