INSTITUTE OF AERONAUTICAL ENGINEERING
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Dundigal, Hyderabad - 500 043

COMPUTER SCIENCE AND ENGINEERING

DEFINITIONS AND TERMINOLOGY

Course Name	:	**SOFTWARE ENGINEERING**
Course Code	:	**ACS008**
Program	:	**B.Tech**
Semester	:	**V**
Branch	:	**COMPUTER SCIENCE AND ENGINEERING**
Sections	:	**A, B, C, D, E**
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COURSE OBJECTIVES

	The course should enable the students to:
I	Learn how to elicitate requirements and develop software life cycles.
II	Understand the design considerations for enterprise integration and deployment.
III	Analyze quality assurance techniques and testing methodologies. .
IV	Understand implementation issues such as modularity and coding standards
V	Prepare a project plan for a software project that includes estimates of size and effort, a schedule, resource allocation, configuration control, and project risk

DEFINITIONS AND TERMINOLOGYQUESTION BANK

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
		UNIT - I				
1	What is spiral lifecycle model?	The spiral model, also known as the spiral lifecycle model. This model of development combines the features of the prototyping model and the strategies that models methodologies used in agile software development.	Remember	CO 1	CLO 1	ACS008.01
2	What is Rapid Application Development model?	It is a type of incremental model. The developments are time boxed, delivered and then assembled into a working prototype.	Remember	CO 1	CLO 1	ACS008.01

3	What is Agile model?	Agile SDLC model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of working software product. Agile Methods break the product into small incremental builds. These builds are provided in iterations.	Remember	CO 1	CLO 1	ACS008.01
4	What is V model?	The V-model is a type of SDLC model where process executes in a sequential manner in V-shape. It is also known as Verification and Validation model.	Remember	CO 1	CLO 1	ACS008.01
4	What is the Scrum process?	Scrum is an agile way to manage a project, usually software development.	Remember	CO 1	CLO 2	ACS008.02
5	Define waterfall model?	In Waterfall model, each phase must be completed before the next phase can beginand there is no overlapping in the phases. Waterfall model is the earliest SDLC approach that was used for software development.	Remember	CO 1	CLO 2	ACS008.02
6	Define umbrella activities?	Umbrella activities are those which keep running in the background throughout the software development.	Remember	CO 1	CLO 2	ACS008.02
7	Give the meaning for Function Points.	A function point is a "unit of measurement" to express the amount of business functionality an information system (as a product) provides to a user. FunctionPoints are used to compute a functional size measurement (FSM) of software. The cost (in dollars or hours) of a single unit is calculated from past projects.	Understand	CO 1	CLO 5	ACS008.05
8	Define Task sets?	Task sets consist of a collection of small work tasks, project milestones, work productivity and software quality assurance points.	Remember	CO 1	CLO 4	ACS008.04
9	Define software process?	The software process framework is a collection of task sets.	Remember	CO 1	CLO 2	ACS008.02
10	Define the process of framework?	The process of framework defines a small set of activities that are applicable to all types of projects.	Remember	CO 1	CLO 5	ACS008.05
12	Define Software Configuration Management?	Software Configuration Management manages the effect of change throughout the software process.	Remember	CO 1	CLO 4	ACS008.04
13	What is Software Process Improvement (SPI)?	Software Process Improvement (SPI) methodology is defined as definitions of sequence of tasks, tools and techniques to be performed to plan and implement improvement activities. Well-known SPI frameworks like CMMI and ISO/IEC 15504 define SPI methodologies in an abstract manner.	Remember	CO 1	CLO 1	ACS008.01
14	What is the purpose of process assessment?	The aim of process assessment is to identify the areas for improvement and suggest a plan for making that improvement.	Remember	CO 1	CLO 3	ACS008.03
15	Define Personal Software Process?	The Personal Software Process (PSP) is a structured software developmentprocess that is intended to help software engineers better understand and improve their performance by bringing discipline to the way they develop software and tracking their predicted and actual development of the code.	Remember	CO 1	CLO 1	ACS008.01
16	What is software?	Software is: (1) Instructions (computer programs) that when executed provide desired features, function, and performance;(2) Data structures that enable the programs to adequately manipulate information and (3) Documentation	Remember	CO 1	CLO 1	ACS008.01

