Roll No. _____

END SEMESTER EXAMINATION
SEMESTER- III

COURSE CODE : CSE 406 | **DURATION : 3 (THREE)HRS**
COURSE TITLE : OPERATING SYSTEM | **MAXIMUM MARKS : 75**
SESSION : JULY-DEC'20 21 | **PASS MARKS : 35 %**

NOTE:
1. *All the questions are compulsory*
2. *Attempt any 5 (five) questions.*
3. *Mark for each question is shown against it.*
4. *Assume suitable logical data wherever necessary.*

1.	**(a)**	Define operating system? Whether an operating system is essential for computer system. Explain why?	**(2+6)**
	(b)	Briefly explain Network Operating system?	**(4)**
	(c)	Define the term spooling	**(3)**
2.	**(a)**	Explain the various services provided by an operating system	**(5)**
	(b)	What is process? Give an explanation of process life cycle.	**(2+4)**
	(c)	Distinguish between the process and the thread	**(4)**
3.	**(a)**	What do you mean by process scheduling?	**(3)**
	(b)	Explain in brief about Process Control Block?	**(5)**
	(c)	What do you understand by scheduling queue?	**(4)**
	(d)	Explain the concept of concept of process synchronization?	**(3)**
4.	**(a)**	Explain Round Robin scheduling algorithm in detail?	**(6)**
	(b)	Define the term scheduler. How many types of schedulers are used in scheduling? Explain each of them briefly?	**(2+5)**
	(c)	What is convoy effect?	**(2)**
5.	**(a)**	Explain the advantages and disadvantages of user-level threads.	**(5)**
	(b)	Explain various multithreading models.	**(5)**
	(c)	Define kernel-level thread in brief.	**(5)**
6.	**(a)**	Explain the FIFO page replacement algorithm with a suitable example.	**(8)**
	(b)	What do you understand by Direct Memory Management (DMA)? Discuss its importance	**(7)**
7.	**(a)**	What is memory management? How it is essential in computer system?	**(2+3)**
	(b)	Describe dynamic loading and static loading in brief	**(5)**
	(c)	How protection is ensured in paging scheme?	**(5)**
8.	**(a)**	Discuss deadlock prevention in detail.	**(6)**
	(b)	Discuss Resource allocation graph algorithm.	**(6)**
	(c)	What do you mean by safe state?	**(3)**

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