

B.SC. DEGREE END SEMESTER EXAMINATION OCTOBER 2016
SEMESTER – 1: COMPUTER APPLICATION (CORE)
COURSE: 15U1CRCAP1–: FUNDAMENTALS OF DIGITAL SYSTEM

Common for Regular (2016 Admission) & Supplementary / Improvement (2015 Admission)

Time: Three Hours

Max. Marks: 75

Answer **all** question Each Question Carries **1** Marks.

1. What is meant by web?
2. What is meant by protocol?
3. Write the 1's complement of 101011.
4. Which numbers are used in hexadecimal system?
5. Who is developed Boolean algebra?
6. Write down the steps to covert an octal number to binary.
7. What is meant by an encoder?
8. What is the use of DMUX?
9. Write the expansion of EEPROM.
10. What is meant by flip-flop? (1 x 10 = 10)

PART B

Answer **any eight** questions. Each Question Carries **2** Marks.

11. Define cache memory.
12. Write down the functions of operating system?
13. Write the corresponding BCD number of $(42)_{10}$
14. What is meant by ASCII code?
15. Explain Duality theorem.
16. Draw the truth table and diagram of NOR gate.
17. Define combinational circuit with diagram.
18. Define data selector with block diagram.
19. Define parity bit.
20. Compare static and dynamic RAM. (2 x 8 = 16)

PART C

Answer **any five** question Each Question Carries **5** Marks.

21. Explain NAND as universal gate.
22. Explain Master Slave flip-flop with diagram.

23. Expand the expression in S.O.P form.
a) $F = AB + C$
b) $F = A + B'C$
24. Simplify using K-map: $F(A,B,C,D) = \sum(0,1,2,4,5,6,8,9,12,13,14)$
25. Write short note on J-K flip-flop with the help of diagram.
26. Define serial in serial out shift register
27. Explain Multiplexer and de multiplexer. Construct 4*1 Multiplexer. (5 x 5 = 25)

PART D

Answer **any two** question Each Question Carries **12** Marks.

28. Describe the functional units of a computer.
29. Explain logic gates and describe the working of various gates with truth table.
30. Explain a) full adder and half adder b) Decoder
31. Explain counters with diagram. (12 x 2 = 24)