		that describes the operation and use of the programs.				
17	What is software engineering?	The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software.	Remember	CO 1	CLO 1	ACS008.01
18	What is software process?	Software process is defined as the structured set of activities that are required to develop the software system.	Remember	CO 1	CLO 1	ACS008.01
19	What is System Engineering?	Systems engineering is an interdisciplinary field of engineering and engineering management that focuses on how to design and manage complex systems over their life cycles.	Remember	CO 1	CLO 1	ACS008.01
20	What is a process model?	Process models are processes of the same nature that are classified together into model. Thus, a process model is a description of a process at the type level. Since the process model is at the type level, a process is an instantiation of it	Remember	CO 1	CLO 2	ACS008.02
21	Define perspective process model?	A software process model is a simplified representation of a software process. Each model represents a process from a specific perspective. These generic models are abstractions of the process that can be used to explain different approaches to the software development.	Remember	CO 1	CLO 2	ACS008.02
22	Define specialized process models?	Specialized process models take on many of the characteristics of one or more of the traditional models. These models tend to be applied when a specialized or narrowly defined software engineering approach is chosen.	Remember	CO 1	CLO 2	ACS008.02
23	Give the meaning for LOC.	Source lines of code (SLOC), also known as lines of code (LOC), is a software metric used to measure the size of a computer program by counting the number of lines in the text of the program's source code.	Understand	CO 1	CLO 5	ACS008.05
24	Define software estimation?	In software development, effort estimation is the process of predicting the most realistic amount of effort (expressed in terms of person-hours or money) required to develop or maintain software based on incomplete, uncertain and noisy input.	Remember	CO 1	CLO 4	ACS008.04
25	Define prototyping?	Prototyping refers to an initial stage of a software release in which developmental evolution and product fixes may occur before a bigger release is initiated. These kinds of activities can also sometimes be called a beta phase or beta testing, where an initial project gets evaluated by a smaller class of users before full development.	Remember	CO 1	CLO 2	ACS008.02
26	Define project scheduling?	Software project scheduling is an activity that distributes estimated effort across the planed project duration by allocating the effort to specific software engineering tasks.	Remember	CO 1	CLO 5	ACS008.05
27	Define earned value analysis?	Earned Value Analysis (EVA) is one of the key tools and techniques used in Project Management, to have an understanding of how the project is progressing. EVA impliesgauging the progress based on earnings or money. Both, schedule and cost are calculated on the basis of EVA.	Remember	CO 1	CLO 4	ACS008.04
28	What is legacy software?	Legacy software is an old and outdated program that is still used to perform a task for a user, even though newer and more efficient options are available.	Remember	CO 1	CLO 1	ACS008.01

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
29	Define COCOMO model?	The Constructive Cost Model (COCOMO) is a procedural cost estimate model for Software projects. It has been commonly used to project costs for a variety of projects and business processes.	Remember	CO 1	CLO 3	ACS008.03
30	Define software myths?	A belief of software managers, customers, and developers believe falsely.	Remember	CO 1	CLO 1	ACS008.01

UNIT – II

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
1	Define the term Traceability?	Traceability is a property of an element of documentation or code that indicates the degree to which it can be traced to its origin or "reason for being". Traceability also indicatestheabilitytoestablishapredecessor-successorrelationshipbetweenonework Product and another.	Remember	CO 2	CLO 7	ACS008.07
2	Define Software maintainability?	The ease with which a software system or component can be modified to correct faults, improve performance or other attributes, or adapt to a changed environment.	Remember	CO 2	CLO 7	ACS008.07
3	What is the purpose of Requirements Traceability Matrix?	The purpose of the Requirements Traceability Matrix is to ensure that all requirements defined for a system are tested in the test protocols.	Remember	CO 2	CLO 8	ACS008.08
4	Define feasibility report?	A feasibility report is a document that assesses potential solutions to the business problem or opportunity, and determines which of these are viable for further analysis.	Remember	CO 2	CLO 8	ACS008.08
5	Define Software Reliability?	According to ANSI, Software Reliability is defined as: the probability of failure-free software operation for a specified period of time in a specified environment.	Remember	CO 2	CLO 7	ACS008.07
6	Define Technical feasibility study?	Technical feasibility study is the complete study of the project in terms of input, processes, output, fields, programs and procedures. It is a very effective tool for long term planning and trouble shooting. The technical feasibility study should most essentially support the financial information of an organization.	Remember	CO 2	CLO 8	ACS008.08
7	Define Requirements development?	Requirements development is a process that consists of a set of activities that produces requirements for a product.	Remember	CO 2	CLO 6	ACS008.06
8	Define the term project stakeholder?	According to the Project Management Institute (PMI), the term project stakeholder refers to, "an individual, group, or organization, who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of project".	Remember	CO 2	CLO 6	ACS008.06
9	Define Requirement prioritization?	Requirement prioritization is used in Software product management for determining which candidate requirements of a software product should be included in a certain release.	Remember	CO 2	CLO 6	ACS008.06
10	What is Consistency check in requirements validation process?	Requirements in the document shouldn't conflict or different description of the same function.	Remember	CO 2	CLO 9	ACS008.09

