

**BCA Degree Examination
SEMESTER -1
COMPUTER FUNDAMENTALS
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)

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