[This question paper contains 2 printed pages.]

Sr. No. of Question Paper: 6085 D Your Roll No......

Unique Paper Code : 234291

Name of the Course : B.Sc. (H) / B.Sc. (Prog.)

Name of the Paper : Computational Skills (CSAT-201)

Semester : II

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. Question 1 is compulsory.
- 3. Answer any five questions out of remaining questions (Q2-Q8).
- 4. Answer all parts of a question together.
- 1. (i) What is virtual reality?
 - (ii) What is an electronic mail? Why is it preferred by many to paper mail?
 - (iii) Give full forms of ASCII, UTF, HTML, WWW.
 - (iv) Find 2's complement of (101011)₂.
 - (v) Write two main roles of communication protocols.
 - (vi) What is palmtop? Why is it so called?
 - (vii) What is Hypertext? How is it useful?
 - (viii) Specify the number of bits used in a byte, nibble, word and double word.
 - (ix) Why is computer sometimes called garbage-in, garbage-out machine?
 - (x) What is a register? Write the full forms of MAR and MBR.
 - (xi) What is the concept of 'stored program'? Who invented it? (2×11)
 - (xii) Differentiate between second and third generation computers. (3)
- 2. Perform the following conversions
 - (i) $(2BA)_{16} = (?)_{2}$

- (ii) $(111011010)_2 = (?)_8$
- (iii) $(96)_{10} = (?)_2$
- (iv) $(111.01)_2 = (?)_{10}$

- 3. (a) What is multimedia computer system? What are its typical characteristics?
 - (b) What is internetworking? Explain the difference between bridge, router and gateway. (5+5)
- 4. (a) What is a WWW browser? What types of navigation facilities are supported by modern browsers to help users save time while internet surfing?
 - (b) What is an input interface? How does it differ from output interface? (5+5)
- 5. (a) Perform the following operations
 - (i) Add (1010110), and (0011010),
 - (ii) Subtract (011011), from (110111)₂
 - (b) Why was Unicode developed? List some of its key features. (6+4)
- 6. (a) What is an Algorithm? What are the various ways to represent it?
 - (b) Write an algorithm that calculates the sum of any 10 numbers. (6+4)
- 7. (a) Why are first and second generation computers more difficult and costlier to produce commercially than computers of subsequent generations?
 - (b) Differentiate between impact and non-impact printers. List key features of laser printers. (5+5)
- 8. Write short notes (any four):
 - (a) Multimedia
 - (b) Hand-held computers
 - (c) Client-Server architecture.
 - (d) Network types

(e) Mainframes (10)

(4500)