

This question paper contains 4 printed pages.]

Your Roll No.

5191

B.Sc.(H)/B.Sc.(Prog.)/II Sem. B
Paper – CSAT 201 – COMPUTER SCIENCE
(Computational Skills)
(Admissions of 2010 and onwards)

Time : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Question No. 1 is compulsory. Answer any **five** questions out of the remaining questions (Q. 2 – Q. 8).

Answer **all** parts of the question together.

1. Answer each of the following :

- (a) Give any two important characteristics of computers. 2
- (b) Name the hardware technology used in second and fourth generation computers. 2
- (c) What is the difference between data and information ? 2
- (d) What is the function of the Program Control Register (PC) ? 2
- (e) Name any two basic types of monitors in use today. 2

- (f) What is a smartphone ? 2
- (g) What is hypertext ? How is it useful ? 2
- (h) Convert $(267)_8$ to binary. 2
- (i) Find the complement of $(56)_8$. 2
- (j) Name any two computer coding schemes used to represent characters in computers. 2
- (k) Mention two ways to represent an algorithm. 2
- (l) Name one common graphic and one common audio file extension. 1
- (m) Give full form of the acronyms 'CAD', 'VLSI'. 2
2. (a) List the key properties of storage units of a computer system.
- (b) What are the two main components of the CPU of a computer system ? Describe the role of each component in short. 5 + 5
3. (a) Perform the following conversions :
- (i) Convert $(9D)_{16}$ to decimal
- (ii) Convert $(34.56)_8$ to decimal
- (iii) Convert $(64)_{10}$ to BCD
- (b) Perform the following operations :
- (i) Add the binary numbers 111100 and 01101.
- (ii) Subtract $(011011)_2$ from $(111100)_2$ 6 + 4

4. (a) What is FTP ? List the steps involved in uploading / downloading a file by using this service.
- (b) Name any two web browsers. Mention four facilities that browsers provide to help users save time while Internet surfing. 5 + 5
5. (a) What is “text importing” and “text exporting” ? Explain how these features help in creation of a document.
- (b) List any five multimedia applications. 5 + 5
6. (a) What is an algorithm ? What are the characteristics necessary for the sequence of instructions to qualify as an algorithm ?
- (b) Write an algorithm that computes the interest (I) on a loan for the given inputs : principal (P), rate of (R) interest and time period (T), using the formula $I = (P * R * T) / 100$. 4 + 6
7. (a) What is a LAN ? What are its key characteristics ?
- (b) What is a collating sequence ? A computer uses ASCII as its internal representation of characters. In which order will this computer sort the following strings ?
BED, 2good, 512, BaD, ADD 5 + 5

8. (a) Name the input device which is likely to be used in
- (i) An information kiosk at a railway station
 - (ii) Video Game
 - (iii) Supermarket
 - (iv) Banks for processing cheques
- (b) What is an IC ? List advantages of IC technology over transistor technology.
- (c) Why are laser printers a preferred printing device ? 4 + 3 + 3
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