QP Code: RN23MCA025 | Reg. No | | | | | | | | | | | AY 23

GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR
(GIET UNIVERSITY)

M.C.A (Third Semester) Regular Examinations, November – 2024

MCA 23303 – Software Engineering

(MCA)

Time: 3hrs | Maximum: 60 Marks

(The figures in the right-hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions	CO #	Blooms Level
a. Describe V model with a neat diagram. What is the significance of using V model?	CO1	K2
b. Differentiate between functional and non-functional requirement. What is the importance of documenting requirement?	CO2	K4
c. Differentiate between activity diagram and sequence diagram.	CO3	K4
d. Differentiate between validation and verification.	CO4	K4
e. Describe importance of risk management in software development.	CO5	K2

PART – B **(10 x5=50 Marks)**

Answer ***ALL*** questions	Marks	CO #	Blooms Level
2. a. Briefly explain different stages of SDLC model with diagram. What is the importance of life cycle model?	5	CO1	K2
b. Describe COCOMO model. Differentiate between organic, embedded & semidetached software.	5	CO1	K2
(OR)			
c. Describe spiral model with a neat diagram. Why spiral model is used?	5	CO1	K2
d. Write the purpose of Software Engineering Institution Capability Maturity Model. Briefly describe all five levels of it.	5	CO1	K1
3.a. Describe characteristic and components of SRS. What is the importance of SRS documentation?	5	CO2	K2
b. Explain Requirement Engineering process describing each of its stages briefly.	5	CO2	K2
(OR)			
c. Develop requirement specification for library management system.	5	CO2	K3
d. Describe CASE tool. Write down advantages of using CASE tool.	5	CO2	K2
4.a. Differentiate between structural view & behavioural view of a system. Describe briefly about the diagrams used under each category.	5	CO3	K4
b. Describe briefly about DFD. What is the importance of using DFD? Develop DFD model (level 0, level 1, level 2) for hotel management system.	5	CO3	K2
(OR)			

c.	Describe about software design. Explain abstraction & modularization.	5	CO3	K2
d.	Illustrate the concept of cohesion and coupling. Describe briefly the different identifiable stages of cohesion & coupling from most desirable to least desirable.	5	CO3	K2
5.a.	Explain white box testing approach explaining each of its strategies.	5	CO4	K2
b.	Write a short note on integration testing approach explaining each of its stages.	5	CO4	K1
	(OR)			
c.	Describe different metrics which are used for analysis model, source code, design model, testing & maintenance.	5	CO4	K2
d.	What do you understand by the art of Debugging? Describe briefly why driver & stub modules are being used?	5	CO4	K2
6.a.	Compare and contrast different life cycle models with their advantages & limitations.	5	CO1	K4
b.	Define LOC & FP metrics. Why size estimation is important?	5	CO1	K2
	(OR)			
c.	Compare and contrast black box testing and white box testing approaches each with their advantages & limitations.	5	CO4	K4
d.	Discuss the importance of maintaining quality in software development. Explain software quality assurance, software reliability & ISO 9000 quality standards.	5	CO5	K2

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