

2063

B.E., (Computer Science and Engineering)
Second Semester

CSC-202: Introduction to Computer Science

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

1. Attempt the following:-
- Explain Turing Model.
 - Explain 2NF.
 - What is cardinality of relation?
 - Differentiate between LAN and WAN.
 - How many bytes will be there in a 20 GB hard disk?
 - What is data structure and file structure?
 - What are the ill-effects of computer viruses?
 - List out the main components of Motherboard.
 - Explain HTTP.
 - Explain virtual memory.

(1x10)

SECTION-A

2. a) Draw the block diagram of the digital computer and explain its various components.
b) List the important characteristics of third generation computers. (06+04)
3. a) $(110101.101010)_2 = (?)_8$
b) $(163.875)_{10} = (?)_2$
c) $(19B116)_{16} = (?)_2$
d) $(756.603)_8 = (?)_{16}$
e) $(5DA2)_{16} = (?)_8$
f) $(2598.675)_{10} = (?)_{16}$
g) $(110.101)_2 = (?)_{10}$
h) $(127.54)_8 = (?)_{10}$
i) $(2B.C4)_{16} = (?)_{10}$
j) Find $(00001010)_2 - (00110011)_2$ using 2's complement method. (1x10)
4. a) Draw the internal design of a hard disk and explain its access mechanism.
b) Explain in brief various types of ROM. (05+05)

SECTION-B

5. a) Explain all phases of Software Development Process.
b) What is AI? Explain applications areas of AI in brief? (05+05)

P.T.O.

(2)

6. a) Explain all network Topologies with advantages and disadvantages.
 b) Consider the following table named "SOFTDRINK".

Table: SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	LIME AND LEMON	20.00	120
102	APPLE DRINK	18.00	120
103	NATURE NECTAR	15.00	115
104	GREEN MANGO	15.00	140
105	AAM PANNA	20.00	135
106	MANGO JUICE BAHAR	12.00	150

- Write command for SQL from (i) to (iv)
- i. To display names and drink codes of those drinks those have more than 120 calories.
 - ii. To display drink codes, names and calories of all drinks, in descending order of calories.
 - iii. To display name and price of drinks that have price in the range 12 to 18.
 - iv. To increase the price of all drink in the given table by 10 %.
7. a) What is a flowchart? Write an algorithm and draw flowchart to find smallest of three given numbers. (06+04)
- b) Discuss in detail social and ethical issues related to computing technology. (05+05)