Bangladesh University

Department of CSE
Final Examination, Spring-2026 Semester
Course Title: Operating System.
Course Code: CSE- 3103
Batch: 69th B(Evening)

Time: 2 hours | Total Marks: 4×10 = 40

Instructions: *1. Answer any 4 (total) out of the 5 questions.*
2. Read the questions carefully and answer accordingly.
3. If you have problem in understanding any question, ask your teacher; not your Classmates.

1. a) Define Deadlock and write down the necessary conditions for Deadlock in OS. (5)

   b) Explain the Deadlock Prevention strategies briefly. (5)

2 a). The total resources for A =10, b = 5, C = 7. The given table (Table 1) represent the information of availability and max need for the five processes. Using the following table find out the save sequence of the processes to avoid the deadlock. (7)

Table 1

Process	Availability			Max Need		
	A	B	C	A	B	C
P0	0	1	0	7	5	3
P1	2	0	0	3	2	2
P2	3	0	2	9	0	2
P3	2	1	1	4	2	2
P4	0	0	2	5	3	3

b) Explain the methods of deadlock handling. (3)

3 a). Explain the terminologies used in CPU Scheduling: (5)

I. Arrival Time
II. Completion Time
III. Burst Time
IV. Turn Around Time
V. Waiting Time (W.T)

b). Calculate the average waiting time using FCFS algorithm for data of the below table (Table 2). (5)

Table 2

Process	Arrival Time	Burst Time
P0	0	5
P1	0	3
P2	0	8

4. a). Explain the importance of CPU Scheduling Algorithm. (3)

   b). Calculate average waiting time and turn-around time using SJF algorithm for the data of the following table (Table 3). (7)

Table 3

Process	Arrival Time	Burst Time
P0	0	6
P1	2	8
P2	4	3

5 a) Define process. Draw the block diagram of process and explain it. (5)

b) Write a short note about process management and mention the tasks of it. (5)