2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

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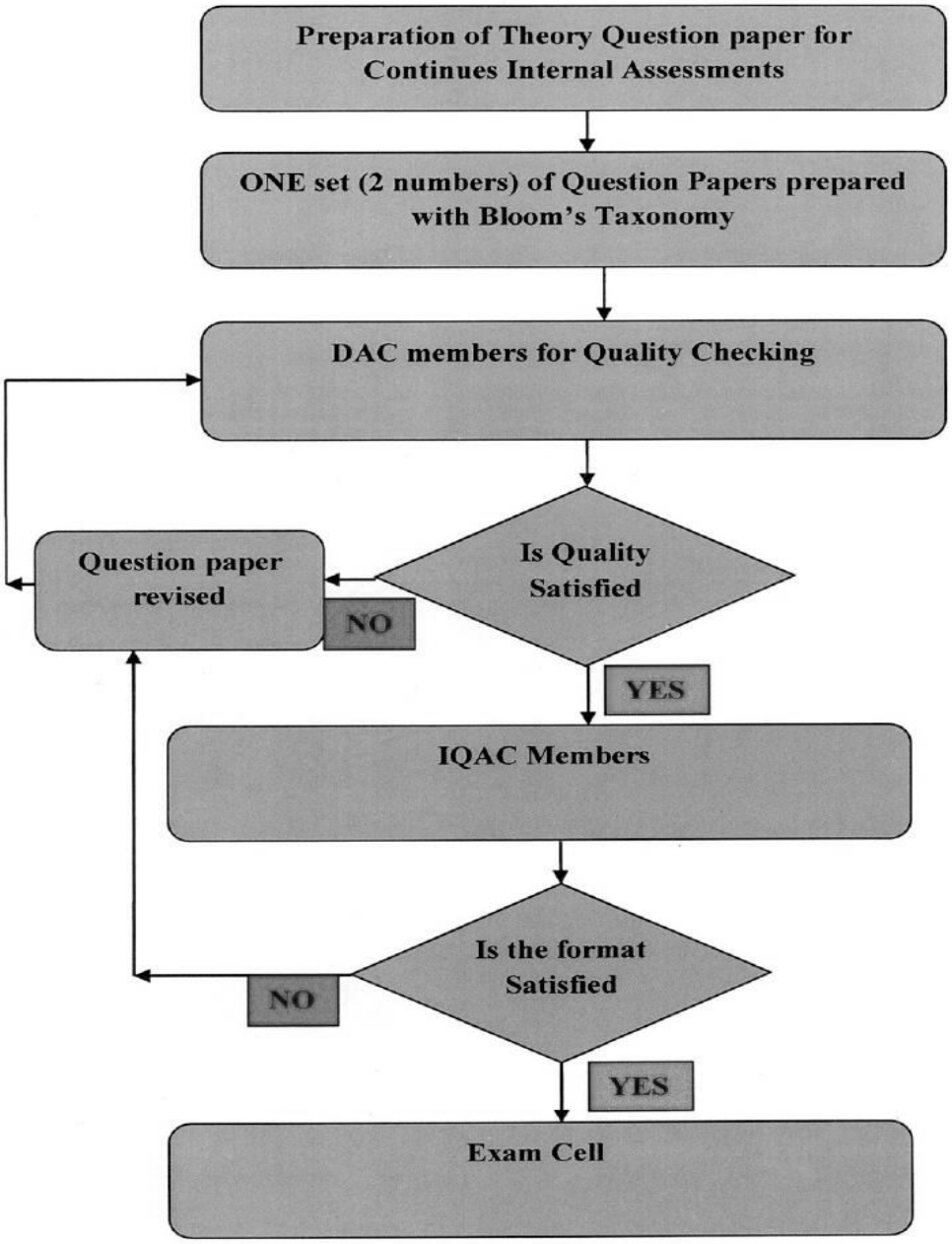
1. Flow chart of checking quality of question paper



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2.Academic Calendar: 2023-2024 EvenSemester

JANUARY 2024/ HIJRI 1445

Date	Day	W days	Particulars
1	MON		NEW YEAR – HOLIDAY
2	TUE		
3	WED		
4	THU		
5	FRI		
6	SAT		HOLIDAY
7	SUN		HOLIDAY
8	MON		
9	TUE		
10	WED		
11	THU		
12	FRI		
13	SAT		HOLIDAY
14	SUN		BHOGI - HOLIDAY
15	MON		PONGAL - HOLIDAY
16	TUE		THIRUVALLUVAR DAY - HOLIDAY
17	WED		UZHAVAR THIRUNAL - HOLIDAY
18	THU		
19	FRI		
20	SAT		HOLIDAY
21	SUN		HOLIDAY
22	MON	1	Commencement of Classes for (UG) III & IV Year
23	TUE	2	
24	WED	3	
25	THU		THAIPUSAM HOLIDAY
26	FRI		REPUBLIC DAY HOLIDAY
27	SAT		HOLIDAY
28	SUN		HOLIDAY
29	MON	4	
30	TUE	5	
31	WED	6	

January month total working days - Days **Civil ECE EEE Mech CSE**

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(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)
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(Recognized by UGC under section 2(f) & 12(B) of UGC Act, 1956)
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FEBRUARY 2024 / HIJRI 1445

Date	Day	W days	Particulars
1	THU	7	
2	FRI	8	
3	SAT		HOLIDAY
4	SUN		HOLIDAY
5	MON	9	
6	TUE	10	
7	WED	11	
8	THU	12	
9	FRI	13	
10	SAT		Holiday for Students, Working day for staff members
11	SUN		HOLIDAY
12	MON	14	
13	TUE	15	
14	WED	16	
15	THU	17	
16	FRI	18	
17	SAT		HOLIDAY
18	SUN		HOLIDAY
19	MON	19	
20	TUE	20	
21	WED	21	
22	THU	22	
23	FRI	23	
24	SAT		Holiday for Students, Working day for staff members
25	SUN		HOLIDAY
26	MON	24	**Cycle Test - I**
27	TUE	25	**Cycle Test - I**
28	WED	26	**Cycle Test - I**
29	THU	27	**Cycle Test - I**

February month total working days - Days **Civil** ECE EEE Mech **CSE**

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MARCH 2024 / HIJRI 1445

Date	Day	W days	Particulars
1	FRI	28	Cycle Test - I
2	SAT		HOLIDAY
3	SUN		HOLIDAY
4	MON	29	Cycle Test - I
5	TUE	30	
6	WED	31	
7	THU	32	
8	FRI	33	
9	SAT		Holiday for Students, Working day for staff members
10	SUN		HOLIDAY
11	MON	34	
12	TUE	35	
13	WED	36	
14	THU	37	
15	FRI	38	
16	SAT		HOLIDAY
17	SUN		HOLIDAY
18	MON	39	
19	TUE	40	
20	WED	41	
21	THU	42	
22	FRI	43	
23	SAT		Holiday for Students, Working day for staff members
24	SUN		HOLIDAY
25	MON	44	
26	TUE	45	
27	WED	46	
28	THU	47	
29	FRI		GOOD FRIDAY - HOLIDAY
30	SAT		HOLIDAY
31	SUN		HOLIDAY

March month total working days = Days **Civil ECE EEE Mech CSE**

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APRIL 2024 / HIJRI 1445

Date	Day	W Days	Particulars
1	MON	48	**Cycle Test - II**
2	TUE	49	**Cycle Test - II**
3	WED	50	**Cycle Test - II**
4	THU	51	**Cycle Test - II**
5	FRI	52	**Cycle Test - II**
6	SAT	53	**Cycle Test - II**
7	SUN		HOLIDAY
8	MON	54	
9	TUE		**TELUGU NEW YEAR - HOLIDAY**
10	WED		**RAMZAN-HOLIDAY**
11	THU		**RAMZAN-HOLIDAY**
12	FRI		**RAMZAN-HOLIDAY**
13	SAT		**RAMZAN-HOLIDAY**
14	SUN		**TAMIL NEW YEAR- HOLIDAY**
15	MON	55	
16	TUE	56	
17	WED	57	
18	THU	58	
19	FRI	59	
20	SAT		HOLIDAY
21	SUN		**MAHAVIR JAYANTI - HOLIDAY**
22	MON	60	
23	TUE	61	
24	WED	62	
25	THU	63	**Model Exam**
26	FRI	64	**Model Exam**
27	SAT		Holiday for Students, Working day for staff members
28	SUN		HOLIDAY
29	MON	65	**Model Exam**
30	TUE	66	**Model Exam**

April month total working days = Days **Civil ECE EEE Mech CSE**

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APRIL 2024 / HIJRI 1445

Date	Day	W Days	Particulars
1	MON	48	**Cycle Test - II**
2	TUE	49	**Cycle Test - II**
3	WED	50	**Cycle Test - II**
4	THU	51	**Cycle Test - II**
5	FRI	52	**Cycle Test - II**
6	SAT	53	**Cycle Test - II**
7	SUN		HOLIDAY
8	MON	54	
9	TUE		**TELUGU NEW YEAR - HOLIDAY**
10	WED		**RAMZAN-HOLIDAY**
11	THU		**RAMZAN-HOLIDAY**
12	FRI		**RAMZAN-HOLIDAY**
13	SAT		**RAMZAN-HOLIDAY**
14	SUN		**TAMIL NEW YEAR- HOLIDAY**
15	MON	55	
16	TUE	56	
17	WED	57	
18	THU	58	
19	FRI	59	
20	SAT		HOLIDAY
21	SUN		**MAHAVIR JAYANTI - HOLIDAY**
22	MON	60	
23	TUE	61	
24	WED	62	
25	THU	63	**Model Exam**
26	FRI	64	**Model Exam**
27	SAT		Holiday for Students, Working day for staff members
28	SUN		HOLIDAY
29	MON	65	**Model Exam**
30	TUE	66	**Model Exam**

April month total working days = Days **Civil** ECE EEE **Mech** **CSE**

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MAY 2024 / HIJRI 1445

Date	Day	W days	Particulars
1	WED		**May Day - Holiday**
2	THU	67	**Model Exam**
3	FRI	68	**Last working day for III year and IV Year students**
4	SAT		HOLIDAY
5	SUN		HOLIDAY
6	MON		**Commencement of University Practical examination for III & IV Year**
7	TUE		
8	WED		
9	THU		
10	FRI		
11	SAT		Holiday for Students, Working day for staff members
12	SUN		HOLIDAY
13	MON		
14	TUE		
15	WED		**Commencement of University End Semester examination for III & IV Year**
16	THU		
17	FRI		
18	SAT		HOLIDAY
19	SUN		HOLIDAY
20	MON		
21	TUE		
22	WED		
23	THU		
24	FRI		
25	SAT		Holiday for Students, Working day for staff members
26	SUN		HOLIDAY
27	MON		
28	TUE		
29	WED		
30	THU		
31	FRI		

May month total working days - Days **Civil** ECE EEE **Mech** **CSE**

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3. Continuous Internal Assessment

3.1 Sample Question Bank of course Object Oriented Software Engineering

UNIT I				
Introduction to Software Engineering, Software Process, Perspective and Specialized Process Models – Introduction to Agility-Agile process-Extreme programming-XP Process-Case Study.				
Q.No.	**Question**	**Topic**	**BTL**	**Mark**
	Part A			
1.	Define a system and computer based system.	Introduction to Software Engineering	BTL-1	2
2.	Write the IEEE definition of software engineering.	Introduction to Software Engineering	BTL-2	2
3.	What is Software Engineering? /Define software engineering.	Introduction to Software Engineering	BTL-1	2
4.	What is Software? List the characteristics.	Introduction to Software Engineering	BTL-1	2
5.	What are two types of software products?	Software Process	BTL-1	2
6.	Mention the characteristics of software contrasting It with characteristics of hardware.	Introduction to Software Engineering	BTL-2	2
7.	Write any two software engineering challenges.	Introduction to Software Engineering	BTL-2	2
8.	Software doesn't wear out. Justify.	Introduction to Software Engineering	BTL-2	2
9.	What is software processes. / Distinguish between process and methods.	Software Process	BTL-2	2
10.	Define the terms product and process in software engineering.	Software Process	BTL-1	2
11.	Why software architecture is important in software process?	Software Process	BTL-2	2
12.	Draw Common Process Framework.	Software Process	BTL-2	2
13.	If you have to develop a word processing software product, what process model will you choose? Justify your answer.	Software Process	BTL-2	2
14.	Depict the relationship between work product, task, activity and system.	Software Process	BTL-2	2
15.	State the benefits and drawbacks of waterfall life cycle model for software development.	Perspective Process Models	BTL-1	2
16.	List two deficiencies in waterfall model. Which process model do you suggest to overcome each efficiency?	Perspective Process Models	BTL-2	2
17.	What are the pros and cons of Iterative software development models?	Perspective Process Models	BTL-2	2
18.	Which process model leads to software reuse? Why?	Perspective Process Models	BTL-2	2
19.	What are the phases encompassed in the RAD model?	Perspective Process Models	BTL-1	2
20.	What are the Drawbacks of rapid application development?	Perspective Process Models	BTL-1	2

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21.	Define Evolutionary Process Model.	Perspective Process Models	BTL-1	2
22.	Compare prototyping approaches in a software process.	Perspective Process Models	BTL-3	2
23.	What are the advantages of prototyping model?	Perspective Process Models	BTL-2	2
24.	What is meant by blocking states in linear sequential model?	Perspective Process Models	BTL-2	2
25.	How does "Project Risk" factor affect the spiral model of software development?	Perspective Process Models	BTL-2	2
	Part – B			
1.	Define software life cycle. List all life cycle models and explain all the models in detail with neat diagram. (13)	Perspective Process Models	BTL-1	13
2.	Describe about agile modeling in details.	Perspective Process Models	BTL-1	13
3.	Discuss the Extreme Programming Process.	Extreme programming	BTL-2	13
4.	What is agility in the context of software engineering work?	Agile process	BTL-2	13
5.	(i)Compare the life cycle models based on their distinguishing factors, strengths and weaknesses.(7) (ii)Discuss the prototyping model, what is the effect of designing prototype on the overall cost of the software project?(6)	Perspective Process Models	BTL-4	13
6.	What is process model? Describe the process model that you would choose to manufacture a car. Explain by giving suitable reasons.	Perspective Process Models	BTL-2	13
7.	Explain the component based software development model with a neat sketch.	Perspective Process Models	BTL-1	13
8.	What are some of the issues that leads to an XP debate?	Extreme programming	BTL-2	13
9.	Describe the various Evolutionary process models with neat diagram.	Perspective Process Models	BTL-2	13
10.	List the principles of agile software development.	Agile process	BTL-2	13
	Part C			
1.	For the scenario describe below, which life cycle model would choose? Give the reason why you choose this model. You are interacting with the MIS department of a very large oil company with multiple departments. They have a complex legacy system. Migrating the data from this legacy system is not easy task and would take a considerable time. The oil company is very particular about processes, acceptance criteria and legal contracts.	Perspective Process Models	BTL-5	15
2.	Describe at least one scenario where. 1. RAD model would be applicable and not the waterfall model. 2. Waterfall model is preferable to all other models	Perspective Process Models	BTL-4	15
3.	Assume that you are the technical manager of a software	Extreme	BTL-5	15

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	development organization. A client approached you for a software solution. The problems stated by the client have uncertainties which lead to loss if it not planned and solved. Which software development model you will suggest for this project – justify. Explain that model with its pros and cons with neat sketch.	programming		
4.	Explain how waterfall model is applicable for the development of the following systems: ***a)*** University accounting system ***b)*** Interactive system that allows railway passengers to find time and other information for the terminals installed in the station.	Perspective Process Models	BTL-4	15
5.	Provide three examples of software projects that would be amenable to incremental model. Be specific.	Perspective Process Models	BTL-4	15

UNIT II

Requirement analysis and specification – Requirements gathering and analysis – Software Requirement Specification – Formal system specification – Finite State Machines – Petrinets – Object modelling using UML – Use case Model – Class diagrams – Interaction diagrams – Activity diagrams – State chart diagrams – Functional modelling – Data Flow Diagram- CASE TOOLS.

Q.No.	Question	Topic	BTL	Mark
	Part A			
1.	Write distinct steps in requirement engineering process.	Requirement analysis and specification	BTL-1	2
2.	Why SRS must be traceable? What is traceability requirement?	Software Requirement Specification	BTL-1	2
3.	What are non-functional requirements for a software?	Requirement analysis and specification	BTL-1	2
4.	What is the outcome of feasibility study?	Requirement analysis and specification	BTL-1	2
5.	Differentiate data flow diagram and state transition diagram.	Finite State Machines	BTL-1	2
6.	Why it is so difficult to gain a clear understanding of what customer wants?	Requirements gathering	BTL-2	2
7.	Identify ambiguities and omissions in the functional requirements. What questions would you ask to clarify these functional requirements?	Requirement analysis	BTL-2	2
8.	List out requirements engineering.	Requirement analysis	BTL-2	2
9.	Define functional and non- functional requirements.	Requirement analysis	BTL-1	2
10.	Give two examples of non functional requirements.	Requirement analysis	BTL-1	2
11.	What is the need for feasibility analysis?	Requirement analysis	BTL-2	2
12.	Define feasibility study and list the types.	Requirement analysis	BTL-1	2
13.	List the characteristics of good SRS.	Software Requirement Specification	BTL-2	2
14.	What is the purpose of petrinet?	Petrinets	BTL-2	2
15.	Differentiate between normal and exciting requirements.	Object modelling using UML	BTL-1	2
16.	Draw a use case diagram for an online shopping which provide provisions for registering, authenticating the customers and also for online payment through any payment gateway like paypal.	Use case Model	BTL-2	2
17.	Define Quality function development(QDF)	Object modelling using UML	BTL-1	2
18.	Draw the context flow graph of a ATM automation syste			
19.	State two advantages of using petri nets.			
20.	How does data flow diagram help in design of s			

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	system?			
21.	Define UML.	UML	BTL-1	2
22.	What are all the various types of diagram that can be drawn in UML?	UML	BTL-2	2
23.	When to use usecase diagram?	Use case Model	BTL-2	2
24.	Define activity diagram?	Activity diagram	BTL-1	2
25.	What is the use of system sequence diagram?	System sequence diagram	BTL-1	2
	Part – B			
1.	Explain in detail about the functional and non functional requirements.	Requirement analysis and specification	BTL-1	13
2.	Explain the software requirement engineering process with neat diagram.	Requirements gathering and analysis	BTL-1	13
3.	Explain the feasibility studies. What are the outcomes? Does it have implicit or explicit effects on the software requirement collection?	Requirement analysis and specification	BTL-1	13
4.	What is requirements elicitation? Briefly describe the various activities performed in requirement elicitation phase with an example of a watch system that facilitates to set time and alarm.	Requirements gathering and analysis	BTL-2	13
5.	What are the components of the standard structure for the software requirement document? Explain in detail. (Or) Show the template of IEEE standard software requirement document.	Software Requirement Specification	BTL-1	13
6.	Explain Petri Net in details. Draw a Petri Net that depicts the operation of an "Automated Teller Machine". State the functional requirements you are considering.	Petrinets	BTL-6	13
7.	Explain with an example, how use case modeling is used to describe functional requirements. Identify the actors, scenarios and use cases for example.	Use case Model	BTL-2	13
8.	Describe the strategies used to identify the conceptual classes. Describe the steps to create a domain model used for representing the conceptual classes.	Activity diagrams	BTL-1	13
9.	What are system sequence diagram? What is the relationship between SSDs and Use cases? Explain with an example.	UML	BTL-3	13
10.	Explain the state chart diagram with a suitable example. Also define its components and use.	State chart diagrams	BTL-4	13
	Part C			
1.	Develop an online railway reservation system, which allows the user to select route, book/cancel tickets using net banking/ credit /debit cards. The site also maintains the history of the passengers. For the above system, list and draw the use case scenario and model the above specification.	Use case Model	BTL-6	15

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	requirement. A coffee vending machine serves coffee to customers. A customer can choose a type of coffee among a list often options, supply the amount required and get served. Each coffee is prepared by adding units of hot water, coffee powder, milk and sugar. The recipe for each coffee is stored. Develop a usecase diagram, Activity diagram and Sequence diagram.	diagrams		
3.	Model a class diagram for "Banking System" State the functional requirements you are considering.	Class diagram	BTL-6	15
4.	Draw Sequence and collaboration diagram for online course reservation system.	Sequence diagram	BTL-6	15
5.	Develop the process of ordering a pizza over the phone. Draw the use case diagram and also sketch the activity diagram representing each step of the process, from the moment you pick up the phone to the point where you start eating the pizza. Include activities that others need to perform. Add exception handling to the activity diagram you developed. Consider at least two exceptions (e.g. delivery person wrote down wrong address, deliver person brings wrong pizza).	Use case Model	BTL-6	15

UNIT III

Software design – Design process – Design concepts – Coupling – Cohesion – Functional independence – Design patterns – Model-view-controller – Publish-subscribe – Adapter – Command – Strategy – Observer – Proxy – Facade – Architectural styles – Layered - Client Server - Tiered - Pipe and filter- User interface design-Case Study.

