PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2022 - 23 Examination

Semester: 1   Date: 27-01-2023

Subject Code: 303105106   Time: 02.00 pm to 4.30 pm

Subject Name: Information and Communication Technology   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Start new question on new page.

Q.1 Objective Type Questions -   **(15)**

1. Communication in the classroom depends
   a. On the ability of the teacher to explain.
   b. On the difficulty level of the subject.
   c. On the merit of the students.
   d. On class interaction.

2. How many bits does an IP address consist of?

3. Given below are two statements
   Statement I: Cache memory is faster than random access memory
   Statement II: Random access memory is closer to the processor than cache memory

   In light of the above statements, choose the most appropriate answer from the options given below
   a. Both Statement I and Statement II are correct.
   b. Both Statement I and Statement II are incorrect.
   c. Statement I is correct but Statement II is incorrect.
   d. Statement I is incorrect but Statement II is correct.

4. Match List-I with List-II in the context of computer networking:

List-I	List-II
a) VOIP	i. Makes use of light pulses to transmit data
b) Fibre-optic cable	ii. Use of internet to make phone calls
c) URL	iii. Most appropriate to connect computers in a small building
d) UTP cable	iv. Text used by web browsers to locate a web address on the Internet.

   Choose the correct option:
   a. (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
   b. (a)-(ii), (b)-(i), (c)-(iv), (d)-(iii)
   c. (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
   d. (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

5. What does the acronym WAN stand for?

6. Bluetooth is a type of radio wave information transmission system that is good for about _____
   a. 30 feet
   b. 30 yards
   c. 30 miles
   d. 300 miles

7. USB is stands for?

8. Which of the following statement(s) is/are TRUE ?
   S1 : The decimal number 11 is larger than the hexadecimal number 11.
   S2 : In the binary number 1110.101, the fractional part has the decimal value as 0.625.
   a. S1 only
   b. S2 only
   c. Both S1 and S2
   d. Neither S1 nor S2

9. DVD is an acronym for?

10. An ASCII is a character-encoding scheme that is employed by personal computers in order to represent various characters, numbers and control keys mat the computer user selects on the keyboard. ASCII is an acronym for

11. State true or false? SDD is faster than HDD?

12. Information, a combination of graphics, text, sound, video and animation is called :_____

13. State true or false? Modem converts the analog signal into digital signal and vice-versa?

14. The _____ generation based on VLSI microprocessor?

15. _____ is an emerging branch in computer science, which interprets means and method of

making computers think like human beings.

Q.2 Answer the following questions. (Attempt any three) **(15)**
    A) What do you mean by ALU? Explain signification of ALU in CPU?
    B) With the help of neat block diagram, explain the internal architecture of 8086 microprocessor?
    C) Why RAM is known as volatile memory? Write difference between RAM and ROM?
    D) Explain types of transmission media used in computer network?

Q.3 A) Why flowchart is used in problem solving? Draw a flowchart to the calculate the average from 25 **(07)**
exam scores.

    B) Is algorithm should be finite justify your answer? Write pseudo code to print table of any number? **(08)**
<div align="center">

OR
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    B) What is topology? Explain types of topology with advantages and disadvantage? **(08)**

Q.4 A) Convert the following number system: **(07)**
    1. $(9867)_{10}$ = $()_2$
    2. $(767)8$ = $()_{16}$
    3. $(110010.1001)_2$ = $()_{10}$
<div align="center">

OR
</div>

    A) Solve the following: **(07)**
    1. $(A12F5)_{16}$ = $()_2$
    2. $(526.354)_{10}$ = $()_8$
    3. Calculate two's complement of $(10101011101001)_2$?

    B) Write short on following: **(08)**
    1. Internet
    2. Types of software.
    3. WAN
    4. CISC