

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2023**

PROJECT MANAGEMENT AND SOFTWARE ENGINEERING

[Maximum Marks: **100**]

[Time: **3 Hours**]

PART-A

[Maximum Marks: **10**]

I. (Answer *all* questions in one or two sentences. Each question carries **2** marks)

1. Write any four importance of software.
2. List any four Symbols used in DFD.
3. Explain any two goal of testing phase.
4. Differentiate Verification and Validation.
5. List the Resources associated with a software project which can be managed. (5 x 2 = 10)

PART-B

[Maximum Marks: **30**]

II. (Answer *any five* of the following questions. Each question carries **6** marks)

1. What are the advantages and disadvantages of classical waterfall model over other models?
2. Explain Object Oriented Design complexity metrics.
3. Write about the programming principles and coding guidelines.
4. Explain the different levels of testing.
5. List and explain the principles of Agile model.
6. Explain about CMMI with its levels.
7. Describe the software design concepts. (5 x 6 = 30)

PART-C

[Maximum Marks: **60**]

(Answer *one* full question from each Unit. Each full question carries **15** marks)

UNIT – I

- III. a. Explain Iterative software development model. (7)
- b. Write about Prototyping software development model. (8)

OR

- IV. a. Describe the different phases of software development. (10)
- b. Explain Spiral software development model. (5)

UNIT – II

- V. Define Cohesion and Coupling. List and explain several levels of Cohesion and Coupling. (15)

OR

- VI. Write about the needs, Characteristics and Structure of SRS document. (15)

UNIT- III

- VII. a. Differentiate White box and Black box testing. (7)
- b. List and explain different types of White box and Black box testing. (8)

OR

- VIII. a. What are the activities and roles involved in code Inspection? (8)
- b. Describe Unit testing with its objectives and advantages. (7)

UNIT - IV

- IX. How the Risk can be Identified, Mitigated and Monitored. (15)

OR

- X. a. Explain about the software configuration management plan. (7)
- b. Write about the main activities involved in software quality management. (8)