Q.No.	Question	Topic	BTL	Mark
	Part A			
1.	Define software design.	Software design	BTL-1	2
2.	Describe software design process.	Design process	BTL-2	2
3.	What are the various models produced by the software design process?	Software design	BTL-2	2
4.	What are the Characteristics of Good Design? What are the steps involved in design stage of a software?	Software design	BTL-1	2
5.	What is the quality attributes of software design? Mention the design quality model proposed by Hewlett Packard.(or) Write a note on FURPS model of design quality.(or) What are the design qualities attributes 'FURPS" meant?	Software design	BTL-2	2
6.	Define software design concept.	Software design	BTL-1	2
7.	What are certain issues that are considered while designing the software?	Design process	BTL-2	2
8.	Define data abstraction.	Design concepts		2
9.	Name the levels of abstraction, which are in practice for the design.	Design concepts	BTL-2	2
10	Define Modularity.	Design concepts		2
11	Modularity is the single attribute of the software that allows a program to be intellectually manageable" - How this is true?	Design concepts	BTL-3	2
12	How can we evaluate a design method to determine if it will lead to effective modularity?	Design concepts	BTL-3	2
13	Why modularity is important in software projects?	Design concepts	BTL-3	2
14	State the guidelines for modular design.	Design concepts	BTL-3	2
15	Define Architecture.	Design concepts	BTL-1	2
16	What are the architectural design various system models can be used?	Design concepts	BTL-2	2
17	Define Refinement.	Design concepts	BTL-1	2
18	In what way abstraction differs from refinement?	Design concepts	BTL-1	2
19	Define Pattern.	Design patterns	BTL-1	2
20	Define Cohesion.	Cohesion	BTL-1	2
21	If a module has logical cohesion what kind of coupling is this module likely to have with others?	Coupling	BTL -2	2
22	What are the Different types of cohesion?	Cohesion	BTL-2	2
23	Define Coupling.	Coupling	BTL-1	2
24	What are the Various types of coupling?	Coupling	BTL-2	2
25	Define Refactoring.	Design concepts	BTL-1	2
	Part – B			
1.	Explain the following list of design concept a. Abstraction	Design concepts	BTL-1	5 4 4

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	b. Patterns c. Functional independence			
2.	a. Write short note on structural pattern. b. Write short note on adapter pattern.	Design patterns	BTL-2	7 6
3.	Describe the concept of coupling and cohesion.	Coupling & Cohesion	BTL-2	13
4.	Explain architecture styles of a. Client server b. Tiered architecture c. Layered architecture	Architectural styles	BTL-1	5 4 4
5.	Explain in detail about golden rules for user interface design.	User interface design	BTL-1	13
6.	Discuss about pipe and filter architectural pattern.	Pipe and filter	BTL-2	13
11.	Explain façade design patent with implementation.	Facade	BTL-3	13
12.	Explain strategy design pattern for any scenario with neat class diagram.	Design pattern	BTL-3	13
13.	With suitable example discuss command pattern.	Command	BTL-3	13
14.	Write a note on observer and proxy.	Observer, Proxy	BTL-2	13
	Part C			
1.	Explain user interface analysis and design.	User interface design	BTL-3	15
2.	Summarize characteristics of good design, quality guideline and quality attributes.	Design process	BTL-2	15
3.	Explain modularity concept in software design.	Design concepts	BTL-1	15
6.	Explain core activities involved in user interface design process with necessary block diagram.	User interface design	BTL-1	15

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UNIT IV				
Testing – Unit testing – Black box testing– White box testing – Integration and System testing– Regression testing – Debugging - Program analysis – Symbolic execution – Model Checking- Case Study				
Q.No.	**Question**	**Topic**	**BTL**	**Mark**
	Part A			
1.	What is software testing?	Testing	BTL-1	2
2.	List the objectives of testing.	Testing	BTL-2	2
3.	When do you stop testing? Justify your answer.	Testing	BTL-3	2
4.	Why testing is important?	Testing	BTL-2	2
5.	What are the principles of testing?	Testing	BTL-1	2
6.	What is test case?	Testing	BTL-1	2
7.	Define regression testing?	Regression testing	BTL-1	2
8.	Difference between testing and debugging.	Debugging	BTL-2	2
9.	Write short note on debugging techniques.	Debugging	BTL-1	2
10.	Why debugging is so difficult?	Debugging	BTL-3	2
11	Difference between black and white box testing.	Black box testing	BTL-2	2
12	What are the attributes of good test?	Testing	BTL-1	2
13	Define cyclomatic complexity.	White box testing	BTL-1	2
14	List the errors uncovered by black box testing.	Black box testing	BTL-3	2
15	Write the type of system test.	Integration and System testing	BTL-1	2
16	List the errors identified during unit testing.	Unit testing	BTL-3	2
17	Calculate cyclomatic complexity for the following program, int temp (a>b) temp a else temp b if (c>temp) temp=c return temp	White box testing	BTL-3	2
18	What are the classes of loops that can be used?	White box testing	BTL-1	2
19	Outline the need for system testing.	Integration and System testing	BTL-3	2
20	Difference between alpha testing and beta testing.	System testing	BTL-2	2
21	Mention the purpose of stubs and driver in testing?	Unit testing	BTL-3	2
22	Distinguish between verification and validation.	Testing	BTL-2	2
23	How will you test simple loop?	White box testing	BTL-3	2
24	What is static program analysis?	Program analysis	BTL-1	2
25	What is model checking?	Model Checking	BTL-1	2
	Part – B			
1.	Explain unit testing.	Unit testing	BTL-3	13

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2.	Explain equivalence portioning techniques with suitable example.	Black box testing	BTL-1	13
3.	Write short note on a. Regression testing b. Smoke testing	Regression testing	BTL-4	7 6
4.	Explain various systems testing strategies.	Integration and System testing	BTL-4	13
5.	Discuss about validation testing methods.	Integration and System testing	BTL-2	13
6.	Write about brute force and backtrack method in debugging techniques.	Debugging	BTL-2	13
7.	With suitable example explain boundary value analysis.	Black box testing	BTL-3	13
8.	Write short note on symbolic execution.	Symbolic execution	BTL-1	13
9.	Explain how program analysis can be carried out?	Program analysis	BTL-2	13
10.	With an example explain loop testing.	White box testing	BTL-3	13
	Part C			
1.	Describe black box testing.	Black box testing	BTL-1	15

2.	Consider the pseudocode for simple subtraction given below
	Program 'simple subtraction'
	Input (x,y)
	Output(y)
	If x>y then DO
	x-y=z
	else y-x=z
	endif
	output(z)
	output 'End Program'
	perform the basic path testing
		White box testing	BTL-5	15

3.	Discuss about integration testing technique with example.	Integration and System testing	BTL-2	15
4.	Write about testing objective, principles? Justify why testing is important.	Testing	BTL-5	15
5.	Write a program for sorting of n numbers. Draw the flowchart, flowgraph and find cyclomatic complexity.	White box testing	BTL-5	15

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UNIT V				
Software Project Management- Software Configuration Management - Project Scheduling- DevOps: Motivation-Cloud as a platform-Operations- Deployment Pipeline:Overall Architecture Building and Testing-Deployment- Tools- Case Study				
Q.No.	**Question**	**Topic**	**BTL**	**Mark**
	Part A			
1.	Write a short note on empirical estimation models.	Software Project Management	BTL-1	2
2.	What is the standardization for the software metrics?	Software Project Management	BTL-1	2
3.	What are project indicators and how do they help a project manager?	Software Project Management	BTL-1	2
4.	Define basic equation for the effort estimation models.	Software Project Management	BTL-1	2
5.	List out few process and product metrics.	Software Project Management	BTL-1	2
6.	Define software measure.	Software Project Management	BTL-2	2
7.	Distinguish between direct and indirect measures of metrics.	Software Project Management	BTL-2	2
8.	Differentiate between size oriented and function oriented metrics.	Software Project Management	BTL-2	2
9.	How to measure the function point (FP)?	Project Scheduling	BTL-2	2
10.	List out the different approaches to size of the software.	Project Scheduling	BTL-1	2
11.	Mention difference between organic mode and embedded mode in cocomo model.	Project Scheduling	BTL-2	2
12.	Name the metrics for specifying non-functional requirements.	Project Scheduling	BTL-3	2
13.	An organic software occupies 15,000 LOC. How many programmers are needed to complete?	Project Scheduling	BTL-2	2
14.	Differentiate between size oriented and function oriented metrics.	Project Scheduling	BTL-3	2
15.	State the advantages and disadvantages in LOC based cost estimation.	Project Scheduling	BTL-2	2
16.	What is scheduling?	Project Scheduling	BTL-2	2
17.	State the importance of scheduling activity in project management.	Project Scheduling	BTL-1	2
18.	What is error tracking?	Project Scheduling	BTL-2	2
19.	What are the issues in measuring the software size using LOC as metric?	Project Scheduling	BTL-1	2
20.	List a few process and project metrics.	Project Scheduling	BTL-1	2
21.	How productivity and cost is are related to function points?	Project Scheduling	BTL-2	2

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22.	What are the different types of productivity estimation measures?	Project Scheduling	BTL-2	2
23.	List out the principles of project scheduling.	Project Scheduling	BTL-2	2
24.	List two advantages of COCOMO model.	Project Scheduling	BTL-2	2
25.	If team A found 342 errors prior to the release of software and team B found 182 errors. What additional measures and metrics are needed to find out if the teams have removed the errors effectively?	Project Scheduling	BTL-2	2
26.	What is EVA?	Project Scheduling	BTL-2	2
27.	Bring the importance between COCOMO I and II	Project Scheduling	BTL-1	2
28.	State any two project scheduling techniques.	Project Scheduling	BTL-1	2
	Part – B			
1.	Explain the role of people, product and process in project management.	Software Project Management	BTL-1	13
2.	(i)What are the categories of stakeholders? What are the characteristics of effective project manager? (ii)Explain W5HHH principle.	Project Scheduling	BTL-1	13
3.	Explain the project estimation in detail with the example.	Project Scheduling	BTL-2	13
4.	Discuss the process of function point analysis. Explain function point analysis with sample cases for components of different complexity.	Project Scheduling	BTL-2	13
5.	Describe in detail COCOMO model for software cost estimation. Illustrate considering a suitable example.	Project Scheduling	BTL-4	13
6.	Explain in detail about project scheduling with the example.	Project Scheduling	BTL-2	13
7.	Explain the overall architecture of DevOps?	DevOps:	BTL-1	13
8.	List the features of LOC and FP based estimation models. Compare the two models and list the advantages of one over other.	Project Scheduling	BTL-2	13
9.	Discuss how Make/Buy decision helps to track a project quantitatively.	Project Scheduling	BTL-2	13
10.	What is configuration management repository? Discuss role and features of SCM repository.	Software Project Management	BTL-1	13
	Part C			
1.	Compute the function point FP for a payroll program that reads a file of employees and file of information for the current month and prints cheques for all the employees. The program is capable of handling an interactive command to print an individually requested cheque immediately.	Project Scheduling	BTL-5	15
2.	Using COCOMO, estimate time required for the following: 1. A semi-detached model of software project of 2000 lines. 2. An embedded model of software of 30,000 lines. 3. An organic model of software of one lakh lines. 4. An organic model of software of 10 lakh lines.	Project Scheduling	BTL-4	15
3.	Suppose you have a budget cost of a project as	Project	BTL-5	15

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	Rs.9,00,000. The project is to be completed in 9 months. After a month, you have completed 10 percent of the project at a total expense of 1,00,000. The planned completion should have been 15 percent. You need to determine whether the project is on-time and on-budget? Use earned value analysis approach and interpret.	Scheduling		
4.	Suppose you have budget cost of a project $9,00,000. The project is to be completed in 9 months. After a month you have completed 10% of the project at the total expenses of $100000. The planned completion should have been 15%. You need to determine whether the project is on-time and on-budged? Use earned value analysis approach and interrupt.	Project Scheduling	BTL-4	15
5.	Suppose you are managing a software development project. The project is expected to be completed 8 month at the cost of $10000 per month. After 2 months you realize the project is 30% completed at the cost of $40000. You need to determine whether the project is on time and on budget after 2 months?	Project Scheduling	BTL-4	15

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SAMPLE EXAM QUESTION PAPER FROM QUESTION BANK

Roll No: | | | | | | | | |

M.I.E.T ENGINEERING COLLEGE
Tiruchirappalli

CYCLE TEST - I
Sixth Semester
Computer Science & Engineering [Sec: A&B]
CCS356-Object Oriented Software Engineering

Date: 26/02/2024 Session : FN
Time: 01.30 hrs Maximum: 50 marks

Answer ALL Questions

PART - A (5 X 2 = 10 marks)

Q.NO	Questions	Marks	CO	BL	PO
1.	Define SRS Document. Why SRS must be traceable?	2	CO2	L2	1
2.	Define functional requirement and nonfunctional requirement for software.	2	CO2	L2	1
3.	List any three characteristics of good SRS.	2	CO2	L1	1
4.	Define software, software engineering and software process.	2	CO1	L2	1
5.	List the two benefits of waterfall life cycle model for software development.	2	CO1	L1	1

PART- B (2 X 13 = 26 marks)

Q.NO	Questions	Marks	CO	BL	PO
6	(a) List the stakeholders and all types of functional and non-requirement for online train reservation.	13	CO2	L2	1
	Or				
	(b) Explain the following specification with diagram. (i) Inception. (ii) Elicitation. (iii) Elaboration. (iv) Negotiation.	13	CO2	L2	1

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	(Requirement engineering process)				
7	(a) What is layered technology? Explain the CMM model to access the organization level.	13	CO1	L3	1
	Or				
	(b) Explain the steps involved in waterfall model and increment model with diagram.	13	CO 1	L3	1

PART- C (1 X 14= 14 marks)

Q.NO	Questions	Marks	CO	BL	PO
8	(a) List various UML diagrams and explain the elements, advantages and disadvantages of each diagrams.	14	CO2	L2	1
	Or				
	(b) Explain the following UML diagram with one example. (i) Use case diagram (ii) Class diagram (iii) Interaction diagram	14	CO2	L2	1

BT LEVEL		CO1	CO2	CO3	CO4	CO5	CO6	%
Remember	Q. Nos	5	3	-	-	-	-	8
	Marks	2	2	-	-	-	-	
Understand	Q. Nos	4	1,2,6,8	-	-	-	-	64
	Marks	2	30	-	-	-	-	
Apply	Q. Nos	7	-	-	-	-	-	28
	Marks	14	-	-	-	-	-	
Analyze	Q. Nos	-	-	-	-	-	-	-
	Marks	-	-	-	-	-	-	
Total		18	32	-	-	-	-	100

DAC	IQAC Member

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3.2Assessment Test Instructions

SELVASHANTHI S <selvashanthi.s@miet.edu>

Cycle Test I and Cycle Test- II Time table-Reg

1 message

Exam Cell <examcell@miet.edu> Mon, Mar 25, 2024 at 4:57 PM
To: e.teaching@miet.edu, E.hod@miet.edu
Cc: principalengg@miet.edu

Sir / Madam,

Cycle Test I (II YEAR) and **Cycle Test-II** (III & IV YEAR) is planned to be conducted from 28.03.2024 to 06.04.2024 for the U.G students. Herewith we enclose the Time Table and Question paper Format for the same. The Subject handling faculty members are asked to prepare one set of question paper **(Category wise)** as per the given format along with the answer Key and submit the same to the department Exam cell Coordinator as a hard copy on or before **26.03.2024 (04.30 PM)** without fail.

Maximum Marks :50
Time:01.30 hrs FN: 09.30 am TO 11.00am
Kindly follow the mark allocation and question paper format as per the enclosed format.

CYCLE TEST- II (II & IV YEAR)

UNIT-III	UNIT-II
PART-A 3X2 =06	2X2 =04
PART-B 1X13 =13	1X13 =13
PART-C 1X14 =14	NIL
TOTAL = 33 Marks	TOTAL = 17Marks

CYCLE TEST-01 (II YEAR)
i

UNIT-I	UNIT-II
PART-A 3X2 =06	2X2 =04
PART-B 1X13 =13	1X13 =13
PART-C 1X14 =14	NIL
TOTAL = 33 Marks	TOTAL = 17Marks

Thanks,
Exam-Cell,
M.I.E.T Engineering College,
Trichy.

