

19.08.20

ST JOSEPH'S COLLEGE (AUTONOMOUS), BANGLORE-27  
BCA – I SEMESTER  
MID-SEMESTER EXAMINATION – AUGUST 2019  
CA 1318 – PROGRAMMING IN C

Time – 1 hour

Max Marks-30

PART A

5\*6=30

I Answer any FIVE

- 1) What is data type? Explain in detail.
- 2) List the difference between while and do while statement.
- 3) What is array? What are the different types of array? Explain the memory location of array.
- 4) Write a program to perform multiplication of two numbers without using \* operator.  
Hint:  $3*2 = 6$  i.e  $3+3=6$ .
- 5) Write a program to calculate number of day, month and year.  
Hint: 1<sup>st</sup> January 2020 till last day of September 2020.
- 6) Write a program to implement the following.
  - a) Compare the first two elements in the list, say a[1], and a[2]. If a[2] is smaller than a[1], then interchange their values.
  - b) Compare a[2] and a[3]; interchange them if a[3] is smaller than a[2].
  - c) Continue this process till the last 2 elements are compared and interchanged
  - d) Repeat the above step N-1 times.
- 7) Write a c program to check whether a two dimensional array is a Sparse Matrix.  
Hint: A Sparse Matrix is a matrix in which number of 0's in a given matrix is greater than the number of non-zero elements.