

[This question paper contains 2 printed pages.]

Sr. No. of Question Paper : 2445

F-4

Your Roll No.....

Unique Paper Code : 2342301

Name of the Course : **Allied Course : Computer Science**

Name of the Paper : Fundamentals of Computer Systems

Semester : IV

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. **Section A** is compulsory.
3. Attempt any **three** questions from Section B.
4. Parts of a question must be answered together.

SECTION A

1. (a) Write the main features of third generations of computers. (4)
(b) Convert $(111001111.11011)_2$ to $()_8$. (2)
(c) What is system software? (2)
(d) Explain any two objectives of an operating system. (4)
(e) What do you understand by main memory? (2)
(f) Give full form of (2)
(i) LED
(ii) UNIVAC
(g) Explain any one point-and-draw input device. (2)
(h) Define a WORM disk. (2)
(i) Explain NOR gate with diagram and truth table. (3)
(j) What is the 1's complement of $(1110001110.1100011)_2$. (2)

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- (k) Explain the functional components of computer system with the help of a basic block diagram. (5)

SECTION B

2. (a) Differentiate between fourth and fifth generations of computers.
(b) Convert $(2A.D7)_{16}$ to $()_{10}$. (10+5=15)
3. (a) Multiply $(111.101)_2$ with $(110.11)_2$.
(b) Briefly describe any two types of Application Software. (10+5=15)
4. (a) Write short notes on :-
(i) Disk Formatting Utility Program
(ii) Disk Compression Utility Program
(b) Prepare the Truth Table for the given Boolean Expression.
(i) $A'.B + A'.B.C'$
(ii) $(A + B).(A' + C')$ (5+10=15)
5. (a) Differentiate between the following :
(i) PROM and EPROM
(ii) Magnetic Tape and Magnetic Disks
(b) What are impact and non-impact printers ? Name two printers from each category. (10+5=15)
6. (a) Explain Voice Reproduction Systems and also give its any four applications.
(b) Write short notes on any **two** of the following :-
(i) MICR
(ii) Optical Disks
(iii) Flash Drive (10+5=15)