3 attachments

MODEL QP CT-1.doc
86K

CYCLE TEST 02 TT.pdf
3907K

CYCLE TEST 1 TT.pdf
3008K

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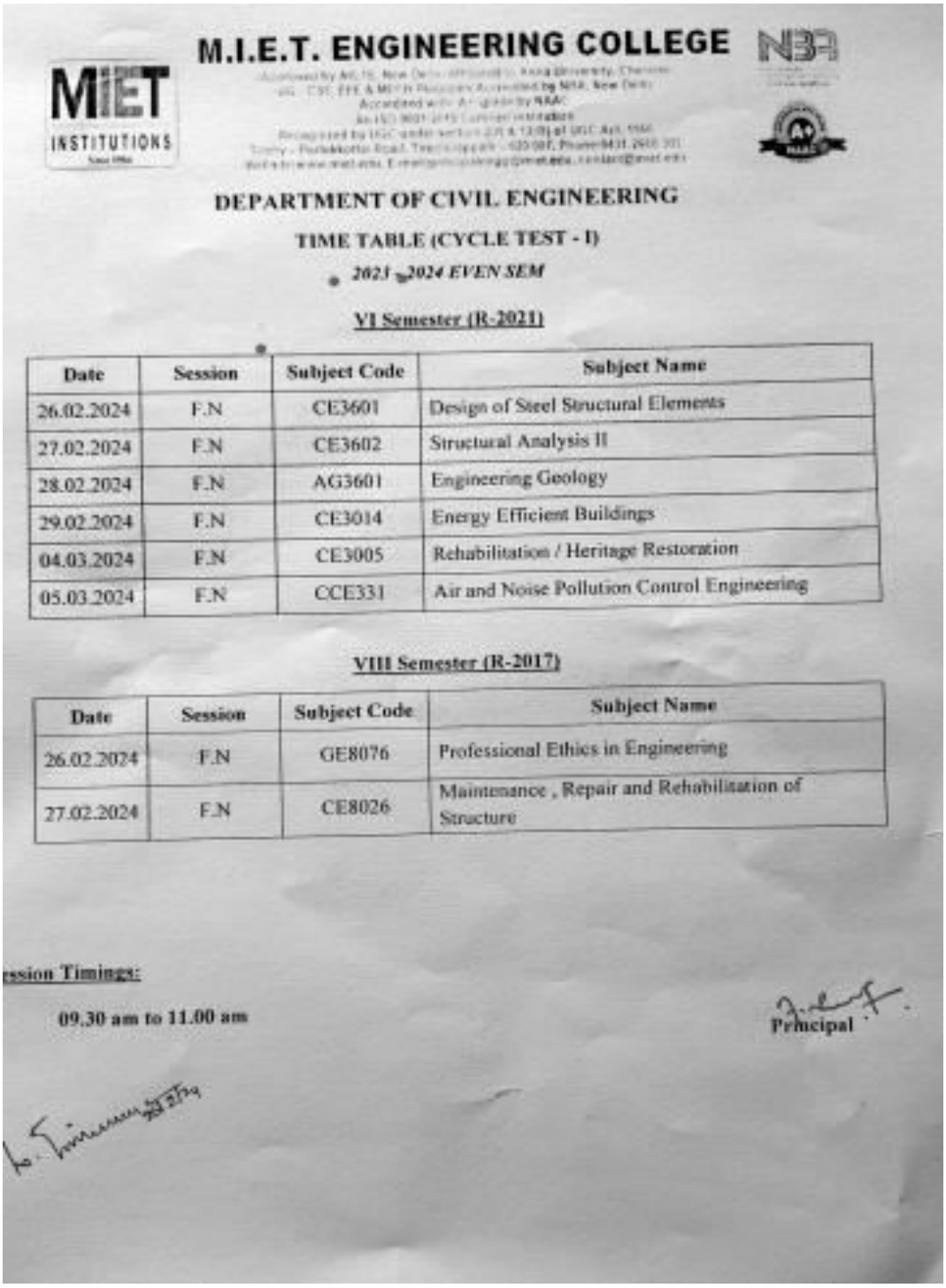
3.3Time Tablefor Cycle Test:



M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF CIVIL ENGINEERING

TIME TABLE (CYCLE TEST - I)

2023 – 2024 EVEN SEM

VI Semester (R-2021)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	CE3601	Design of Steel Structural Elements
27.02.2024	F.N	CE3602	Structural Analysis II
28.02.2024	F.N	AG3601	Engineering Geology
29.02.2024	F.N	CE3014	Energy Efficient Buildings
04.03.2024	F.N	CE3005	Rehabilitation / Heritage Restoration
05.03.2024	F.N	CCE331	Air and Noise Pollution Control Engineering

VIII Semester (R-2017)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	GE8076	Professional Ethics in Engineering
27.02.2024	F.N	CE8026	Maintenance , Repair and Rehabilitation of Structure

ession Timings:

09.30 am to 11.00 am

Principal

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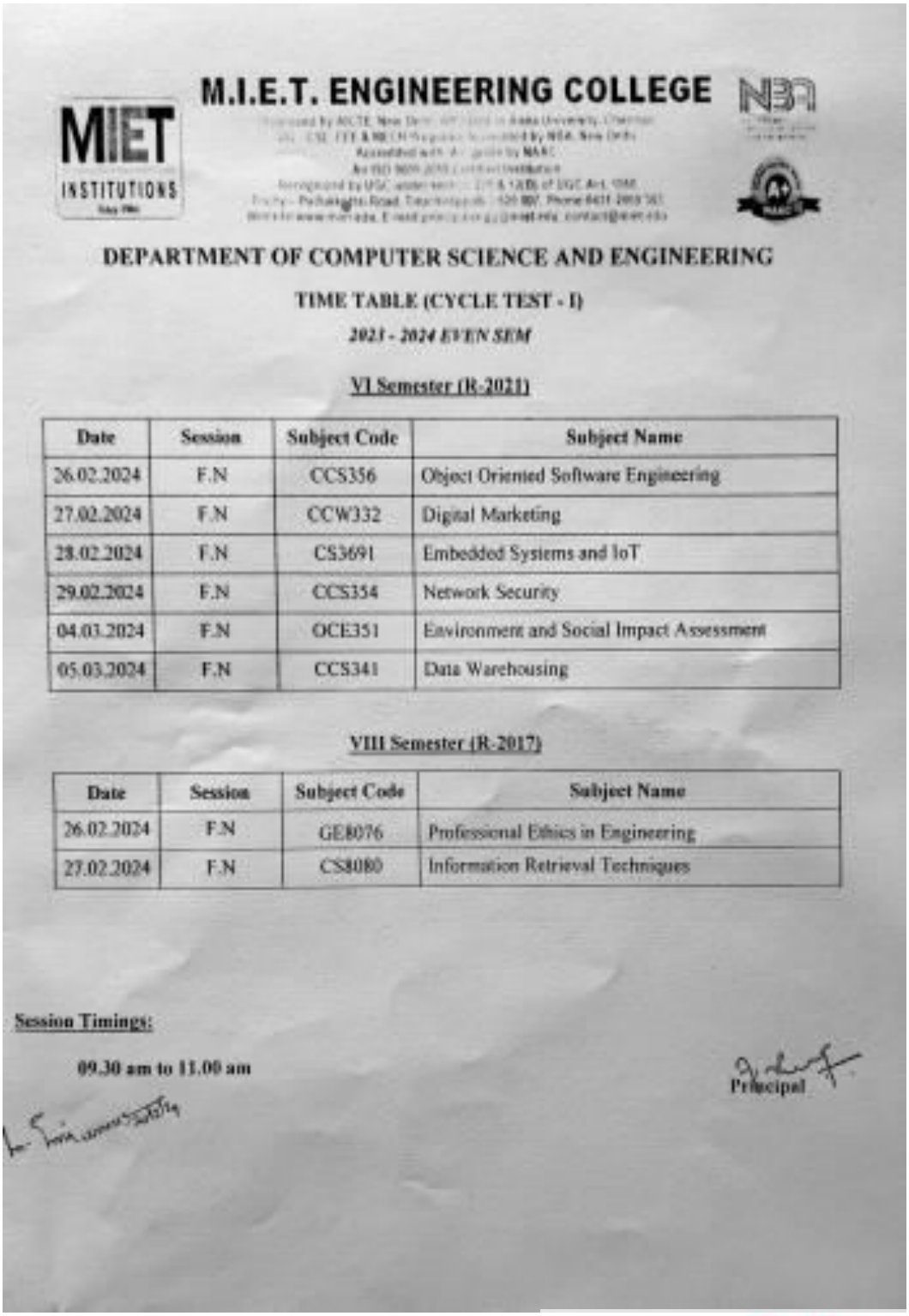

M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TIME TABLE (CYCLE TEST - I)

2023 - 2024 EVEN SEM

VI Semester (R-2021)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	CCS356	Object Oriented Software Engineering
27.02.2024	F.N	CCW332	Digital Marketing
28.02.2024	F.N	CS3691	Embedded Systems and IoT
29.02.2024	F.N	CCS354	Network Security
04.03.2024	F.N	OCE351	Environment and Social Impact Assessment
05.03.2024	F.N	CCS341	Data Warehousing

VIII Semester (R-2017)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	GE8076	Professional Ethics in Engineering
27.02.2024	F.N	CS8080	Information Retrieval Techniques

Session Timings:

09.30 am to 11.00 am

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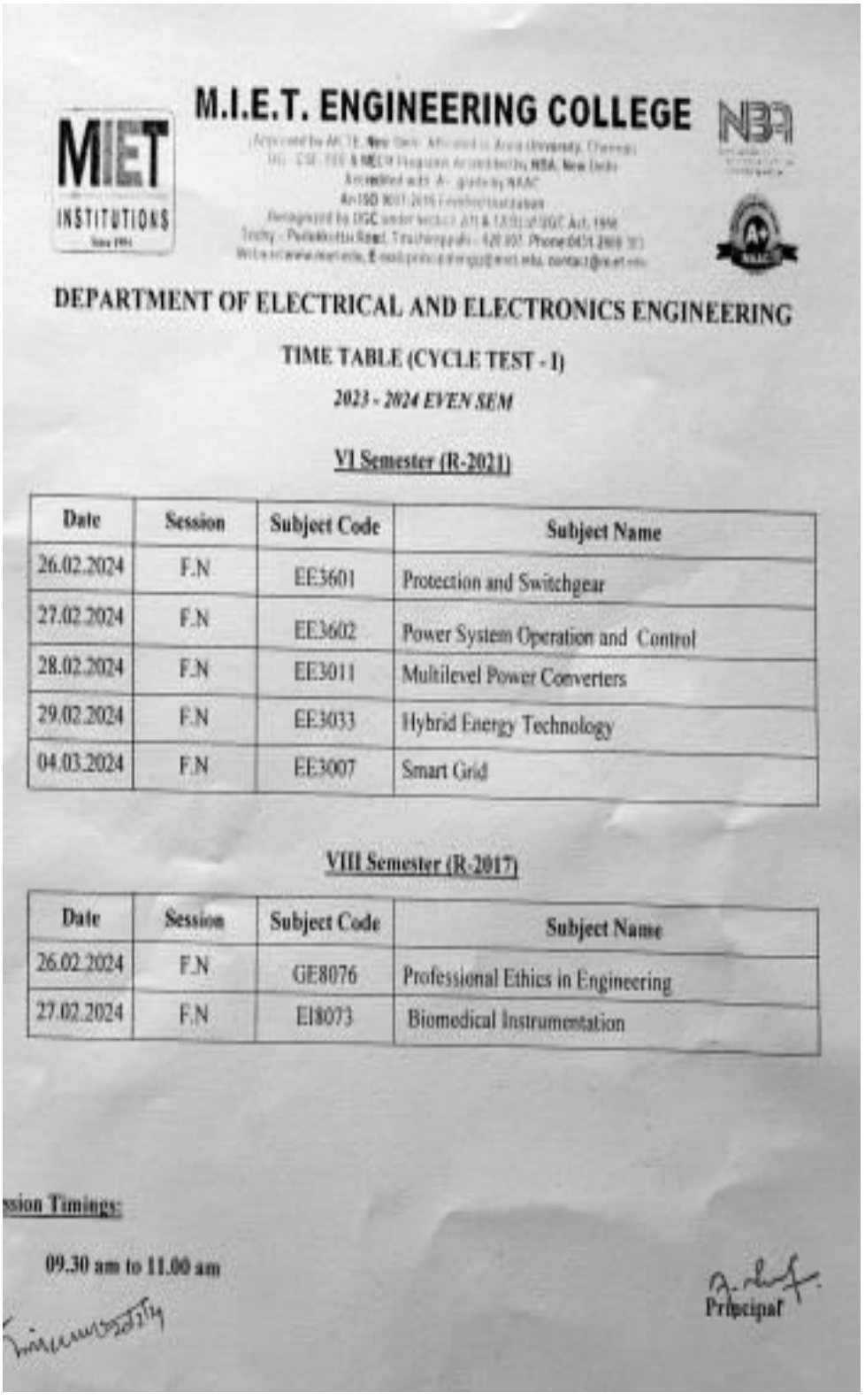

M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

TIME TABLE (CYCLE TEST - I)

2023 - 2024 EVEN SEM

VI Semester (R-2021)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	EE3601	Protection and Switchgear
27.02.2024	F.N	EE3602	Power System Operation and Control
28.02.2024	F.N	EE3011	Multilevel Power Converters
29.02.2024	F.N	EE3033	Hybrid Energy Technology
04.03.2024	F.N	EE3007	Smart Grid

VIII Semester (R-2017)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	GE8076	Professional Ethics in Engineering
27.02.2024	F.N	EI8073	Biomedical Instrumentation

ssion Timings:

09.30 am to 11.00 am

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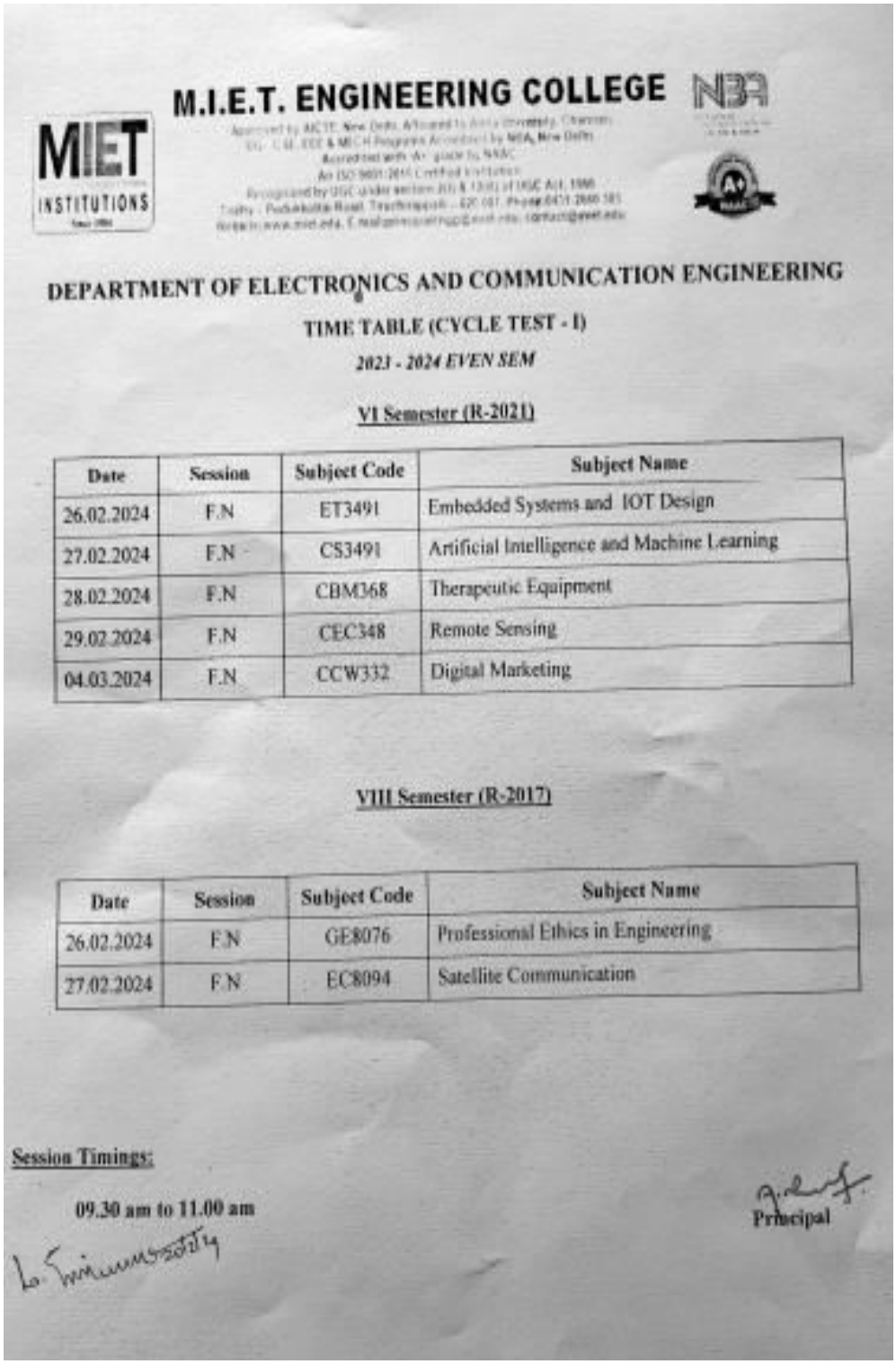

M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

TIME TABLE (CYCLE TEST - I)

2023 - 2024 EVEN SEM

VI Semester (R-2021)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	ET3491	Embedded Systems and IOT Design
27.02.2024	F.N	CS3491	Artificial Intelligence and Machine Learning
28.02.2024	F.N	CBM368	Therapeutic Equipment
29.02.2024	F.N	CEC348	Remote Sensing
04.03.2024	F.N	CCW332	Digital Marketing

VIII Semester (R-2017)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	GE8076	Professional Ethics in Engineering
27.02.2024	F.N	EC8094	Satellite Communication

Session Timings:

09.30 am to 11.00 am

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M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF MECHANICAL ENGINEERING

TIME TABLE (CYCLE TEST - I)
2023 - 2024 EVEN SEM

VI Semester (R-2021)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	CME389	Design of Transmission System
27.02.2024	F.N	CME333	Renewable Powered of Highway Vehicles and Emission control Technology
28.02.2024	F.N	CME364	Energy Storage Devices
29.02.2024	F.N	CME387	Non-traditional Machining Processes
04.03.2024	F.N	ME3691	Heat and Mass Transfer

VIII Semester (R-2017)

Date	Session	Subject Code	Subject Name
26.02.2024	F.N	MG8591	Principles of Management
27.02.2024	F.N	IE8693	Production Planning and Control

Session Timings:

09.30 am to 11.00 am

Principal

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Hall Plan for Cycle test

M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CYCLE TEST I

CONSOLIDATED HALL PLAN

BOYS

YEAR	ROLL NUM	TOTAL	HALL NO.
II	E1225001 - E1225034	20	BG 01
	E1225035 - E1225057	20	CS 04
	E1225058 - E1225062 E1225063 - E1225082	20	CS 05
	E1225083 - E1225111	20	CS 09
	E1225112 - E2235131	14	CS10

GIRLS

YEAR	ROLL NUM	TOTAL	HALL NO.
II	E1225002 - E1225039	15	BF15
	E1225044 - E2235124	14	BF16

EXAMCELL COORDINATOR

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M.I.E.T. ENGINEERING COLLEGE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CYCLE TEST I

CONSOLIDATED HALL PLAN

BOYS

YEAR	ROLL NUM	TOTAL	HALL NO.
III - A	E1215002 - E1215030	18	DF2
	E1215031 - E1215060	17	DF3
	E1215061 - E1215075	18	DF4
III - B	E1215076 - E1215097		
	E1215101 - E2225126	16	DF5
	E2225129 - E2225136	5	DF6
IV - A	E1205001 - E1205021	18	DG1
	E1205022 - E1205043	18	DG2
	E1205045 - E1205064	18	DG3
	E1205065 - 067	18	BG13
IV - B	E1205071 - E1205100		
	E 2215101 - E 2215132	20	BG14

