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SECOND YEAR (BBA(CA))
BBA24408: Operating System
(Semester IV)

Program: BBA(Computer Application)
Program Specific:BBACA07
Course Type: SEC
Paper:

Credits: 2
Time: 2 Hours
Max. Marks: 30
SET: A

Instructions to the candidate:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Draw a well labelled diagram wherever necessary.

Q1) Answer the following.

[5 X 1= 5]

1. Which of the following is NOT an example of a mobile operating system?
a) Android b) iOS c) Linux Mint d) Symbian OS
2. _____ system call is used for read an open file
a) b) Write c) Open d) Delete
3. Which of the following is not the state of a process?
a)New b)Old c)Waiting d)Running
4. Identify which one of following is the deadlock avoidance algorithm?
a)Banker's algorithm b)Round Robin algorithm c) Elevator algorithm d)Karn's Algorithm
5. Analyze the role of Hold and Wait in deadlock formation.
a) Ensures processes complete execution faster
b) Allows a process to hold a resource while requesting additional resources
c) Frees up resources immediately after usage
d) Prevents the circular wait condition

Q2) Answer the following (Any 5)

[5 X 1 =5]

1. Enlist the any four types of operating system.
2. What is the full form of ARM in mobile processors?
3. Define system call.
4. What is preemptive scheduling ?
5. Which scheduling algorithm uses time slicing?
6. Short term scheduler is used for?
7. Name one method to prevent deadlocks.

Q3) Answer the following (Any 4)

[4X4 = 16]

1. Explain the difference between preemptive and non-preemptive scheduling.
2. Compare Windows and Linux as operating systems.
3. How does first-come, first-served (FCFS) scheduling work?
4. Differentiate between soft real-time and hard real-time operating systems.
5. Explain the feature of windows mobile operating system.
6. Consider the following set of processes which all arriving at time 0 and the burst time of each process is given below. Calculate Average Waiting Time ,Average Turnaround Time and Average Response Time using FCFS.

Process	Burst Time
P1	5
P2	24
P3	16
P4	10

Q4) Answer the following (Any 1)

[1X4 = 4]

1. Differentiate between Intel and ARM in Mobile Operating System.
2. Consider the following snapshot of the system.

Answer the following questions using the banker's algorithm.

i)is the system safe? Justify?

ii)if yes give safe sequence.

Process	Allocation				Max				Available			
	A	B	C	D	A	B	C	D	A	B	C	D
P0	0	0	1	2	0	0	1	2	1	5	2	0
P1	1	0	0	0	1	7	5	0				
P2	1	3	5	4	2	3	5	6				
P3	0	6	3	2	0	6	5	2				
P4	0	0	1	4	0	6	5	6				
