BCA Degree Examination
SEMESTER -1
COMPUTER FUNDEMENTALS
MODEL PAPER

Time: 3 Hours **Max.Marks: 75**

Instructions: ***Answer any 5 questions Out of 8 in PART-A***
Answer one question from each unit in PART – B

PART-A

1. Explain about the parts of a personal computer? **5*5=25**
2. Write a short note on operating system?
3. What is the difference between primary memory and secondary memory of a computer system? and list 2 examples of secondary memory?
4. Write down gray code for decimal digits from 0 to 15 ?
5. Convert (98AF) base 16 to base 2 and base 8
6. Convert the hexadecimal number (F3A7C2) to binary and octal ?
7. Explain the different types of computer software?
8. State and prove demorgans theorem for 3 variables

PART- B **5*10=50**

UNIT-1

9. Draw the block diagram of computer system and explain its main components? **(10)**

(OR)

10. Explain about different types of input devices, and output devices used in a computer system ? **(10)**

UNIT-2

11 What is meant by storage system and describe the way of storing information in the memory of a computer system with the help of a diagram ? **(10)**

(OR)

12. **a)** Discuss about complements with examples ? **(5+5)**
b) Explain about different types of binary codes with examples?

UNIT-3

13. Demonstrate by means of truth table the validity of the following theorems of Boolean algebra.
a) Associative law **b)** Distributive law over + **(5+5)**

(OR)

14. Draw the logic symbol and construct the truth table for each of the following gates **(10)**
a) 2-input NAND gate **b)** 3-input OR gate **c)** 2-input EX-OR gate
d) 3-input EX-OR gate **e)** NOT gate

UNIT-4

15. **a)** Explain about why NAND and NOR gates are known as universal gates ? **(5+5)**
b) Give the Boolean expression for each of the following gates AND,NOR,EX-OR,OR,NOT

(OR)

16. **a)** Explain about different types of computer software? **(5+5)**
b) Explain in detail about different generations of computer?

UNIT-5

17. **a)** Write an algorithm to find the biggest of 3 numbers **(5+5)**
b) List out some popular high level languages and explain in detail any three of them ?

(OR)

18. Explain briefly the layers of the OSI model ? **(10)**