EXAMCELL CO-ORDINATOR

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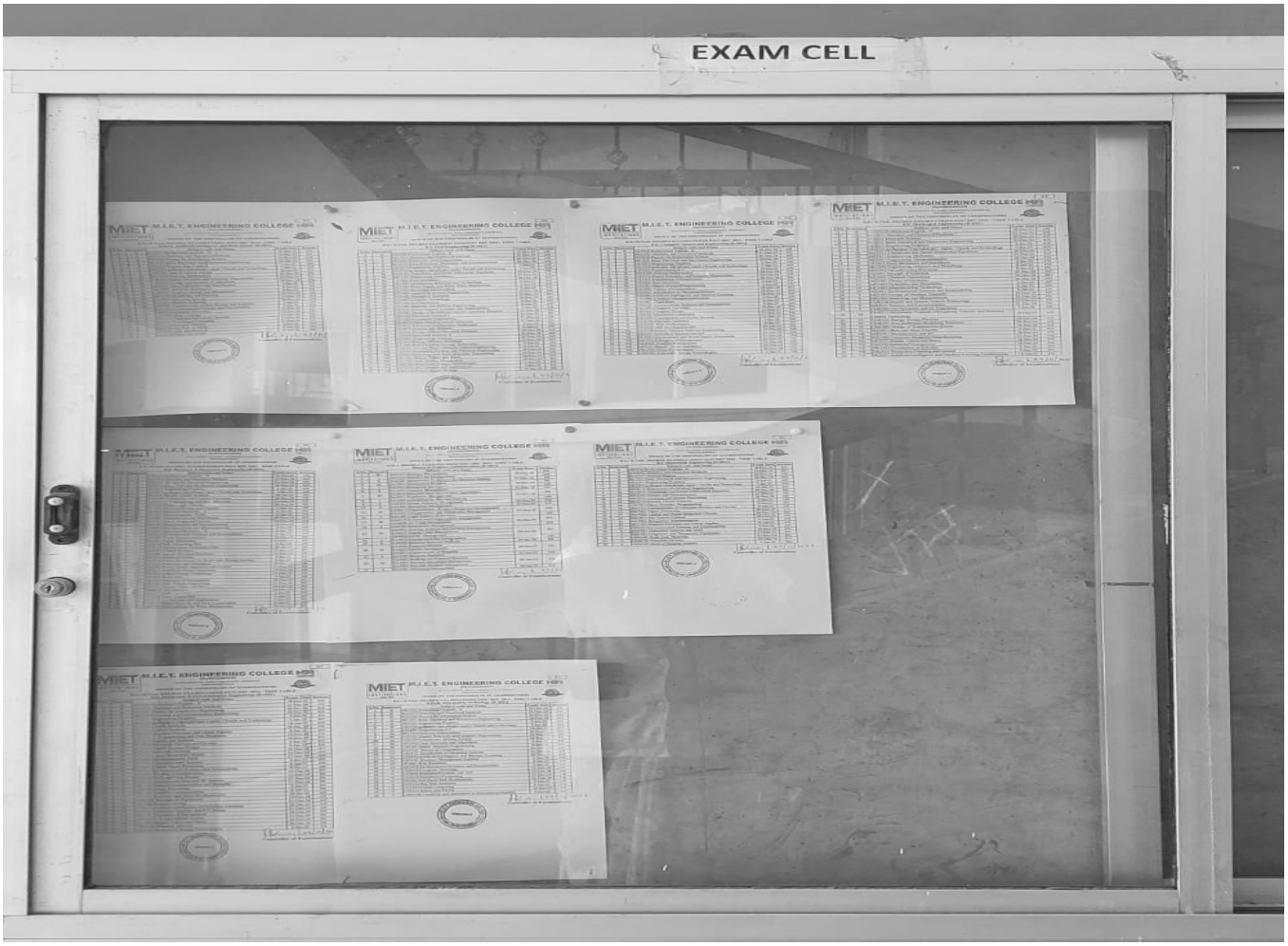
Notice Board Display



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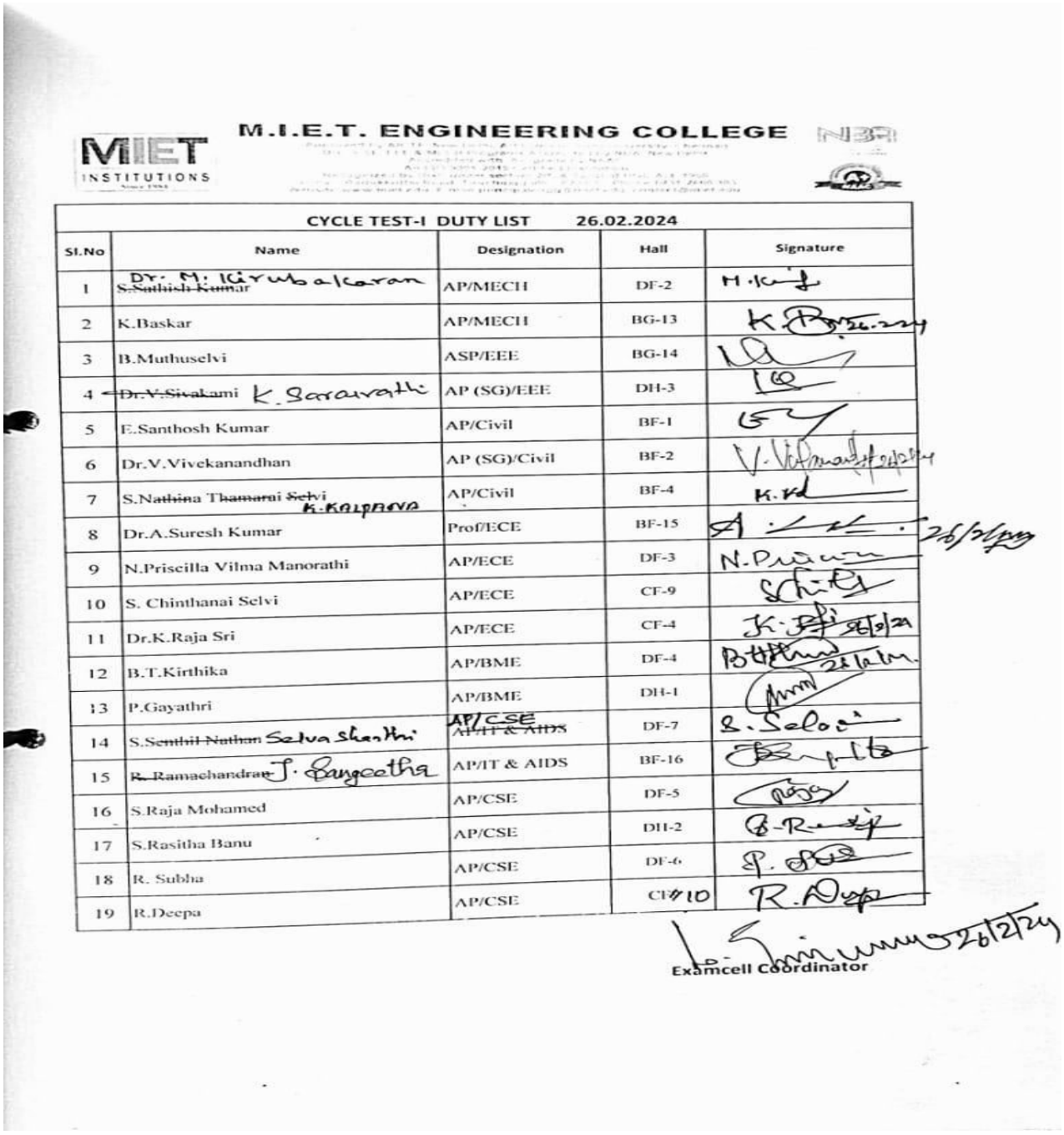
3.5Faculty Duty List



M.I.E.T. ENGINEERING COLLEGE

CYCLE TEST-I DUTY LIST 26.02.2024

Sl.No	Name	Designation	Hall	Signature
1	~~S.Sathish Kumar~~ Dr. M. Kirubakaran	AP/MECH	DF-2	
2	K.Baskar	AP/MECH	BG-13	
3	B.Muthuselvi	ASP/EEE	BG-14	
4	~~Dr.V.Sivakami~~ K. Saraswathi	AP (SG)/EEE	DH-3	
5	E.Santhosh Kumar	AP/Civil	BF-1	
6	Dr.V.Vivekanandhan	AP (SG)/Civil	BF-2	
7	S.~~Nathina Thamarai Selvi~~ K.Kalpana	AP/Civil	BF-4	
8	Dr.A.Suresh Kumar	Prof/ECE	BF-15	
9	N.Priscilla Vilma Manorathi	AP/ECE	DF-3	
10	S. Chinthanai Selvi	AP/ECE	CF-9	
11	Dr.K.Raja Sri	AP/ECE	CF-4	
12	B.T.Kirthika	AP/BME	DF-4	
13	P.Gayathri	AP/BME	DH-1	
14	S.~~Senthil Nathan~~ Selva shanthi	~~AP/CSE~~ AP/IT & AIDS	DF-7	
15	~~R. Ramachandran~~ J. Sangeetha	AP/IT & AIDS	BF-16	
16	S.Raja Mohamed	AP/CSE	DF-5	
17	S.Rasitha Banu	AP/CSE	DH-2	
18	R. Subha	AP/CSE	DF-6	
19	R.Deepa	AP/CSE	CF-10	

26/2/24

Examcell Coordinator

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M.I.E.T. ENGINEERING COLLEGE

CYCLE TEST-I DUTY LIST — 27.02.2024

Sl.No	Name	Designation	Hall	Signature
1	~~R.Manickam~~ S.SATHISHKUMAR	AP/MECH	DF-2	
2	M.Mohamed ibrahim	AP/MECH	DF-3	
3	D.Jayaraj	AP/EEE	BG-13	
4	S.Pandiarajan	AP/EEE	DF-7	
5	K.Saraswathi	AP/EEE	BF-16	
6	T.Jayanthi	AP/EEE	BG-14	
7	J.Sherrin Banu	AP/EEE	CF-4	
8	~~B.Sekar~~ S. Rasitha banu	AP/Civil	DF-4	
9	~~Dr.K.Pandia~~ V. Vivekanandhan	AP (SG) /Civil	BF-1	
10	L.Kiruthika	AP/Civil	CF-9	
11	S.Suraj Kumar	AP/ECE	DF-5	
12	M.Kokilavani	AP/ECE	CF-10	
13	R.Anitha	AP/ECE	DH3 BF2	27/02/24
14	K.Nandhitha	AP/ECE	DH-1	
15	J.Nirmala	AP/BME	DH-2	
16	S. Sugantha	AP/IT & AIDS	BF-15	
17	M.Bharathi	AP/CSE	DF-6	
18	S.Selva Shanthi S Senthilkumaran	AP/CSE	BF2 DH3	
19	Jayanth . K.	AP/CSE	BF-4	

Examcell Coordinator

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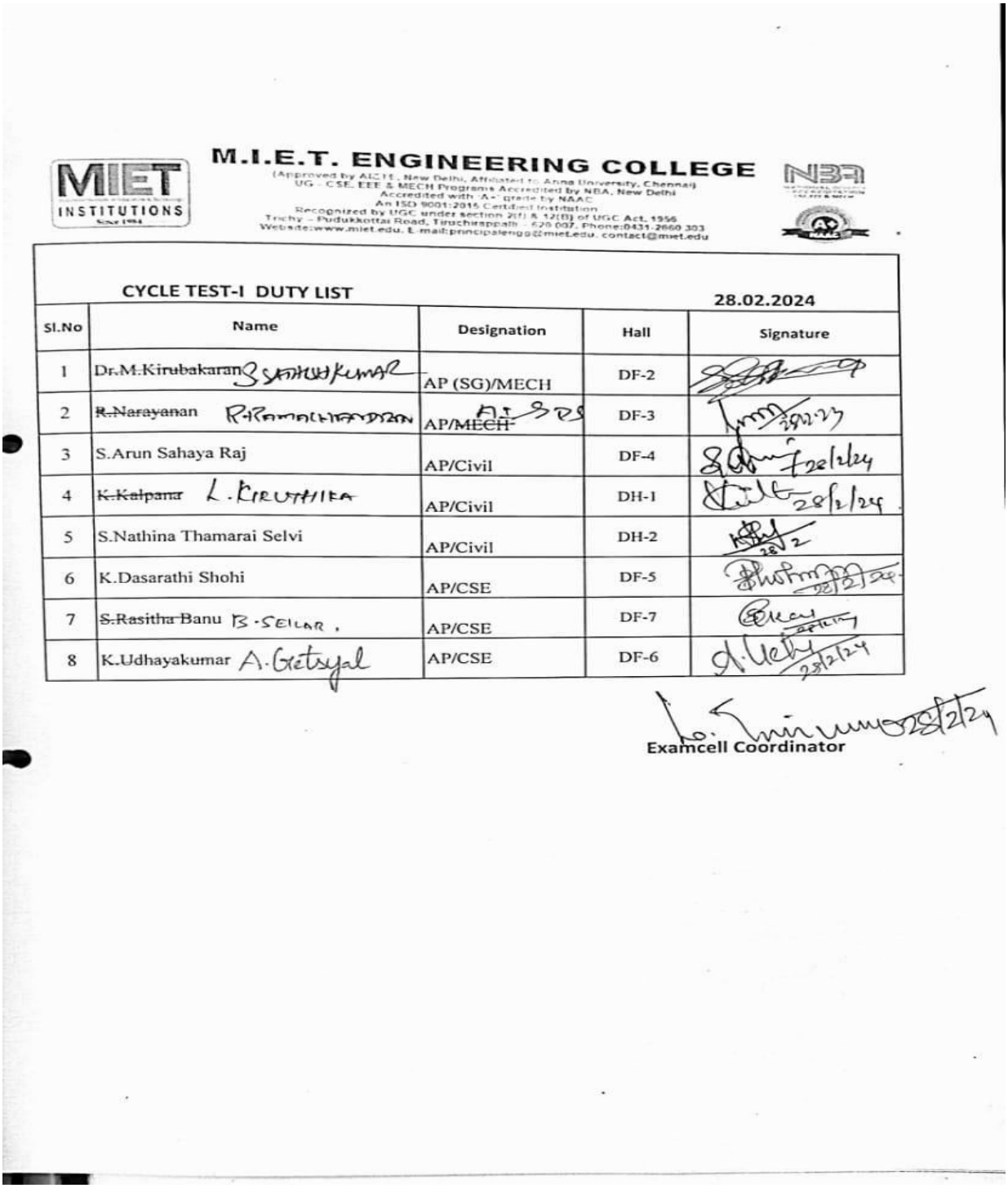

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Website:www.miet.edu, E-mail:principalengg@mietedu, contact@miet.edu

CYCLE TEST-I DUTY LIST — 28.02.2024

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2	~~R.Narayanan~~ R.RAMACHANDRAN	AP/~~MECH~~ AI & DS	DF-3	29.2.24
3	S.Arun Sahaya Raj	AP/Civil	DF-4	28/2/24
4	~~K.Kalpana~~ L.KIRUTHIKA	AP/Civil	DH-1	28/2/24
5	S.Nathina Thamarai Selvi	AP/Civil	DH-2	28/2
6	K.Dasarathi Shohi	AP/CSE	DF-5	28/2/24
7	~~S.Rasitha~~ Banu B.SELVAR.	AP/CSE	DF-7	
8	K.Udhayakumar A.Geetsyal	AP/CSE	DF-6	28/2/24

Examcell Coordinator 28/2/24

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4	L.Kiruthika	AP/Civil	DH-2	
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6	S. Chinthanai Selvi	AP/ECE	DH-1	
7	~~Dr.K.Raja Sri~~ M. KOKILAVANI	AP/ECE	DF-6	M. kokilavani
8	S.Raja Mohamed	AP/CSE	DF-7	

Examcell Coordinator

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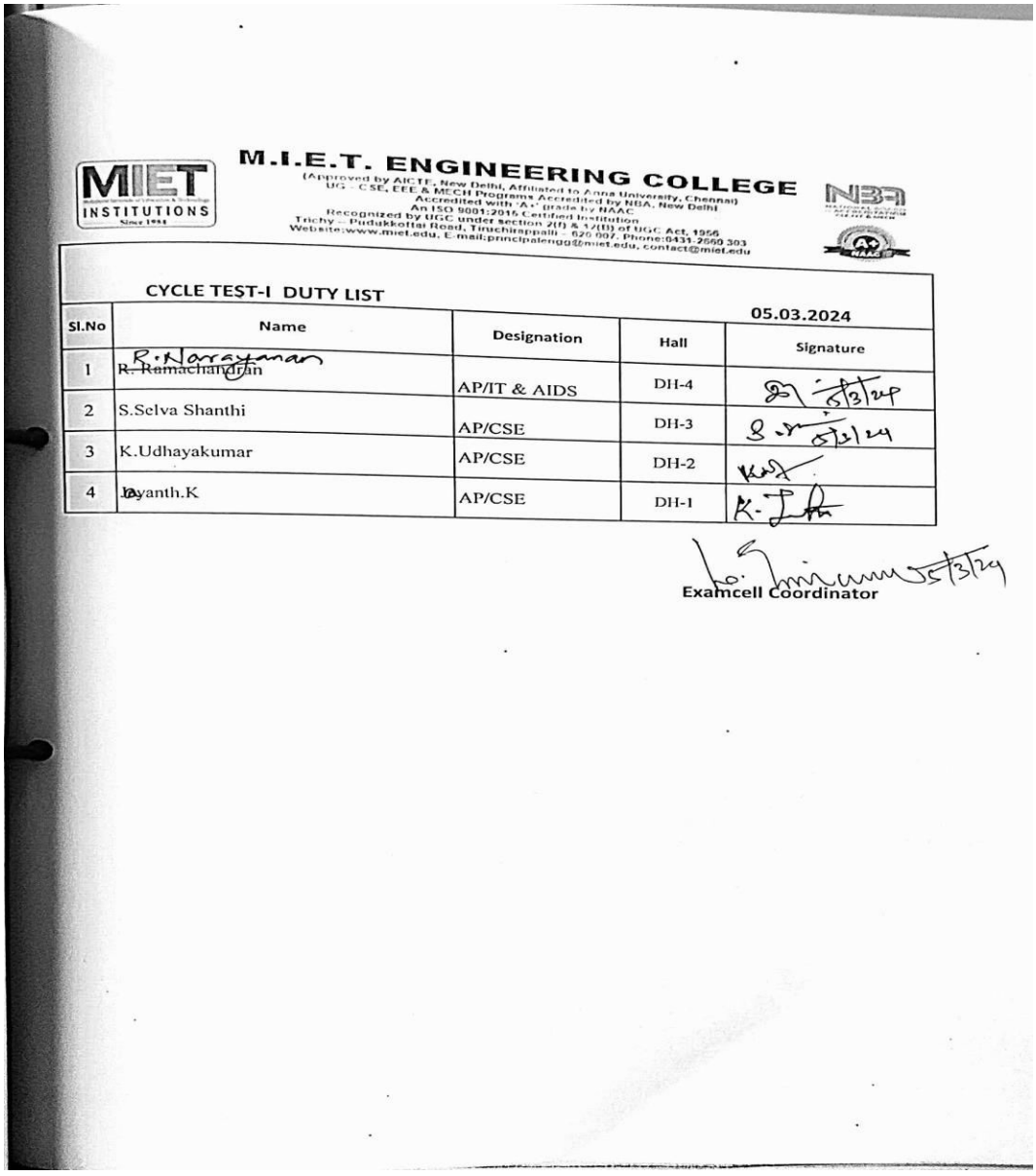

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CYCLE TEST-I DUTY LIST — 05.03.2024

Sl.No	Name	Designation	Hall	Signature
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2	S.Selva Shanthi	AP/CSE	DH-3	5/3/24
3	K.Udhayakumar	AP/CSE	DH-2	
4	Jayanth.K	AP/CSE	DH-1	

5/3/24

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4.Sample Reports of CIA

4.1 Internal Assessment Question Paper

Roll No: | | | | | | | | | |

M.I.E.T ENGINEERING COLLEGE
Tiruchirappalli

CYCLE TEST - I
Sixth Semester
Computer Science & Engineering [Sec: A&B]
CCS356-Object Oriented Software Engineering

Date: 26/02/2024 Session : FN
Time: 01.30 hrs Maximum: 50 marks

Answer ALL Questions

PART - A (5 X 2 = 10 marks)

Q.NO	Questions	Marks	CO	BL	PO
1.	Define SRS Document. Why SRS must be traceable?	2	CO2	L2	1
2.	Define functional requirement and nonfunctional requirement for software.	2	CO2	L2	1
3.	List any three characteristics of good SRS.	2	CO2	L1	1
4.	Define software, software engineering and software process.	2	CO1	L2	1
5.	List the two benefits of waterfall life cycle model for software development.	2	CO1	L1	1

PART- B (2 X 13 = 26 marks)

Q.NO	Questions	Marks	CO	BL	PO
6	(a) List the stakeholders and all types of functional and non-requirement for online train reservation.	13	CO2	L2	1
	Or				
	(b) Explain the following specification with diagram. (i) Inception. (ii) Elicitation. (iii) Elaboration. (iv) Negotiation.	13	CO2	L2	1

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	(Requirement engineering process)				
7	(a) What is layered technology? Explain the CMM model to access the organization level.	13	CO1	L3	1
	Or				
	(b) Explain the steps involved in waterfall model and increment model with diagram.	13	CO 1	L3	1

PART- C (1 X 14= 14 marks)

Q.NO	Questions	Marks	CO	BL	PO
8	(a) List various UML diagrams and explain the elements, advantages and disadvantages of each diagrams.	14	CO2	L2	1
	Or				
	(b) Explain the following UML diagram with one example. (i) Use case diagram (ii) Class diagram (iii) Interaction diagram	14	CO2	L2	1

BT LEVEL		CO1	CO2	CO3	CO4	CO5	CO6	%
Remember	Q. Nos	5	3	-	-	-	-	8
	Marks	2	2	-	-	-	-	
Understand	Q. Nos	4	1,2,6,8	-	-	-	-	64
	Marks	2	30	-	-	-	-	
Apply	Q. Nos	7	-	-	-	-	-	28
	Marks	14	-	-	-	-	-	
Analyze	Q. Nos	-	-	-	-	-	-	-
	Marks	-	-	-	-	-	-	
Total		18	32	-	-	-	-	100

DAC	IQAC Member

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4.2 Scheme of Evaluation

M.I.E.T ENGINEERING COLLEGE
Tiruchirappalli

CYCLE TEST - II
Sixth Semester
Computer Science & Engineering [Sec: A&B]
CCS356-Object Oriented Software Engineering- Answer Key

1.Define SRS Document. Why SRS must be traceable?
Provides a traceable link between the requirements and the final software product, which helps to ensure that all requirements have been met.

