

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(MID SEMESTER EXAMINATION)**

**CLASS: BCA  
BRANCH: BCA**

**SEMESTER : 1<sup>ST</sup>  
SESSION : MO/2024**

**SUBJECT: CN105 BASICS OF OPERATING SYSTEMS**

**TIME: 02 Hours**

**FULL MARKS: 25**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	Define Operating System.	[2]	1 I
Q.1(b)	Explain the different types of operating Systems.	[3]	1 II
Q.2(a)	Explain different services of operating system.	[2]	1 II
Q.2(b)	Compare monolithic architecture and layered architecture.	[3]	1 IV
Q.3(a)	What do you mean by process? Explain.	[2]	2 II
Q.3(b)	Discuss the different process states and process life cycle.	[3]	2 II
Q.4(a)	Write short note on Process Control Block (PCB).	[2]	2 II
Q.4(b)	Using the data below, make the Gantt chart and find the Average Waiting Time of FCFS scheduling algo, SJF algo.	[3]	2 III

Process	Burst Time
P <sub>1</sub>	6
P <sub>2</sub>	8
P <sub>3</sub>	7
P <sub>4</sub>	3

Q.5(a)	Define Deadlock.	[2]	3 I
Q.5(b)	Explain the characteristics of deadlock.	[3]	3 II

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