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

SOFTWARE ENGINEERING

[Maximum Marks: **75**] [Time: **3** Hours]

PART-A

I. Answer *all* the following questions in one word or one sentence. Each question carries *'one'* mark.

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1.	List any two ethical responsibilities you must have if you are a professional engineer.	M1.01	R
2.	Define software process.	M1.02	R
3.	What is a prototype?	M1.10	R
4.	List any two advantages of pair programming in context with extreme programming.	M2.06	R
5.	Which is the person who is responsible for Scrum meeting?	M2.07	R
6.	Name two classification of system requirements.	M3.10	R
7.	What is the function of use-case in use-case modelling?	M3.05	R
8.	Name the model that shows how the system interacts with its environment.	M4.01	R
9.	Define Unit testing.	M4.06	R

PART-B

II. Answer any *eight* questions from the following. Each question carries *'three'* marks.

(8 x 3 = 24 Marks)

		Module Outcome	Cognitive level
1.	Explain the stages of integration and configuration in process models for reuse-based development?	M1.05	U
2.	How is software validation done with respect to testing?	M1.08	R
3.	Compare agile approach and plan driven approach?	M2.01	U
4.	Summarize the advantages of refactoring in agile software development compared with incremental development?	M2.04	U
5.	Explain the problems occurred by using agile approach in large long-lifetime systems that are developed by software companies.	M2.08	U
6.	Show the context of Mentcare system by using appropriate system models.	M3.04	R
7.	Illustrate the generalization technique to manage complexity in structural models?	M3.06	U
8.	How system context models and interaction models present complementary views of relationship between a system and its environment?	M4.02	R
9.	What are the important issues of implementation in software engineering?.	M4.05	R
10.	What are the three types of user testing?	M4.10	R

PART-C

Answer all questions from the following. Each question carries *'seven'* marks.

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level
III.	Explain waterfall model derived from engineering process models.	M1.03	U
	OR		
IV.	Illustrate the activities used during the design process of software.	M1.07	U
V.	Show the incremental development model with the help of a neat diagram.	M1.04	R
	OR		
VI.	Relate the levels in process maturity model used for improvement of a process.	M1.11	R
VII.	Outline the practices of Extreme programming that reflect the principles of agile manifesto.	M2.03	U
	OR		
VIII.	Explain the key features of testing used in Extreme Programming.	M2.05	U
IX.	Explain the guidelines used in specifying the requirements with the help of natural language.	M3.02	U
	OR		
X.	Explain the types of abstract models recommended by Model-Driven architecture.	M3.08	U
XI.	Summarize the different types of checks to be carried out on the requirement validation process.	M3.03	U
XII.	**OR** Explain the fundamental architectural views that can be linked with common use case.	M3.10	U
XIII.	Illustrate sequence diagram for showing the interactions that take place in a weather station.	M4.03	U
	OR		
XIV.	Summarize component testing and also find out the interface errors occurred during testing.	M4.07	U

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