GURUDAS COLLEGE
INTERNAL EXAMINATION,2020
SUBJECT - CMSA
Part-I (Honours)
PAPER – II A **F.M=50**
Answer Question No. 1 and any 2 from the rest

1. Answer any **fou**r Questions **(4X5)**
   a. Define kernel. What is mutual Exclusion? 2.5+2.5

   b. State main difference between multiprocessor and real time processor? 5
   c. Define the term DATA and Information. Define Application Software. 5
   d. What are the various operations that can be performed on different data structure? What are the linear and non linear data structures? 2.5+2.5
   e. Write the algorithm for insert at beginning of a array. 5
   f. What is an array? What is index in an array. 2+3

   g. Define data structure. How array is different from linked list. 2+3
   h. What do you mean by searching in a data structure? What are the different types of searching available in data structure? 2+3

2. a. Draw the process state diagram and explain its each state .

   b. Distinguish between multitasking and multiprogramming.

   c. What is CPU scheduling? why is it necessary?

[5+5+5]

3 . a. Write down the differences between

   i. Preemptive and non preemptive scheduling
   ii. Process and Thread
   iii. Multi user operating system and single user operating system

   b. What is resource allocation graph ? why we use this graph in deadlock avoidance?
   c. Consider a set of four process :

Process	Burst time	Arrival time
P1	10	0
P2	5	1
P3	4	2
P4	7	6

[5+5+5]

4. Write an algorithm to merge two unsorted array. Write the algorithm for insert an element operation in a queue.

8+7

5. Why we cannot perform binary search on linked list. Why queue is called a FIFO. What is priority queue? How it is different from normal queue. Covert the following infix expression into postfix using stack.

(A+B)*C/D 3+2+2+2+ 6

Send the Scanned answer scripts to the following mail id: csexam.cmsa3@gmail.com