

LBS COLLEGE SATARA

B.Sc. Part - III Sem- V Practical Examination Oct. / Nov. – 2026

Computer Science (Optional)

Day and Date: Tuesday, 13-10-2026

Total Marks: 40

Time: 10.00 a.m. to 01.00 p.m.

Instructions:

- 1) Solve all programs from the following.
- 2) Each question carries 15 marks, 5 marks for journal and 5 marks oral examination.
- 3) No paper work is required for the practical exam.

Q.1 Write a Python program to create a user-defined function to check whether a given number is even or odd.

Q.2 Create a Python virtual environment named 'myenv' and activate the virtual environment.

Q.3 Create and test role-based prompts by assigning different roles to an AI system. Analyze how the assigned role changes the tone, content, and level of detail of the response. Teacher Role – Create a prompt that instructs AI to act as a Computer Science Teacher and explain a topic such as Artificial Intelligence, Machine Learning, or DBMS to a beginner. The prompt should specify: Role: Teacher, Target audience: Beginners/Students, Simple language, Examples Appropriate level of detail

Q. 4 Create and test prompts that instruct an AI system to generate responses in fixed and structured formats such as JSON. Verify whether the generated output follows the specified format. JSON Format – Create a prompt to generate information about 5 students in valid JSON format. The output should contain fields such as: Roll_No, Name, Course, Marks, Result Verify whether the response follows valid JSON syntax.

Q.5. Write a console application for swapping of 2 numbers using Pass by Reference.

Q.6. Write a C# program to demonstrate hierarchical inheritance.

Q.7. Write a Node.js program that prints "Hello" immediately and "World" after a 3- second delay using setTimeout()

Q.8. Create an event listener that runs only once using the once() method and verify that it doesn't execute on second emit.