2.Define functional requirement and nonfunctional requirement for software.
Functional requirements define what a product must do and what its features and functions are. Nonfunctional requirements describe the general properties of a system.

3.List any three characteristics of good SRS.
1.Completeness 2.Clarity. 3.Correctness. 4.Consistency. 5.Verifiability. 6.Ranking. 7.Modifiability.

4.Define software, software engineering and software process.
The software engineering process consists of activities for managing the creation of software, including requirement collection, analysis, design, coding, testing, and maintenance.

5.List the two benefits of waterfall life cycle model for software development.
- Uses clear structure. When compared with other methodologies, Waterfall focuses most on a clear, defined set of steps. …
- Determines the end goal early. …
- Transfers information well. ..

PART- B

6.a) List the stakeholders and all types of functional and non-requirement for online train reservation.

Stakeholders in Online Train Reservation System:

1. Passengers/Users: Individuals who book tickets and use the services.
2. Railway Operators: Organizations responsible for running trains and managing schedules.
3. Booking Agents: Entities or individuals who assist passengers in booking tickets.
4. System Administrators: Personnel responsible for maintaining and updating the system.
5. Government Authorities: Entities that regulate and oversee railway operations.
6. Payment Gateways: Service providers enabling online payment transactions.
7. Third-Party Vendors: Providers of add-on services like travel insurance, meal bookings, or tour packages.
8. Developers/Technical Team: Teams building and maintaining the system.
9. Security Agencies: Ensuring compliance with data protection and security standards.

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10. Customer Support Teams: Handling inquiries and resolving issues for passengers.

Types of Requirements:

Functional Requirements:

1. User Authentication:
2. Ticket Booking:
3. Payment Processing:
4. Ticket Management:
5. Train Information:
6. Notifications and Alerts:
7. Admin Features:
8. Support Services:

Non-Functional Requirements:

1. Performance:
2. Scalability:
3. Availability:
4. Security:
5. Usability:
6. Compatibility:
7. Reliability:
8. Maintainability:
9. Compliance:

6 (b) Explain the following specification with diagram.
(i) Inception.
(ii) Elicitation.
(iii) Elaboration.
(iv) Negotiation.
(Requirement engineering process)

The **Requirement Engineering Process** is critical in software development for understanding, analyzing, documenting, and managing software requirements. Below is an explanation of the listed activities with diagrams:

(i) Inception

It is the initial phase of the requirement engineering process where stakeholders and developers come together to identify the purpose, goals, and scope of the project. The primary focus is on understanding the problem domain and establishing a preliminary understanding of the requirements.

Key Activities:

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- Identify stakeholders.
- Define the problem domain.
- Understand project objectives.
- Create a high-level overview of the system.

(ii) Elicitation

Definition;
Elicitation involves gathering requirements from stakeholders through various methods like interviews, surveys, workshops, and brainstorming sessions. The objective is to uncover explicit and implicit requirements.

Key Activities:

- Collect requirements using appropriate techniques.
- Understand both functional and non-functional requirements.
- Document findings systematically.

(iii) Elaboration

Definition;
In the elaboration phase, the gathered requirements are analyzed, refined, and detailed to create a clear and unambiguous specification. This step often involves creating models like data flow diagrams, use case diagrams, or class diagrams.

Key Activities:

- Analyze collected data to remove ambiguity.
- Define detailed functional and non-functional requirements.
- Develop models and prototypes.

(iv) Negotiation

Definition;
Negotiation is the process of resolving conflicts between stakeholders, prioritizing requirements, and ensuring all parties agree on the final set of requirements. This step ensures that requirements are realistic, feasible, and within budget and schedule constraints.

Key Activities:

- Identify conflicting requirements.
- Prioritize requirements based on feasibility and importance.
- Achieve stakeholder consensus.

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7 a)What is layered technology? Explain the CMM model to access the organization level.

Layered technology is a design approach that organizes a system into layers, each with a specific function or responsibility. It is commonly used in software engineering, system architecture, and project management to separate concerns and make systems easier to understand, develop, and maintain. For example:

- **Presentation Layer**: Handles user interface.
- **Application Layer**: Contains the core business logic.
- **Data Layer**: Manages data storage and access.

This separation helps isolate changes, reduce complexity, and improve scalability.

Capability Maturity Model (CMM)

The **Capability Maturity Model (CMM)** is a framework for assessing and improving the maturity of an organization's processes, particularly in software development. It was developed by the Software Engineering Institute (SEI) at Carnegie Mellon University. CMM is used to evaluate the maturity of an organization's practices and guide process improvement.

The model categorizes organizations into **five levels of maturity**, as follows:
1. Initial (Ad-hoc/Chaotic)
2. Repeatable
3. Defined
4. Managed
5. Optimizing

Benefits of the CMM Model

1. Provides a structured framework for process improvement.
2. Helps organizations deliver high-quality products on time and within budget.
3. Improves predictability, efficiency, and scalability of processes.
4. Enables benchmarking against industry standards.

7 b)Explain the steps involved in waterfall model and increment model with diagram.

The **Waterfall Model** is a linear and sequential approach to software development. Each phase must be completed before moving to the next. This model is best suited for projects where requirements are well-defined and unlikely to change.

Steps in the Waterfall Model

1. **Requirement Analysis**:
   Collect and document all system requirements.

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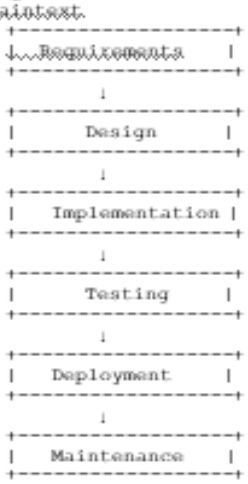
2. **System Design**:
   Translate the requirements into a system design document.
3. **Implementation**:
   Develop the code according to the design.
4. **Testing**:
   Test the developed system for defects and ensure it meets the requirements.
5. **Deployment**:
   Deploy the software into the production environment.
6. **Maintenance**:
   Perform regular updates, fix bugs, and enhance functionality as needed.

Diagram of the Waterfall Model

plaintext



2. Incremental Model

The **Incremental Model** develops a system through repeated cycles (increments). Each increment adds functional pieces to the software until it is complete. This approach is more flexible and allows partial delivery of the product.

Steps in the Incremental Model

1. **Requirement Analysis**:
   Identify the overall requirements and break them into smaller, manageable modules.
2. **Design**:
   Design each module in detail.
3. **Implementation**:
   Develop the first module and incrementally add subsequent modules.

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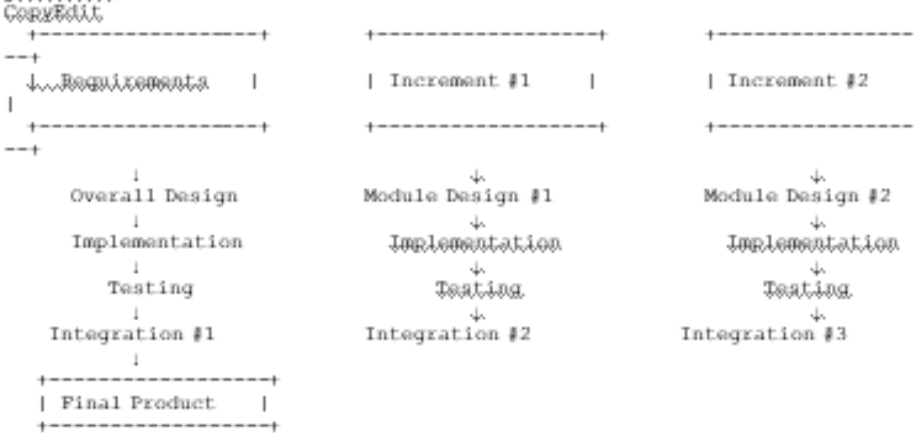
4. **Testing:**
   Test each increment and the system as a whole.
5. **Integration:**
   Integrate each module into the final system after testing.
6. **Delivery:**
   Deliver the completed system after all increments are integrated.

Diagram of the Incremental Model



Both models have their specific use cases:

- The **Waterfall Model** is suitable for static and well-defined projects.
- The **Incremental Model** works well for projects where requirements may evolve over time.

8(a) List various UML diagrams and explain the elements, advantages and disadvantages of each diagrams.

Standardized modeling language used to visualize, specify, and document the structure and behavior of software systems.

1. Class Diagram

Description: Represents the static structure of a system, showing classes, attributes, operations, and relationships.

Elements:

- **Class**: Represented as a rectangle with compartments for name, attributes, and methods.
- **Relationships**: Associations, aggregations, compositions, and inheritance.

Advantages:

- Provides a blueprint for system architecture.
- Simplifies the understanding of relationships between system components.
- Aids in object-oriented design.

Disadvantages:

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- Can become overly complex for large systems.
- Requires understanding of object-oriented principles.

2. Use Case Diagram

Description: Illustrates the functionality of a system from the user's perspective.

Elements:

- **Actors**: Represent external entities interacting with the system.
- **Use Cases**: Represent functionalities or services provided by the system.
- **Relationships**: Includes, extends, and associations.

Advantages:

- Focuses on user requirements.
- Provides a high-level overview of system functionality.
- Helps in identifying stakeholders and system boundaries.

Disadvantages:

- Limited detail about system internals.
- Requires further elaboration with other diagrams for technical implementation.

3. Sequence Diagram

Description: Shows the interaction between objects in a sequential order.

Elements:

- **Lifelines**: Represent participants in the interaction.
- **Messages**: Show communication between participants.
- **Activations**: Indicate the duration an object is active.

Advantages:

- Visualizes dynamic behavior of the system.
- Highlights object interactions and message flow.
- Aids in identifying potential performance bottlenecks.

Disadvantages:

- Difficult to represent complex interactions.
- Can become cluttered in systems with many objects.

4. Activity Diagram

Description: Represents workflows of stepwise activities and actions.

Elements:

- **Actions/Activities**: Represent tasks or operations.
- **Transitions**: Indicate flow between actions.
- **Decision Nodes**: Represent branching points.
- **Swimlanes**: Partition activities by responsible actor or component.

Advantages:

- Useful for modeling workflows and business processes.
- Helps in understanding the logic of complex processes.
- Identifies parallel and conditional processes.

Disadvantages:

- May oversimplify system behavior.
- Limited in representing object-specific interactions.

5. State Diagram

Description: Depicts the states an object can be in and the transitions between those states.

Elements:

- **States**: Represent conditions of the object.

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- **Transitions**: Show how the object moves between states.
- **Events/Actions**: Trigger transitions.

Advantages:

- Captures the lifecycle of an object.
- Useful for reactive systems with state-dependent behavior.

Disadvantages:

- Limited applicability for systems with few states.
- Complex systems may result in convoluted diagrams.

6. Component Diagram

Description: Shows the physical structure of the system in terms of components and their relationships.

Elements:

- **Components**: Represent physical modules or libraries.
- **Interfaces**: Define interaction points.
- **Dependencies**: Show relationships between components.

Advantages:

- Clarifies system architecture and modularity.
- Useful for deployment and configuration planning.

Disadvantages:

- Requires detailed knowledge of system components.
- May be too abstract for early development stages.

7. Deployment Diagram

Description: Represents the physical deployment of software artifacts on hardware nodes.

Elements:

- **Nodes**: Represent hardware or execution environments.
- **Artifacts**: Represent deployed software components.
- **Communication Paths**: Show connections between nodes.

Advantages:

- Helps in understanding system infrastructure.
- Useful for system deployment planning.

Disadvantages:

- Abstract and less useful during early design stages.
- May not capture all runtime dependencies.

8. Collaboration Diagram

Description: Displays interactions between objects and their relationships in a structured form.

Elements:

- **Objects**: Represent system components.
- **Links**: Indicate relationships between objects.
- **Messages**: Show the flow of communication.

Advantages:

- Focuses on structural and behavioral aspects simultaneously.
- Easy to trace message flow.

Disadvantages:

- Can be harder to interpret compared to sequence diagrams.
- Becomes cluttered with many objects.

9. Object Diagram

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Description: Snapshot of instances of classes at a particular point in time.
Elements:

- **Objects**: Instances of classes with attribute values.
- **Links**: Represent relationships between instances.

Advantages:

- Useful for debugging and testing.
- Captures system state at a given time.

Disadvantages:

- Limited utility for dynamic behavior modeling.
- Can become outdated as the system evolves.

10. Interaction Overview Diagram

Description: Combines features of activity and sequence diagrams, focusing on interactions within the system.
Elements:

- **Activity Nodes**: Represent activities or interactions.
- **Control Flows**: Indicate the sequence of activities.

Advantages:

- Useful for summarizing

8(b) Explain the following UML diagram with one example.
(i) Use case diagram
(ii) Class diagram
(iii) Interaction diagram Here's an explanation of each UML diagram type, along with an example:

(i) Use Case Diagram

A Use Case Diagram represents the functional requirements of a system by showing the interactions between actors (users or external systems) and the use cases (specific functionalities). It captures what the system does from the user's perspective.

Example:

Online Shopping System:

- **Actors**: Customer, Admin
- **Use Cases**:
  - Browse Products
  - Add to Cart
  - Checkout
  - Manage Inventory (Admin)
  - Generate Reports (Admin)

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A **Class Diagram** models the static structure of a system. It shows the classes, their attributes, methods, and relationships (e.g., associations, generalizations, aggregations).
Example:
Library Management System:

- **Classes**:
  - `Book`: Attributes like `title`, `author`, `ISBN`; Methods like `issue()`, `return()`.
  - `Member`: Attributes like `name`, `memberID`; Methods like `borrowBook()`, `returnBook()`.
  - `Librarian`: Attributes like `name`, `employeeID`; Methods like `addBook()`, `removeBook()`.

(iii) Interaction Diagram

An **Interaction Diagram** models the dynamic behavior of a system by showing how objects interact through messages over time. Common types include **Sequence Diagrams** and **Collaboration Diagrams**.
Example:
ATM System - Withdraw Cash (Sequence Diagram):

- **Objects**:
  - Customer
  - ATM
  - Bank Server
- **Flow**:

1. Customer inserts the card (message to ATM).
2. ATM requests PIN.
3. Customer enters PIN (message to ATM).
4. ATM validates the PIN by communicating with the Bank Server.
5. ATM prompts the Customer to enter the withdrawal amount.
6. ATM sends the request to the Bank Server.
7. Bank Server authorizes the transaction.
8. ATM dispenses cash to the Customer.

Each type of UML diagram serves a distinct purpose:

- **Use Case Diagram**: Defines the scope of functionalities.
- **Class Diagram**: Models the system's structure.
- **Interaction Diagram**: Demonstrates object collaboration in dynamic scenarios.

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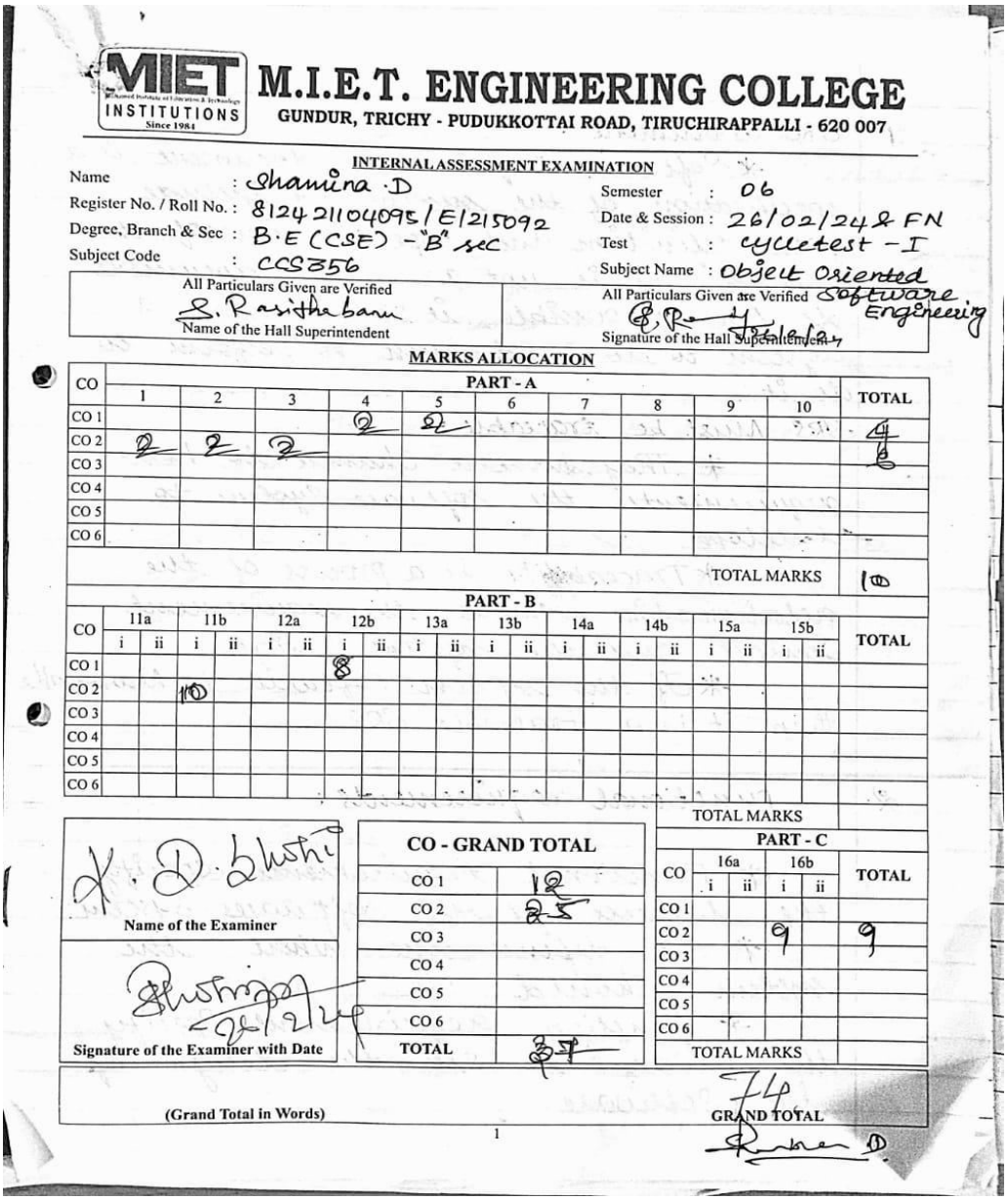
4.3 Sample Answer Sheet



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INTERNAL ASSESSMENT EXAMINATION

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Register No. / Roll No. : 812421104095 / E1215092
Degree, Branch & Sec : B.E (CSE) - "B" sec
Subject Code : CCS356
Semester : 06
Date & Session : 26/02/24 & FN
Test : cycletest - I
Subject Name : Object Oriented Software Engineering

All Particulars Given are Verified
S. Rasithabanu
Name of the Hall Superintendent

All Particulars Given are Verified
Signature of the Hall Superintendent

MARKS ALLOCATION

PART - A

CO	1	2	3	4	5	6	7	8	9	10	TOTAL
CO 1				2	2						4
CO 2	2	2	2								6
CO 3											
CO 4											
CO 5											
CO 6											
										TOTAL MARKS	10

PART - B

CO	11a		11b		12a		12b		13a		13b		14a		14b		15a		15b		TOTAL
	i	ii	i	ii	i	ii	i	ii	i	ii	i	ii	i	ii	i	ii	i	ii	i	ii	
CO 1							8														
CO 2			10																		
CO 3																					
CO 4																					
CO 5																					
CO 6																					
																			TOTAL MARKS		

PART - C

CO	16a		16b		TOTAL
	i	ii	i	ii	
CO 1					
CO 2			9		9
CO 3					
CO 4					
CO 5					
CO 6					
			TOTAL MARKS		

K. D. Bhuthi
Name of the Examiner

Signature of the Examiner with Date
22/2/24

CO - GRAND TOTAL

CO 1	12
CO 2	25
CO 3	
CO 4	
CO 5	
CO 6	
TOTAL	37

(Grand Total in Words)

GRAND TOTAL 74

1

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1. SRS Document :

* Software Requirement document is a specification of the system. It Include both definition and Specification of the system. It is not a design document. As far as possible, it should have a System to do and must to perform to do it.