11	Define the term Verifiability of requirements validation process?	Requirements should be written so that they can be tested. This means you should be able to write a set of tests that demonstrate that the system meets the specified requirements.	Remember	CO 2	CLO 7	ACS008.07
12	Define Petri nets?	Petri nets are specific types of modeling constructs useful in data analysis, simulations, business process modeling and other scenarios. Petri nets use elements like places, transitions and gates to describe complex procedures and model the workings of system.	Remember	CO 2	CLO 8	ACS008.08
13	Define structure chart?	A structure chart shows the breakdown of the configuration system to the lowest manageable levels.	Remember	CO 2	CLO 8	ACS008.08
14	Define the term failure?	Failure is the inability of a system or component to perform required function according to its specification.	Remember	CO 2	CLO 9	ACS008.09
15	Define the term Regulatory compliance?	Regulatory compliance describes the goal that organizations aspire to achieve in their efforts to ensure that they are aware of and take steps to comply with relevant laws, policies, and regulations.	Remember	CO 2	CLO 10	ACS008.10
16	Define a requirement?	A condition or capability needed by a user to solve a problem or achieve an objective. A condition or capability that must be met or possessed by a system or system Component to satisfy a contract, standard, specification, or other formally imposed document.	Remember	CO 2	CLO 7	ACS008.07
17	Define functional requirements?	A functional requirement defines a function of a system or its component, where a function is described as a specification of behavior between outputs and inputs. As defined in requirements engineering, functional requirements specify particular results of a system.	Remember	CO 2	CLO 7	ACS008.07
18	Define non-functional requirements?	A non-functional requirement (NFR) is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. They are contrasted with functional requirements that define specific behavior or functions.	Remember	CO 2	CLO 8	ACS008.08
19	Define user requirements?	The user requirement(s) document (URD) or user requirement(s) specification (URS) is a document usually used in software engineering that specifies what the user expects the software to be able to do.	Remember	CO 2	CLO 8	ACS008.08
20	Define system requirements?	System requirements are the configuration that a system must have in order for a hardware or software application to run smoothly and efficiently. Failure to meet these requirements can result in installation problems or performance problems. System requirements are also known as minimum system requirements.	Remember	CO 2	CLO 7	ACS008.07
21	Define domain requirements?	A domain is a field of study that defines a set of common requirements, terminology, and functionality for any software program constructed to solve a problem in the area of computer programming, known as domain engineering. The word domain is also taken as a synonym of application domain.	Remember	CO 2	CLO 8	ACS008.08
22	Define Source traceability?	These are basically the links from requirement to stakeholders who propose these requirements.	Remember	CO 2	CLO 6	ACS008.06

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
23	Define validation process?	Validation is the process of evaluating software at the end of the development process to determine whether software meets the customer expectations and requirements	Remember	CO 2	CLO 6	ACS008.06
24	Define verification process?	Verification is the process of evaluating products of a development phase to find out whether they meet the specified requirements	Remember	CO 2	CLO 6	ACS008.06
25	Define requirements management?	Requirements management is the process of documenting, analyzing, tracing, prioritizing and agreeing on requirements and then controlling change and communicating to relevant stakeholders. It is a continuous process throughout a project. A requirement is a capability to which a project outcome (product or service) Should conform.	Remember	CO 2	CLO 9	ACS008.09
26	Define requirements elicitation?	In requirements engineering, requirements elicitation is the practice of researching and discovering the requirements of a system from users, customers, and other stakeholders. The practice is also sometimes referred to as "requirement gathering".	Remember	CO 2	CLO 7	ACS008.07
27	Define requirements analysis?	Requirements analysis, also called requirements engineering, is the process of determining user expectations for a new or modified product. These features, called requirements, must be quantifiable, relevant and detailed. In software engineering, Such requirements are often called functional specifications.	Remember	CO 2	CLO 8	ACS008.08
28	Define requirements specification?	A software requirements specification (SRS) is a description of a software system to be developed.	Remember	CO 2	CLO 8	ACS008.08
29	Define data dictionary?	The data dictionary can be defined as an organized collection of all the data elements of the system with precise and rigorous definitions so that user and system analyst will have a common understanding of inputs, outputs, components of stores and intermediate	Remember	CO 2	CLO 9	ACS008.09
30	Define structured system analysis?	Structured systems analysis is a set of standards for systems analysis and application design. It uses a formal methodical approach to the analysis and design of information systems.	Remember	CO 2	CLO 10	ACS008.10

