

**C 33300**

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Name.....

Reg. No.....

**FIRST SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2017**

(CUCBCSS—UG)

Computer Science

BCS 1B 01—COMPUTER FUNDAMENTALS AND HTML

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

**Part A (Short Answer Questions)**

*Answer all questions.*

1. What is a translator ?
2. What is Cache memory ?
3. What do you mean by Truth Table ?
4. Define the term Byte.
5. Add binary numbers 11001 and 1011.
6. What is principle of duality ?
7. What is an Algorithm ?
8. State De Morgan's Theorem.
9. What do you mean by Web Hosting ?
10. How to insert a picture in HTML page ?

(10 × 1 = 10 marks)

**Part B (Short Paragraph Questions)**

*Answer all questions.*

11. Convert  $2AC_{16}$  and  $562_8$  into their binary equivalent.
12. Subtract  $01010_2$  from  $10000_2$ .
13. Why NAND and NOR gates are called Universal gates.
14. What are language translators? What are the features of good languages ?
15. What is Web Server and web hosting ?

(5 × 3 = 15 marks)

**Turn over**

**Part C (Short Essay Questions)**

*Answer any five questions.*

16. Write advantages and limitations of flowcharting.
17. What are data scanning devices ? How do they help in improving the input data accuracy as compared to keyword.
18. Convert the following expression into SOP and POS form  $F(a, b, c) = (ab + c)(b + ac)$  ?
19. Differentiate between the characteristics of primary and secondary storage of a computer system.
20. Draw the implementation of the logical operations AND, OR, NOT with :
  - (a) NAND gate.
  - (b) NOR gate.
21. What is a programming language ? Why it is so called ?
22. Construct logic circuit diagram for a half-adder by using NAND gates only.
23. Draw the flowchart to check whether a given number is prime or not.

(5 × 5 = 25 marks)

**Part D (Essay Questions)**

*Answer any three questions.*

24. Write HTML code to prepare an application form for programme registration.
25. Explain different types of style sheets, creation of style sheets and style sheet properties in detail.
26. State and prove the laws of Boolean Algebra.
27. What are the importance of secondary storage devices? Explain the features of the following devices.
  - (a) Magnetic tape.
  - (b) Hard disk.
  - (c) CD Drive.
28. Simplify : Using K Map in both SOP and POS forms.  $f(A, B, C, D) = \Sigma(0, 2, 8, 9, 10, 11, 14, 15)$ . Draw the logic diagram of simplified form.

(3 × 10 = 30 marks)