SRS Must be traceable :

* They have a Chance to new requirements the software System to develope.

* Traceability Is a process of the relationship between the requirement Sources and the system design.

* If the system software is Manageable then it is a traceable SRS.

2. Functional requirements :

* Functional requirements specify the features of the Software System.

* It defines the What the system should do.

* function requirement Specify the action to SLE the design of the Software.

2

Ex: In a library management, the Online article Magazine is a readable form to the user.

Non functional requirements:

* Non-functional requirements specify the properties of the software System.
* It defines the how the System Software Should performed.
* Non-functional requirements specify the user experience at once to design a software.

Ex: In a library Management, the Online article magazine is whises to read to the user.

3. Characteristics of good SRS:

→ SRS must be correct
→ SRS must be complete
→ SRS must be unambiguous
→ SRS must be consistent
→ SRS must be traceable

3

v

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4. Software:

* Software is a collection of computer program and related documen that indented with the functionalities, better performance and features.

Software engineering:

* Software engineering is a discipl Structured set of activities that defined by theories, Methods and tools to develop a Software System.
* The fundamental activities are,
  - → analysis and specification
  - → Code
  - → design
  - → validation
  - → Evolution

Software Process:

* It contains some structured set of activities to develop a software The functional fundamental activities are,
  - → analysis and specification
  - → requirement
  - → validation

4

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→ evolution

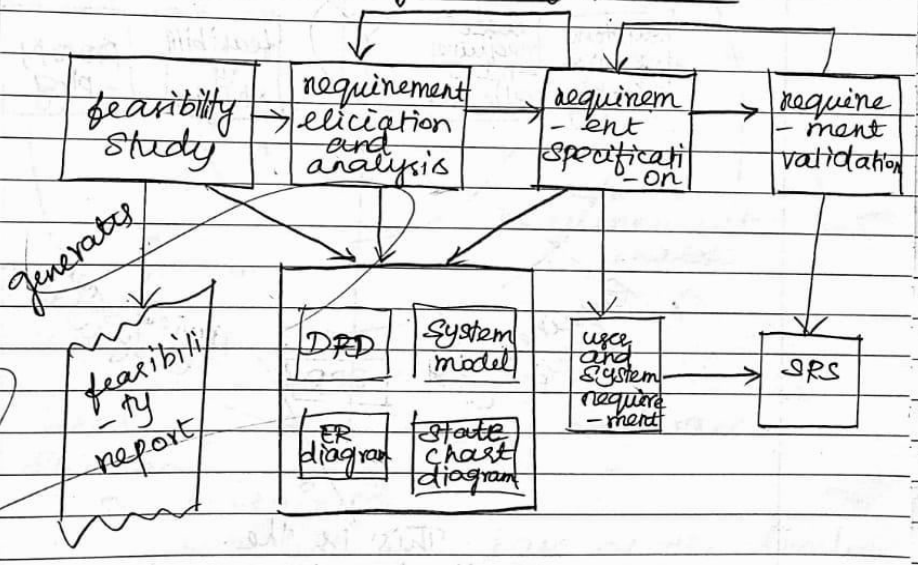
5. Benefits of Waterfall life cycle Model :

* It is very easy and simple to implement.
* For a small system it will use for the software developement.

PART - B

6. Requirement engineering process :

b)



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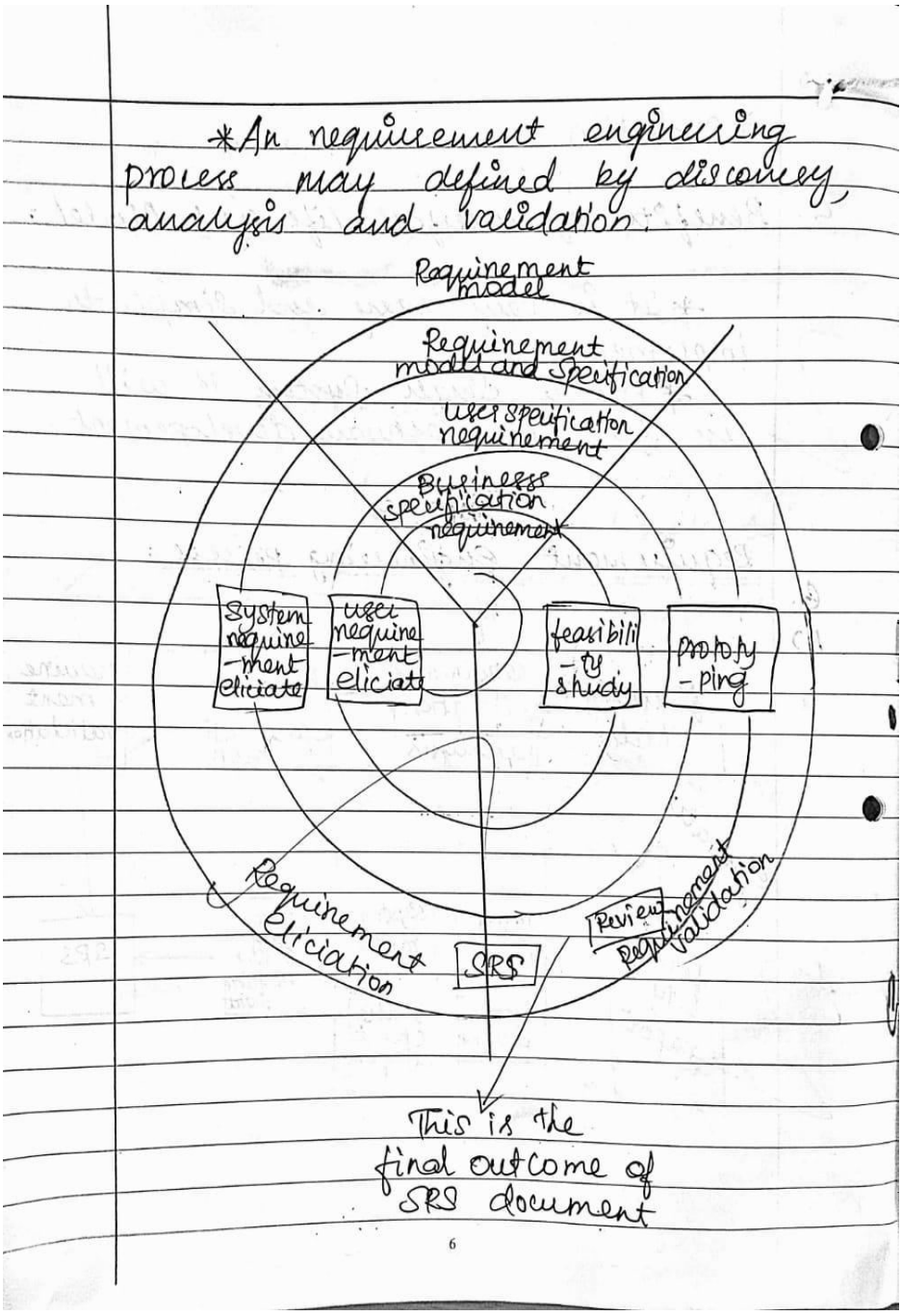

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The begin is feasibility study and it exit with the requirement validation to design a requirement Software.

Requirement Engineering process.

- Inception
- Elicitation
- Elaboration
- Negotiation
- Specification
- Validation
- Requirement materials.

Inception:

* It is a process of the begening the every Software system.

It contains,

Establish the base of the develo-pement.

Find all solution and Nature

7

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of all Solution.

Establish the relationship between Customer and System.

Elicitation:

* elicitation is a process of requirement discovery. It is very difficult task.

The following difficulties are,

→ The System unstable to need a requirement.

→ The customers is not said about the need of the requirement to the analyst.

Elaboration:

* Elaboration is a process of expand and refined the Software requirement.

* It is used to define a functionality, performance and the features of the Software.

8

Negotiation :

* Negotiation consists the need or the demand for the resource.
* It is provided by the Organization which we will convey the information.
* No need of the requirement as a software.

7. prescriptive process Model :

b)

* prescriptive process model is a abstract process Model of the Software System.
* The appropriate process model is a abstract process model.
* It is also called as Software developement life cycle (SDCL) Model (or) abstract model.
* It is a abstract Model or prescriptive process Model because of the rules of the System.

9

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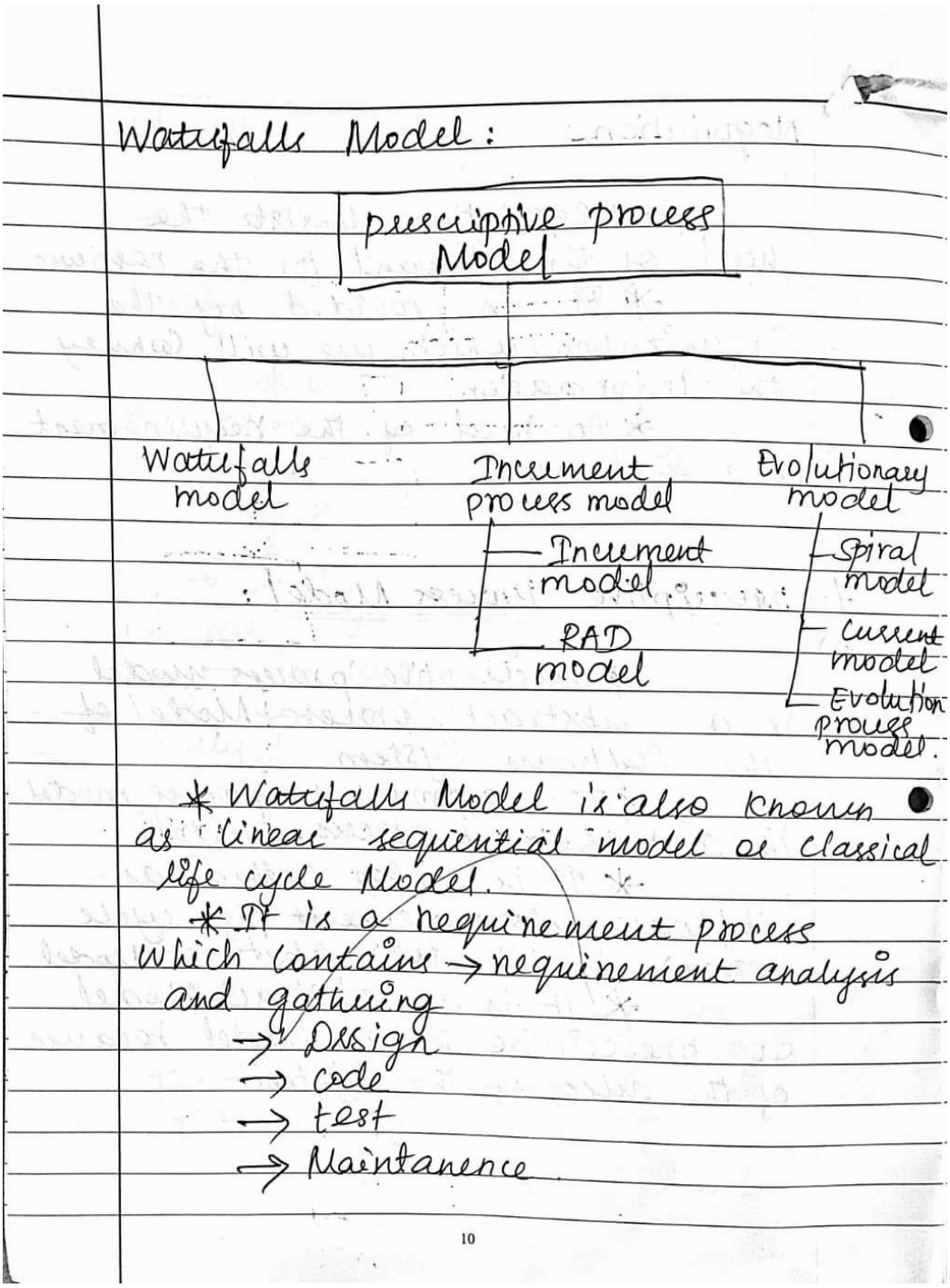

Waterfalls Model :

prescriptive process Model

- Waterfalls model
- Increment process model
  - Increment model
  - RAD model
- Evolutionary model
  - Spiral model
  - Current model
  - Evolution process model.

* Waterfalls Model is also known as linear sequential model or classical life cycle Model.
* It is a requirement process which contains → requirement analysis and gathering
  → Design
  → code
  → test
  → Maintanence.

10

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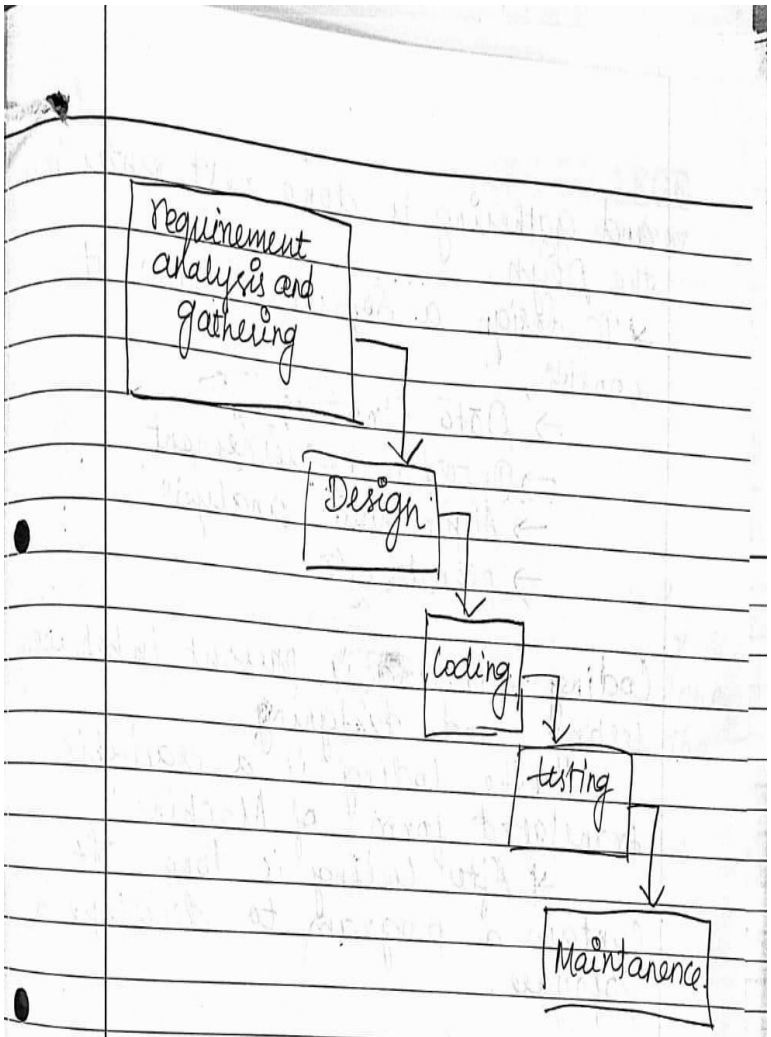

Requirement analysis and gathering is a Method that contains the Software to developement wanted things.

*It contains the functionalities, better experience and the features of the developed Software Systems.

Design:

The requirement analysis

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and gathering is done next enter into the Design.

* To design a Software System it consists,
  - → Data Structure
  - → Interface requirement
  - → Algorithmic analysis
  - → pseudocode.

Coding : * Coding is present inbetween testing and designing.

* the coding is a readable translated form of Machine.

* After coding is done. It contain a program to develope a software.

Testing : * Testing is a next step of the coding.

* It is used to check the error, date of the bug and fix the line in the coding.

* And also it check whether the Software is done or not.

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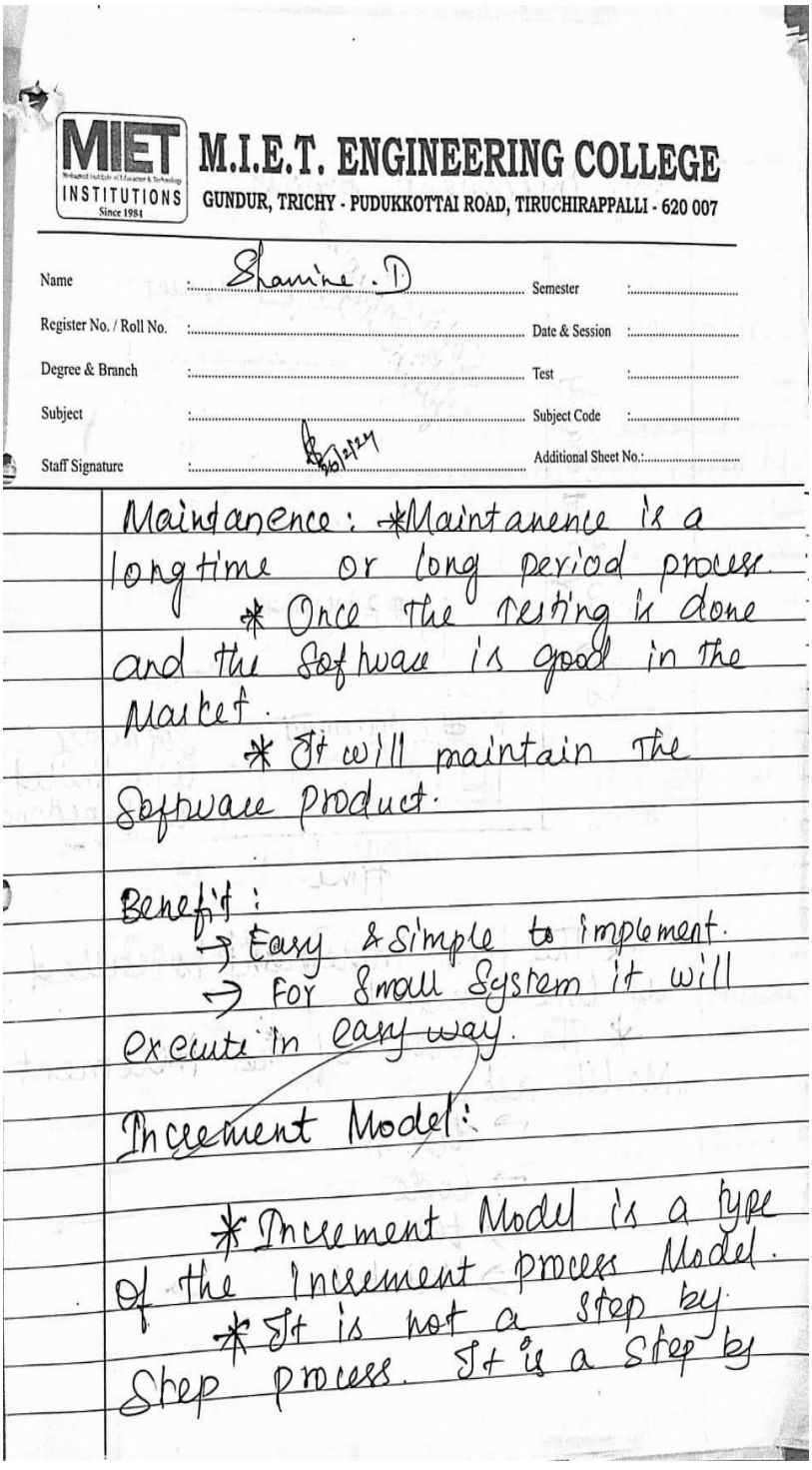

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Register No. / Roll No. : Date & Session :
Degree & Branch : Test :
Subject : Subject Code :
Staff Signature : Additional Sheet No.:

Maintanence: *Maintanence is a longtime or long period process.
* Once the testing is done and the Software is good in the Market.
* It will maintain the Software product.

