E 8441

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Reg. No.....43

Name.....

B.C.A./B.Sc. DEGREE (CBCS) EXAMINATION, JANUARY/FEBRUARY 2018

First Semester

Computer Applications Model III (Triple Main)

Core—CA ICR T01—COMPUTER FUNDAMENTALS AND DIGITAL PRINCIPLES

(Common to B.C.A.)

[2017 Admissions]

Time : Three Hours

Maximum Marks : 80

Part A

Answer any **ten** *questions.*
Each question carries 2 *marks.*

1. Define a digital computer.
2. What is an internet ? Explain.
3. Differentiate between a latch and a flip flop.
4. What is an encoder ?
5. Explain any two input devices.
6. What is an operating system ? Explain.
7. Write short note on A to D converters.
8. What is a search engine ? Explain.
9. What is an error correction code ?
10. Differentiate between RAM and ROM.
11. What do you mean by the resolution of a monitor ?
12. Simply using De Morgan's theorem :
    (a) (AB)' + (CD)'
    (b) (A(B + C))'

(10 × 2 = 20)

Turn over

Part B

Answer any **six** *questions.*
Each question carries 5 *marks.*

13. Explain different types of networks.
14. Explain the working of a dot matrix printer.
15. Obtain the canonical form of the following functions :
    (a) AB + BD +ACD.
    (b) (A + D + B) (A + C).
16. Discuss the working of RS flip flops.
17. Describe 3 to 8 line decoder.
18. With truth table, explain the basic gates.
19. Subtract 45_8 from 66_8 using 1's complement and 2's complement method.
20. Explain different types of plotters.
21. What are SOP and POS forms ? Explain.

(6 × 5 = 30)

Part C

Answer any **two** *questions.*
Each question carries 15 *marks.*

22. Explain the working of Master-Slave and JK flip flop.
23. State and prove basic rules and laws of Boolean Algebra.
24. Explain different types of computers.
25. Explain the working of Internet. What are the major features of Internet.

(2 × 15 = 30)