

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3161605****Date:01/06/2022****Subject Name:Software Engineering****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

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|------------|---|-----------|
| <b>Q.1</b> | (a) What is meant by Software and Software Engineering?   | <b>03</b> |
|            | (b) Discuss merits and demerits of Waterfall model.   | <b>04</b> |
|            | (c) What is the importance of Process Model in development of Software System? Discuss Spiral Model in detail.  | <b>07</b> |
| <b>Q.2</b> | (a) Define agile process .Give any two agile principles.  | <b>03</b> |
|            | (b) Describe FOUR Ps for Project Management.  | <b>04</b> |
|            | (c) Explain Scrum with its advantages and disadvantages.  | <b>07</b> |
|            | <b>OR</b>   |           |
|            | (c) Explain Extreme Programming (XP) in detail.   | <b>07</b> |
| <b>Q.3</b> | (a) What are the characteristics of good SRS document?  | <b>03</b> |
|            | (b) How the activity diagrams are useful in eliciting the requirements of software system?  | <b>04</b> |
|            | (c) Compute function point value for a project with the following domain characteristics:<br>No. of I/P = 30, No. of O/P = 62 , No. of user Inquiries = 24<br>No. of files = 8 , No. of external interfaces = 2 . Assume that all the complexity adjustment values are average. | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.3</b> | (a) Discuss the use of Data dictionaries in analysis modelling.   | <b>03</b> |
|            | (b) What are the tasks performed in requirement engineering?  | <b>04</b> |
|            | (c) Discuss about COCOMO model for software estimation.   | <b>07</b> |
| <b>Q.4</b> | (a) Describe golden rules of User Interface Design.   | <b>03</b> |
|            | (b) What is the importance of software design? List out various design principles of good software design.  | <b>04</b> |
|            | (c) What is testing? Explain the different levels of testing.   | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.4</b> | (a) What is DevOps?   | <b>03</b> |
|            | (b) What is architectural design? Enlist different style and patterns of architecture.  | <b>04</b> |
|            | (c) Discuss the concepts of Cohesion and Coupling in detail.  | <b>07</b> |
| <b>Q.5</b> | (a) Explain Formal Technical Review.  | <b>03</b> |
|            | (b) Compare white box and black box testing.  | <b>04</b> |
|            | (c) Discuss five-level of SEI-CMM   | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.5</b> | (a) What is software quality?   | <b>03</b> |
|            | (b) What is software maintenance? Describe different types of maintenance.  | <b>04</b> |
|            | (c) Briefly explain software configuration management   | <b>07</b> |

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