Benefit:
→ Easy & simple to implement.
→ For small system it will execute in easy way.

Increment Model:

* Increment Model is a type of the Increment process Model.
* It is not a step by step process. It is a step by

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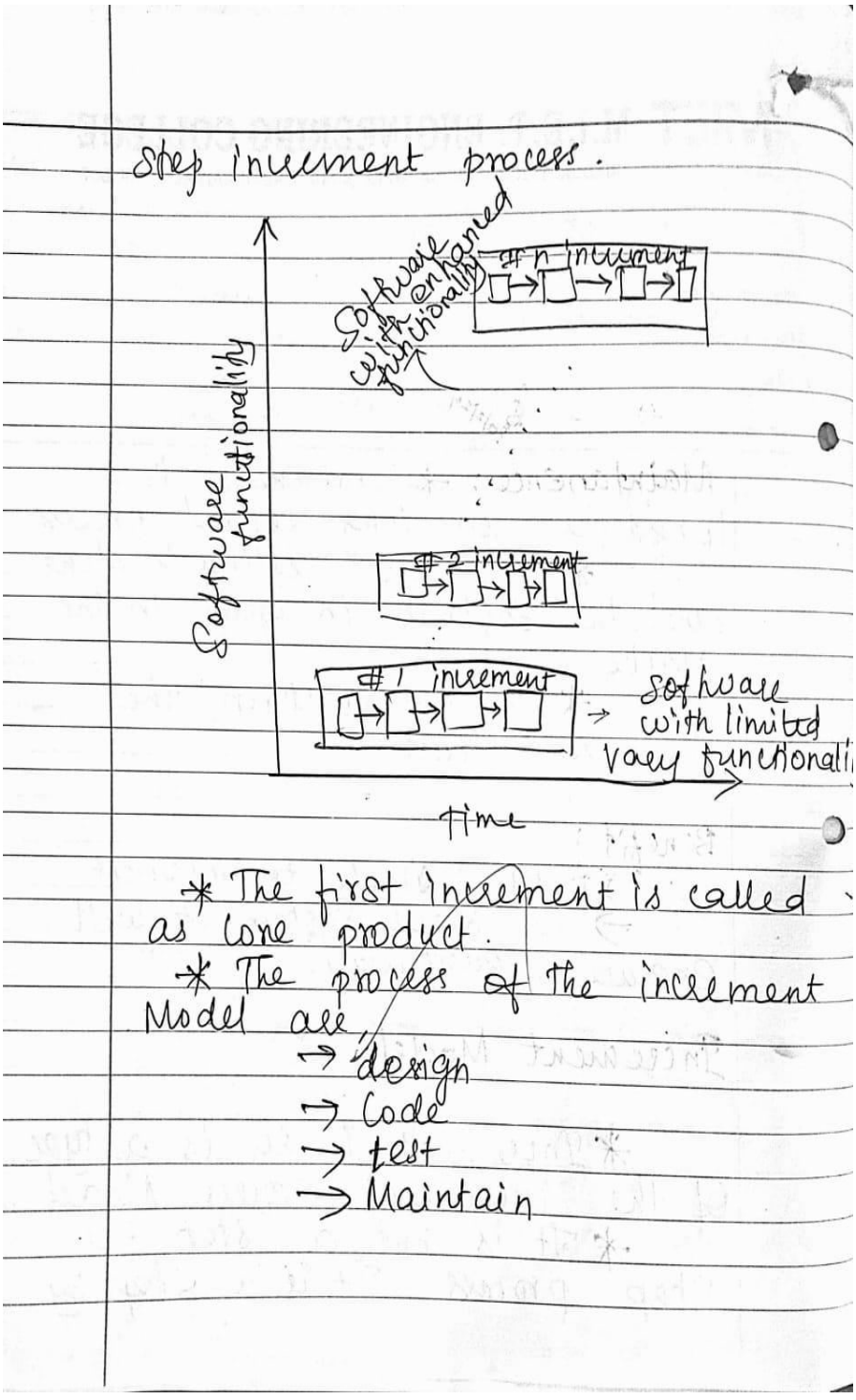

* The first increment is called as core product.
* The process of the increment Model are,
  - → design
  - → Code
  - → test
  - → Maintain

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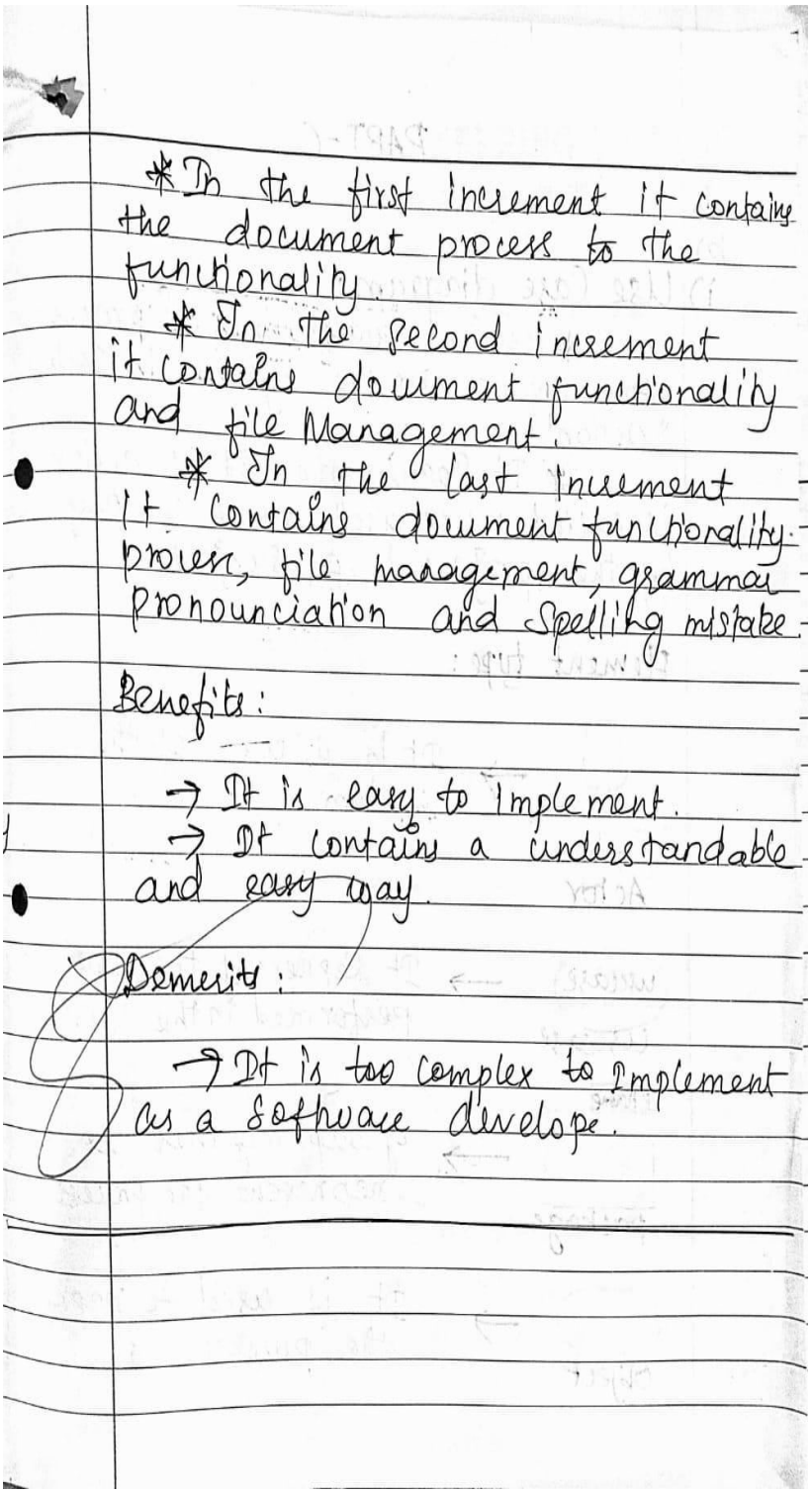

* In the first increment it contains the document process to the functionality.
* In the second increment it contains document functionality and file Management.
* In the last increment it contains document functionality prover, file management, grammar pronounciation and Spelling mistake.

Benefits:

→ It is easy to Implement.
→ It contains a understandable and easy way.

Demerits:

→ It is too complex to Implement as a Software develope.

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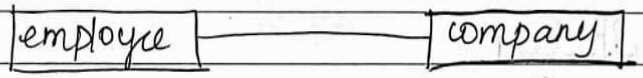
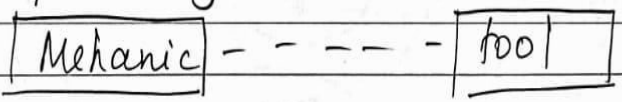
Degree & Branch : Test :
Subject : Subject Code :
Staff Signature : 20/12/24 Additional Sheet No. :

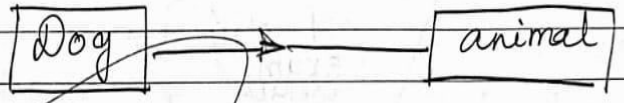
Relationship:
Association.



Dependency:



Generalization:



Advantage:

→ Easy to Implement.
→ Easy to understand.

Disadvantage:

→ It uses too Many Use Case Model.

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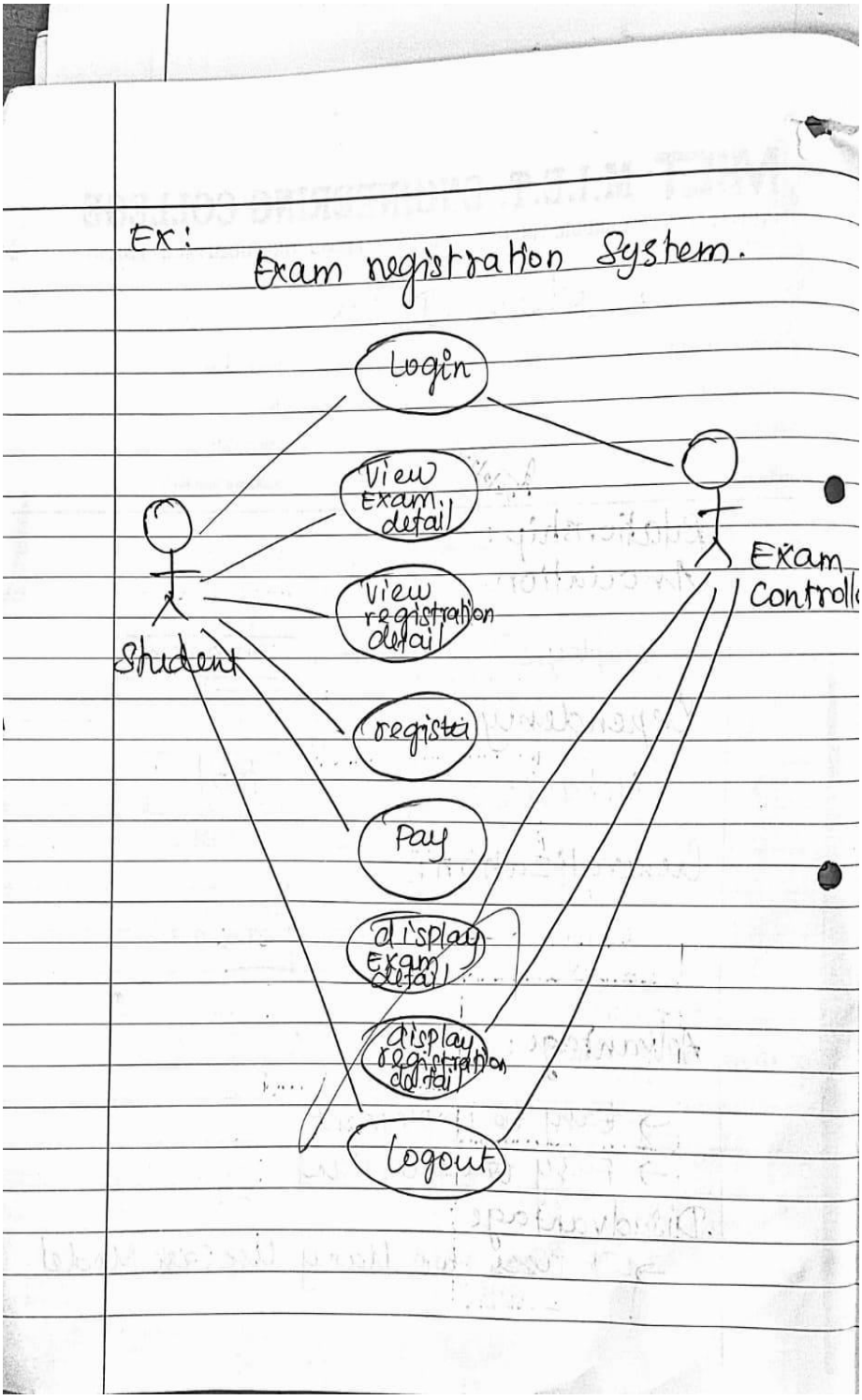

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PART-C.

8.

b)

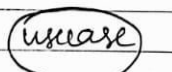
i) **Use Case diagram:**

* Use Case diagram is a process to perform in the system is called "action".

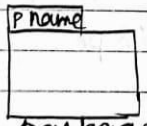
* It Specify the Set of action is called "usecase" which is performed by the project is a subject.

Element type:

Actor → It is a user of the system.



usecase → It Represent the process performed in the System.



package → group together to represent the process

object → It is used to represent the process.

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Merit:

→ It is very easy to understand.
→ It is simple.

Demerit:

→ If we use more classes it contains more classes and it difficult to understand.

iii) Interaction diagram:

* It contains a set object and the relationship of the attributes with link. It contains 2 types,
→ Sequence diagram
→ Collaboration diagrams.

Sequence diagram:
→ It is a type of Interaction diagram.
→ It is used to link with a single usecase.
→ It is a link contain to about a attribute.

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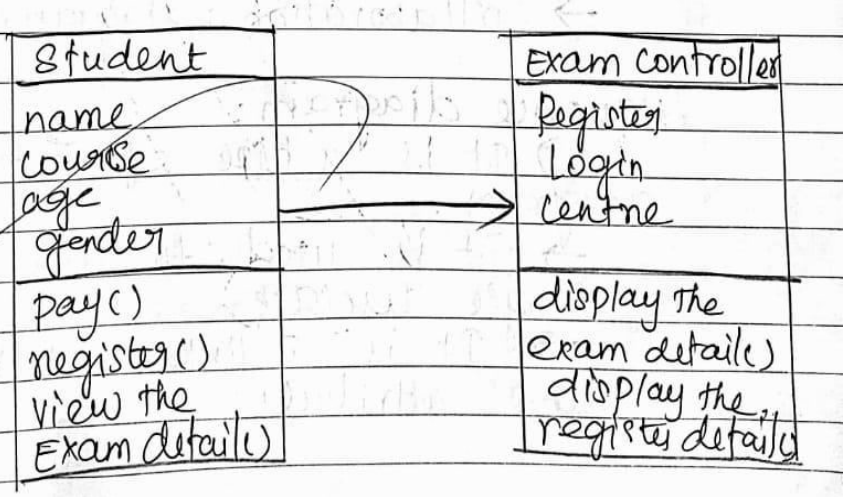
ii) Class diagram:

* It is used to set of object classes and the relation between the attributes classes.
* It consists of:
  - → class
  - → attribute
  - → operation.

Account	→ class
account no name Branch	} → attribute
deposit() getbalance()	} → operation.

Example:



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Semester :
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Test :
Subject :
Subject Code :
Staff Signature :
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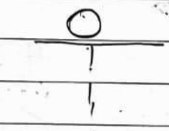
Life line notation with object:

It represent a Object.

Lifeline notation with entity:



It represent a entity.

lifeline notation with actor:

It represent a actor of the notation

life line Notation with Control element:

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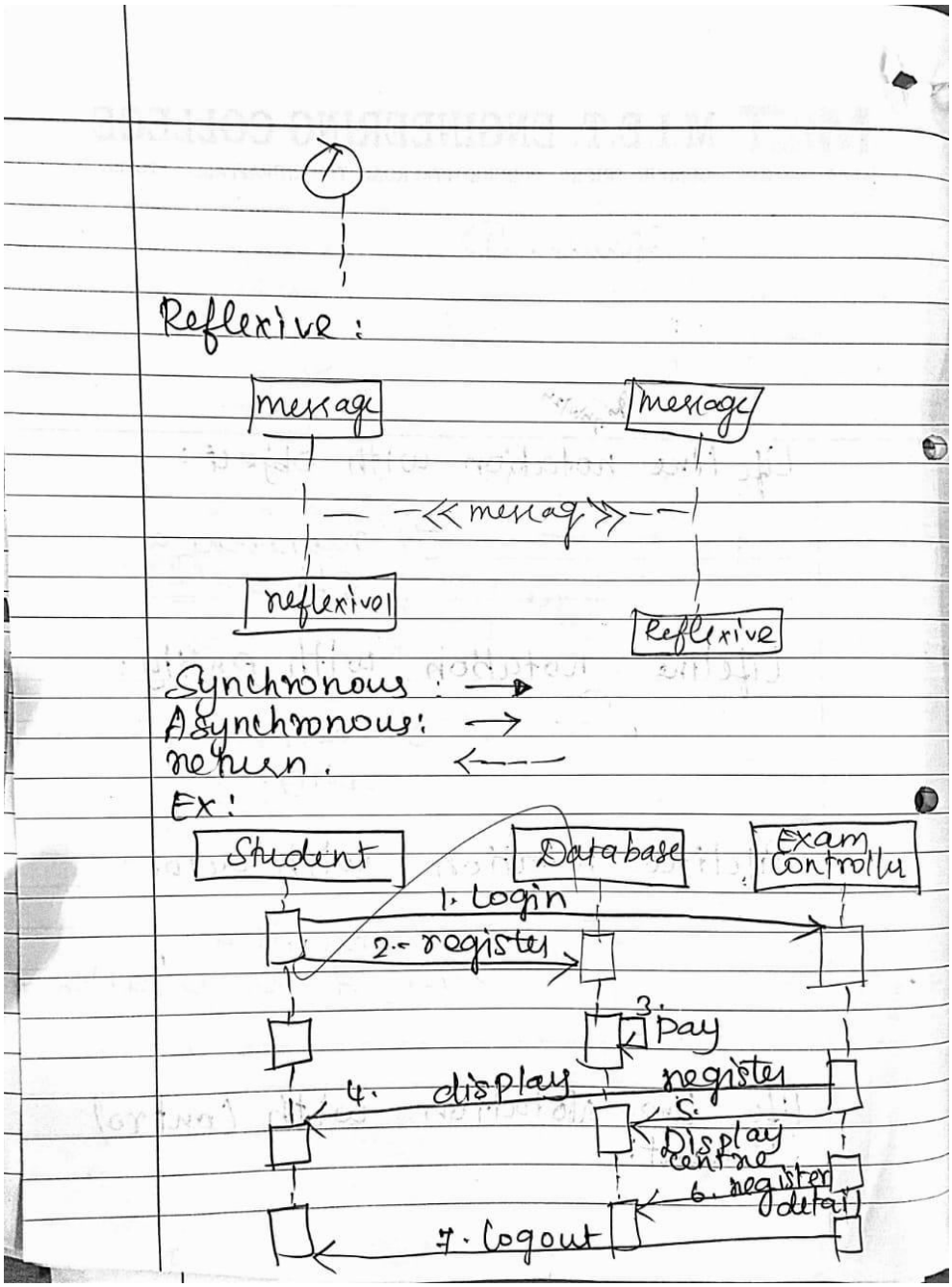

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Collaboration diagram:

→ It is same as a sequence diagram but some different.
→ It is a type of Intiaction diagram.

actor → It is used to specify the user.

link → It is a relationship between attributi

Message → Return Message.

