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**SAINTGITS COLLEGE OF APPLIED SCIENCES**

**MODEL INTERNAL ASSESSMENT EXAMINATION, OCTOBER 2019**

**Department of Computer Application (BCA) , Semester I**

**Fundamentals of Digital Principles**

Total : **80 marks** Time:**3 Hours**

**Section A**

*Answer any 10 questions. Each question carries 2 marks.*

1. Subtract a. (1010-1000) b.(1111-1000)

2. What is a register?

3. Perform BCD addition a.1001+0101 b. 1000+1010

4. Design AND gate using NOR gate?

5. Convert to SOP π(2,3,7)?

6. Define sequential circuit?

7. What is an absorption Law?

8. Write note on WWW?

9. Define DNS?

10. Define Don’t care conditions?

11.What is race-around condition?

12. Differentiate between RAM and ROM?

 **(10 X 2 = 20 marks)**

**Section B**

*Answer any 6 questions. Each question carries 5 marks.*

13. Explain JK Flip Flop with neat diagram?

14. What is a decoder? Draw logic diagram for decoder?

15. Explain different representation of numbers in memory?

16. Convert to decimal

a.(101.111)2 b. (1225)8 c. (12BD)16 d. (1100010)2 e. (12ABC)16

17. Simplify using K-map and draw logic diagram using universal gates

* 1. F(w,x,y,z)=∑(0,1,2,4,5,6,8,,9,12,13,14)

18. Explain functional units of a computer?

19. Explain different types of computer networks?

20. Explain different types of plotters?

21. Explain different types of operating systems?

**(6 X 5 = 30marks)**

**Section C**

*Answer any 2questions. It carries 15marks.*

22. Explain Master Slave J K flip flop?

23. Explain Odd parity generator?

24. Explain different types of printers with working?

25. Explain the working of internet? What are the major features of Internet?

 **(2 X 15 = 30 marks)**

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