Nirma University
Institute of Technology
M. Tech CSE, M. Tech CSE (Data Science) Sem. II
6CS374ME25 – MLOps
Sessional Examination, Feb 2026

Total Marks: 50 Time: 120 minutes

Roll No. 25MCD005 Supervisor's initial with date

Instructions:
1. Attempt all questions.
2. Figures to the right indicate full marks.
3. Draw neat sketches wherever necessary.
4. Assume suitable data wherever necessary and specify clearly.

Q 1 (CO 3) (BL 4) Analyse challenges in deploying & managing ML Models. Discuss in detail. [08]

Q 2 (CO 1) (BL 2) Assume that we have a folder named Demo. We have files f1.txt, f2.txt, f3.txt and f4.txt inside it. After opening Git Bash in Demo, if we run the following commands in sequence, what will the output and the working directory (WD) status be after **each command**? [12]

```
git init
git status
git add f2.txt f3.txt f4.txt
git status
git commit -m "first commit"
git status
rm f3.txt
git status
git add f3.txt
git status
git commit -m "second commit"
git status
git restore --source=hash1 .
git status
git restore --source=hash2 .
git status
```

Q 3 (CO 3) (BL 4) Analyze key stages in the MLOps life cycle. Explain the role and importance of each stage. Which are the tools useful at various stages of the MLOps lifecycle? [10]

Q 4 (CO 3) (BL 3) Write a code to train and save an ML model for iris flower classification. Also, write complete code for a simple web application (HTML, Python, and configuration files) that serves this trained model. Use Flask as the backend. How can we deploy this application using production servers and a reverse proxy? How can we ensure that the web application serves static files efficiently, balances load using multiple application servers, and supports sticky sessions? Show required configuration. [20]