(object) → Notes of the Message.

Merit:
→ It is easy to implement.
→ simple.

Demerit:
→ Difficult to understand
→ Difficult to draw.

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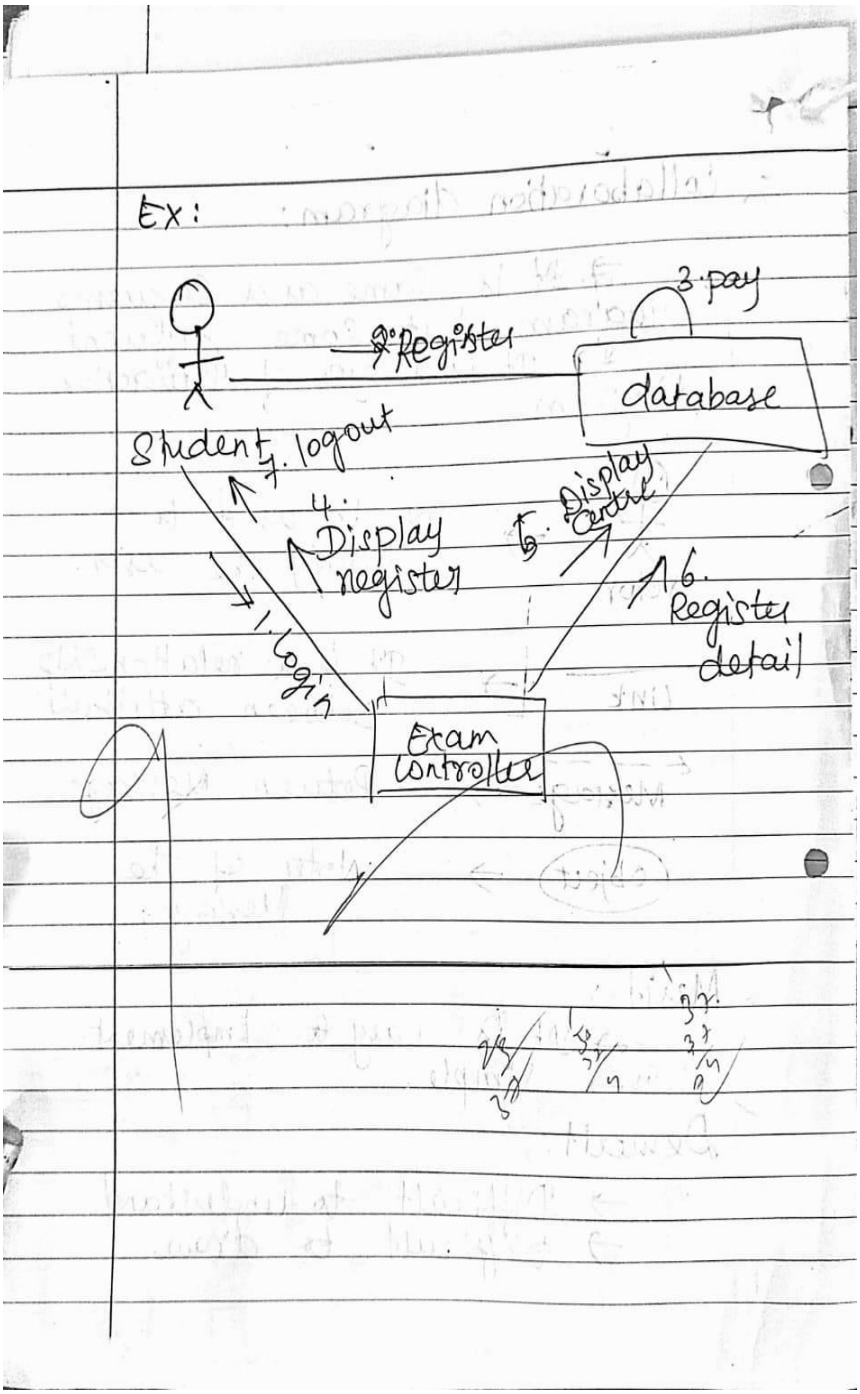

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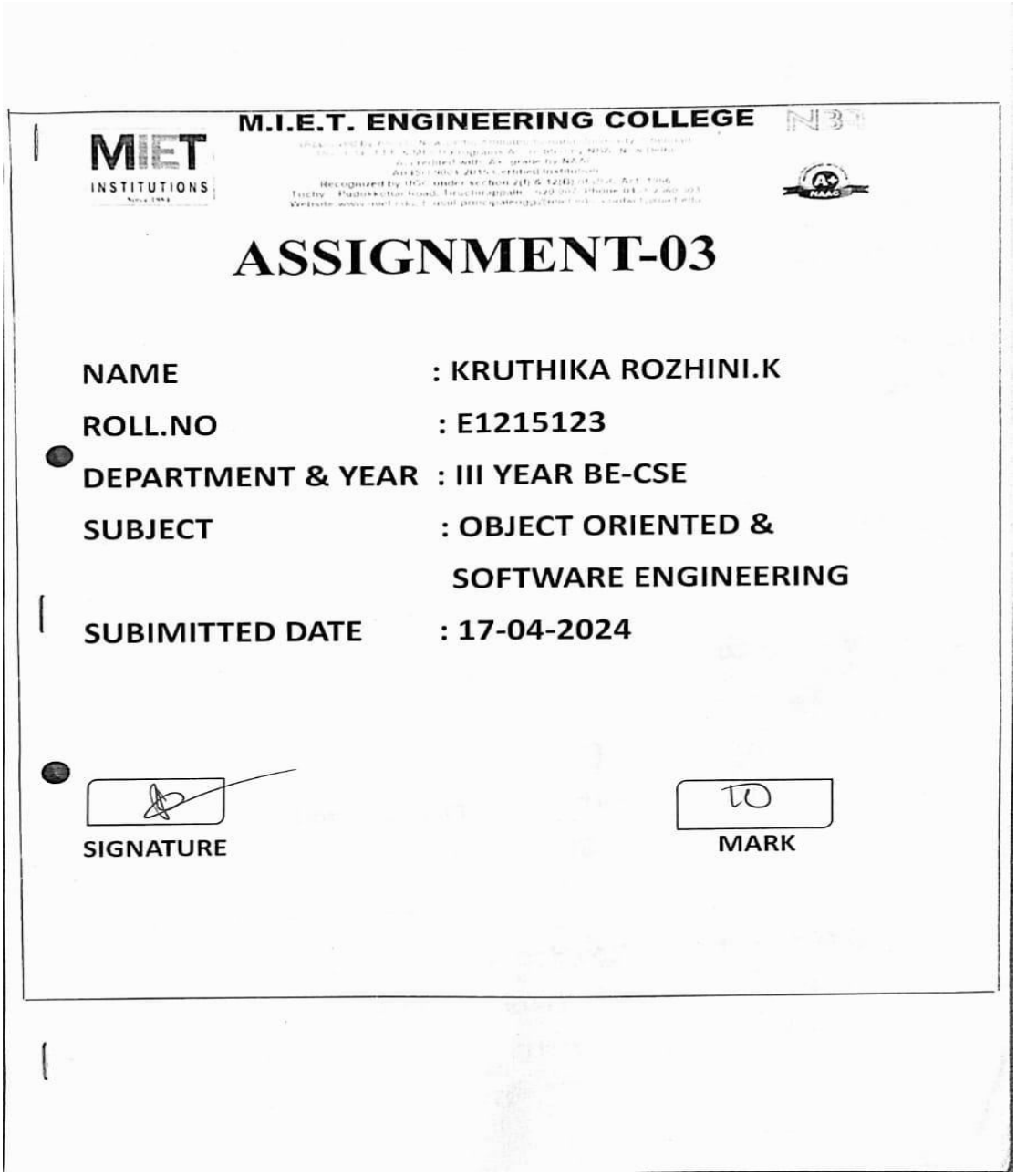
5. Assignments

As per scheduled dates fixed by the departments, the assignment questions are being given in the classes and enough time is given to the students to complete and submit the assignments.



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ASSIGNMENT-03

NAME : KRUTHIKA ROZHINI.K

ROLL.NO : E1215123

DEPARTMENT & YEAR : III YEAR BE-CSE

SUBJECT : OBJECT ORIENTED & SOFTWARE ENGINEERING

SUBIMITTED DATE : 17-04-2024

SIGNATURE

10

MARK

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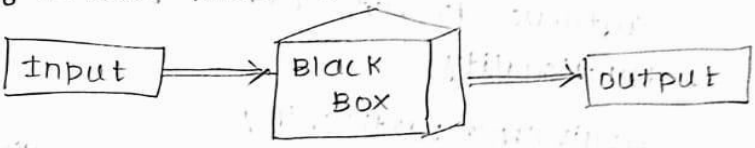
Black Box Testing :

The Black box Testing is also called as (1) Behavioural testing.

Black box testing methods focus on the functional requirements of the software. Test sets are dervied that fully exercise all functional requirements.

The Black box testing is not an alternative to White Box testing and it incovers different class of errors than white box testing.



Types of Blockbox testing :

The following are the serveral categories of black box testing

- Functional Testing
- non-functional testing (NFT)
- Regression testing.

Functional Testing :

This type of Blackbox testing verifies that the software's functions and features work as excepted and ahere to the specified requirements.

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S.NO	Test case	Expected result
1.	The Ballast tank is filled with air above threshold level.	It will float on the surface of water.
2.	the Ballast tank is filled with water with water above threshold.	It will sink under water by letting some water out.
3.	Fin in centered.	submarine can be moved forward
4.	Fin to right side	Direction changes.
5.	Fin to left side	Direction gets changed.
6.	Creating adequate amount of oxygen.	the water is separated out as and o by releasing oxygen.

White Box testing:

The white Box testing is also as structur testing.

In white Box testing derivation of test cases in according to program structure. H

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the larger system.

Testes are executed from the user's or client's point of view.

Test cases are easily reproducible.

Disadvantages of Black Box testing:

It is difficult to execute the text cases.

It does not reveal the errors in the control structure.

Some programs in the applications are not tested.

Example:

Design a Block box testing for an under water submarine.

solution:

Inside submarine there are conitainers called ballast tanks. If ballast tanks are full of air then, the submarine will float otherwise, if water is plumed into the ballast tank then submarine will sink. the reader of submarine is turned left or right.

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Non-functional Testing :

unlike functional testing, non-functiona testing evaluates ascepts of the software that are not related to its specific functio It includes tests for performance, usabilit security, scalability, etc..

Regression Testing :

Regression Testing is performed to ensure that recent changes or updates to the software do not adversely affect existing functionality.

Equivalence partitioning :

It is a Black box techniaue that divides the recent domain into classes of data. From this data test cases can be derived.

Boundary value Analysis (BVA) :

Boundary value Analysis is done to check Boundary conditions.

A Boundary value analysis is a testing techniaue in which the elements at the edge of the domain are selected and tested.

Advantages of Black Box testing :

It is efficient for implementing the tes

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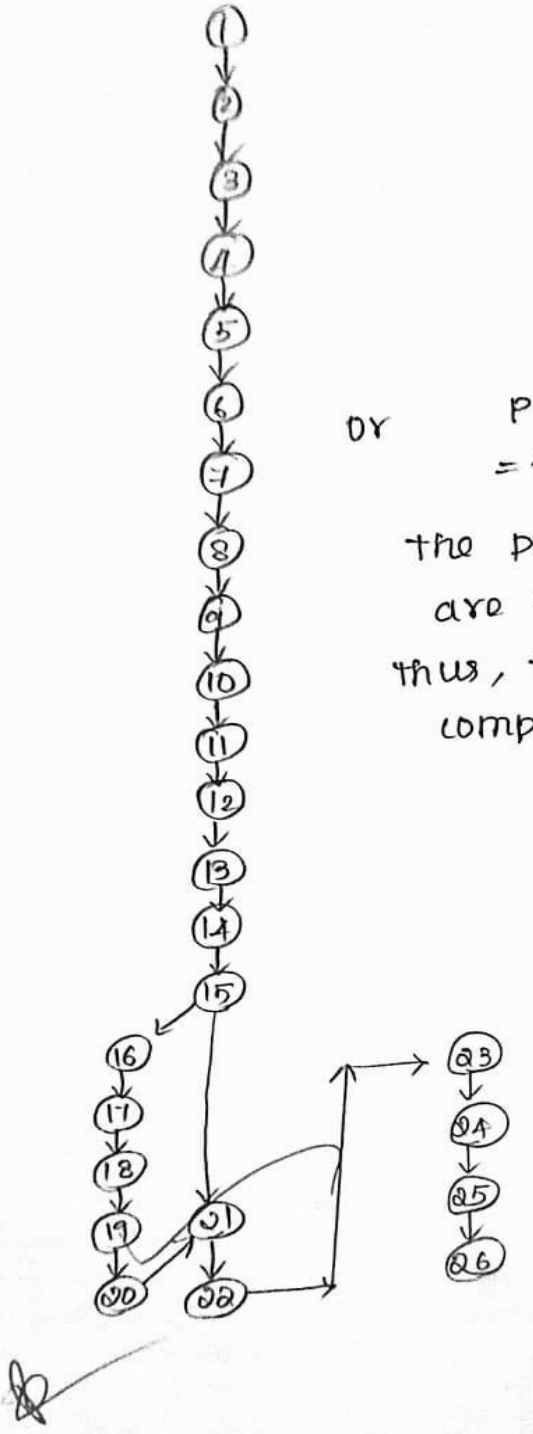
(b)



OR P+1
= 6+1 = 7

the predicate node P are 9, 10, 11, 13, 15, 21

thus, the cyclomatic complexity is 7.

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```
2. {
3. int i,A[10];
4. int j, temp;
5. printf("\n\t\t Bubble sort \n");
6. printf("\n How many elements are use?");
7. scanf("\n Enter the elements \n");
8. printf("%d", &n);
9. for(i=0; i<n; i++)
10. scanf("%d", &A[i]);
11. for(i=0; i<n-2; i++)
12. {
13. for[j=0; j<n-2; j++)
14. {
15. if(A[j] > A[j+1])
16. {
17. temp = A[j];
18. A[j] = A[j+1];
19. A[j+1] = temp;
20. }
21. }
22. }
23. printf("\n The sorted list is ... \n");
24. for(i=0; i<n; i++)
25. printf("%d", n[i]);}
```

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2) processing : performing risk analysis to guide through the entire process. (4)

3) proper test planning : performing testcases to cover the entire code.

4) output : preparing final report of the entire testing process.

Advantages of white Box :

code optimization.
Early detection of defects
comprehensive test cases
Integration of SDLC.

Disadvantages of White Box testing :

programming knowledge and source code Access.
Test case overhead.
Increased production Errors.

Example :

Write a program for sorting of n numbers.

Soln :

```
#include <stdio.h>
# include <conio.h>
int n ;
1. void main ()
```

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2. Nested loops:

The simple loop test for innermost loop is done.

This testing processing is continued until all loops have been tested.

3. concatenated loop:

It can be tested in the same manner as simple loop tests.

4. unstructed loops:

The testing cannot be effectively conducted for unstructed loops. Hence these types of loops reads to be redigned.

Basics path testing:

path testing is a structural testing strateg

1. Design the flow graph for the program.
2. calculate the cyclomatic complexity
3. select a basic set of path...
4. generate test cases of these paths.

process of white box testing:

1) Input: Requirement, functional specifica design documents, source code.

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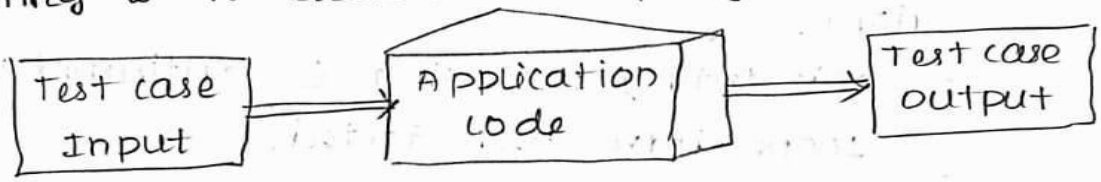
Knowledge of the program is used to identify additional test cases objective of white box testing is to exercise all program statements



condition Testing :

To test the logical conditions in the program module the condition testing is used.

The condition testing focuses on each testing condition in the program.

Loop testing :

Loop testing is a white box testing technique which is used to test the loop constructs. Basically there are four types of loops.

1. simple loops :

The test can be performed for n number of classes.

n=0 that means skip the loop complexity.

n=1 that means one passess through the loop is tested.

n=2 that means two passes through the loop is tested.

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5. Letter to parents

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Trichy – Pudukkottai Road, Tiruchirappalli – 620 007. Phone:0431-2660 303
Website:www.miet.edu, E-mail:principalengg@miet.edu, contact@miet.edu

DATE : 02.05.24

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CYCLE TEST REPORT

STUDENT NAME: NIHAL ASFER K ROLL NO: E1215124

S.NO	SUBJECT CODE	SUBJECT NAME	CYCLE TEST 1		CYCLE TEST 2	
			MARK	STATUS	MARK	STATUS
1	CCS356	OBJECT ORIENTED SOFTWARE ENGINEERING	33	FAIL	41	FAIL
2	CCW332	DIGITAL MARKETING	21	FAIL	39	FAIL
3	CS3691	EMBEDDED SYSTEMS AND IOT	13	FAIL	34	FAIL
4	CCS354	NETWORK SECURITY	37	FAIL	29	FAIL
5	OCE351	ENVIRONMENT AND SOCIAL IMPACT ASSESSMENT	39	FAIL	41	FAIL
6	CCS341	DATA WAREHOUSING	38	FAIL	22	FAIL

COLLEGE REOPEN DATE: 22.01.24
NUMBER OF HOURS ATTENDED:190
NUMBER OF HOURS ABSENT:226
TOTAL ATTENDANCE PERCENTAGE (as on 02.05.24): 45.6%

CLASS COORDINATOR HOD/CSE

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