BCA-Ist Semester
Assignment-1

Q1. Write the sorting techniques and explain any two with suitable examples.

Q2. What are arrays? How are arrays declared?

Q3. Differentiate between malloc and calloc functions.

Q4. What is pointer variable? What is the use of pointer variable? Show the relation between a pointer and an array.

Q5. Write a program to accept two matrices of 3 x 3 and print their addition in one of them.

Q6. What do you understand with sorting? Write the name of any four sorting techniques. Illustrate the algorithm of insertion sort for the following array of numbers. Show the result of each pass of algorithm:

3,6,2,7,1,8,9,4,0.

Q7. What do you understand with searching? Write the algorithm for sequential or linear search. Illustrate the algorithm with the help of suitable example.
Assignment No. 1

Course: BCA

Semester: Second

Subject: Mathematics-II

Last Date of Submission: 31st March

Q. No.1. Define the following: Set
   (i) Subset
   (ii) Power Set
   (iii) Null Set
   (iv) Equal set
   (v) Singleton Set

Q.No.2. State and prove Demorgan’s law.

Q. No.3. If A, B, C, are three sets, then prove that
   \[ A \cap (B \setminus C) = (A \cap B) - (A \cap C) \]

Q. No.4. If A, B, C, are three sets, then prove that
   \[ A \cap (B \cup C) = (A \cap B) \cup (A \cap C) \]
Q. No.5. A group of 50 students appeared for two examinations, one in physics and other in Maths, 38 students passed in physics and 37 in Maths. If 30 students passed in both subjects. Find how many students failed.

Q. No. 6. If \( f(x) = \log \left( \frac{(1+x)}{(1-x)} \right) \), Show that

\[
f(x) + f(y) = f \left( \frac{(x + y)}{(1+xy)} \right)
\]

Q.No.7. If \( f(x) = \frac{1}{(1-x)} \) and \( g(x) = \frac{(x-1)}{x} \)

Find the value of \( g[f(x)] \)

Q. No.8. Write the following in the set builder form

(i) \( A = \{1, \frac{1}{4}, \frac{1}{9}, \frac{1}{16}, \ldots \} \)

(ii) \( B = \{\frac{1}{2}, \frac{2}{5}, \frac{3}{10}, \ldots \} \)

(iii) \( C = \{1, 8, 27, \ldots \} \)

Q.No. 9. Out of 450 students in a class 193 students read “India Today” and 200 read ‘The Week’, 80 students read neither. Find out the number of students who read both.

Q.No.10. Draw the graph for exponential function

\[
f(x) = 2^x
\]
ASSIGNMENT NO. 1

UNIT –I (BOOLEAN ALGEBRA)

Subject: Digital Electronics

Prof. Nancy Sharma

Date Of Submission: 29.02.2012

Marks: 15

1. Simplify the following Boolean functions algebraically:
   (i) \((x+y), (x+y')\)
   (ii) \(xy+xy'\)

2. Obtain the truth table for the function
   \(F = AB' + B'C + A'C\)

3. Simplify the following Boolean function in sum of products form, where:
   \(F (A, B, C, D) = \Sigma (0, 1, 2, 5, 8, 9, 10)\)

   Draw the logic diagram with NAND gates

   (i) How many word in the memory space?

4. What is DeMorgan’s Theorem? Using DeMorgan’s Theorem show that:
   (i) \((A+B)' (A'+B')' = 0\)
   (ii) \(A + A'B + A'B' = 1\)

5. Simplify the following Boolean function using four variable map:
   (i) \(F (A, B, C, D) = \Sigma (3, 7, 11, 13, 14, 15)\)
   (ii) \(F (A, B, C, D) = \Sigma (4, 6, 7, 15)\)

6. Simplify the following Boolean function in product of sum form by means of a four variable map:
   \(F (A, B, C, D) = \Sigma (2, 3, 4, 5, 6, 11, 15)\).

7. Simplify the following Boolean function in sum of products form by means of a four variable map:
   \(F (w, x, y, z) = \Sigma (0, 2, 8, 9, 10, 11, 14, 15)\)

   Draw the logic diagram with NAND gates

8. Simplify the Boolean function:
   \(F (A, B, C) = \Sigma (0, 2, 6)\)

   Having the don’t –care conditions

   \(D(A, B, C) = \Sigma (1, 3, 5)\)
COURSE: BCA  ASSIGNMENT NO 1  SUBJECT Financial accounting and management

DATE OF SUBMISSION: 31st March 2012

Assignment-1

Financial accounting and management  10 marks

Q2 explain various golden rules of accounting.

Q3 write short note on

a) Capital
b) Fixed assets
c) Loan
d) Depreciation
e) Patents
f) Goodwill
g) Deferred revenue expenditure

Q4 write short note on limitation of accounting.
1. Discuss the meaning, nature and scope of organizational behavior.
2. Explain emerging concepts of OB.
3. Explain cultural diversity.
4. What do you mean by perception? Discuss its nature and importance.
5. Discuss the stages involved in the process of perception.
6. What do you understand by the term ‘personality’? Discuss its different components.
7. Critically examine the Big Five Factor model of personality.
8. Describe various models of OB.
9. What is the impact of global and cultural diversity on OB?
10. Discuss the challenges and opportunities for OB.