UNIT – III

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
1	Define a design pattern?	A design pattern describes a design structure which solves a particular design problem in a specified content.	Remember	CO 3	CLO 11	ACS008.11
2	Define functional independence?	The functional independence is the concept of separation and related to the concept of modularity, abstraction and information hiding.	Remember	CO 3	CLO 11	ACS008.11
3	Define Refactoring?	Refactoring is the process of changing the software system in a way that it does not change the external behavior of the code still improves its internal structure.	Remember	CO 3	CLO 12	ACS008.12
4	What are Super ordinate systems?	Super ordinate systems use the target system like a part of some higher-level processing scheme.	Remember	CO 3	CLO 12	ACS008.12
5	What are Subordinate systems?	Subordinate systems are used by the target system and provide the data mandatory to complete target system functionality.	Remember	CO 3	CLO 12	ACS008.12

6	Define archetype?	An archetype is a class or pattern which represents a core abstraction which is critical to implement or design for the target system.	Remember	CO 3	CLO 13	ACS008.13
7	Define Functionality of a software system?	The degree to which the software satisfies stated needs as indicated by the following sub attributes: suitability, accuracy, interoperability, compliance, and security.	Remember	CO 3	CLO 13	ACS008.13
8	Define Usability of a software system?	The degree to which the software is easy to use as indicated by the following sub attributes: understandability, learn ability, operability.	Remember	CO 3	CLO 14	ACS008.14
9	Define the term Portability of software?	The ease with which the software can be transposed from one environment to another as indicated by the following sub attributes: adaptability, install ability, conformance, and replace ability.	Remember	CO 3	CLO 15	ACS008.15
10	Define a transaction?	A transaction is a unit of work seen from a system user's point of view. A transaction Consists of a sequence of operations, some of which are performed by a system, persons or devices that are outside of the system.	Remember	CO 3	CLO 15	ACS008.15
12	What is Coincidental cohesion?	Coincidental cohesion is when parts of a module are grouped arbitrarily; the only relationship between the parts is that they have been grouped together.	Remember	CO 3	CLO 13	ACS008.13
13	Define Sequential cohesion?	Sequential cohesion is when elements of module are grouped because the output of one element serves as input to another and so on, it is called sequential cohesion.	Remember	CO 3	CLO 11	ACS008.11
14	Define data coupling?	The dependence of a software component on data not exclusively under the control of that software component. Data Coupling involves all the global variables and also those Local variables which are passed down through parameter lists to lower level components.	Remember	CO 3	CLO 15	ACS008.15
15	Define modularization in software design?	Modularization is a technique to divide a software system into multiple discrete and independent modules, which are expected to be capable of carrying out task(s) independently. These modules may work as basic constructs for the entire software.	Remember	CO 3	CLO 15	ACS008.15
16	Define the term External Inquiry?	An inquiry is a combination of input and output, where user sends some data to inquire about as input and the system responds to the user with the output of inquiry processed.	Remember	CO 3	CLO 15	ACS008.15
17	Define a design process?	The Design Process is an approach for breaking down a large project into manageable chunks. Use this process to define the steps needed to tackle each project, and remember to hold to all of your ideas and sketches throughout the process	Remember	CO 3	CLO 11	ACS008.11
18	Define a design model?	The design model is an object model describing the realization of use cases, and serves as an abstraction of the implementation model and its source code. The design model is used as essential input to activities in implementation and test.	Remember	CO 3	CLO 11	ACS008.11
19	Define transaction flow?	A unit of work seen from a system user's point of view is known as transaction. It containsthesequenceofoperations, someofwhichareperformedbyasystem, persons or devices that are outside of the system. Transactions begin with birth, i.e. they are created	Remember	CO 3	CLO 12	ACS008.12

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
		as a result of some external act. At the conclusion of the transactions processing, the transaction is no longer in the system				
20	Define Coupling?	Coupling is the measure of interconnection among modules in a program structure. It depends on the interface complexity between modules.	Remember	CO 3	CLO 12	ACS008.12
21	What is a cohesive module?	A cohesive module performs only "one task" in software procedure with little interaction with other modules. In other words cohesive module performs only one thing.	Remember	CO 3	CLO 12	ACS008.12
22	Define architectural design?	IEEE defines architectural design as "The process of defining a collection of hardware and software components and their interfaces to establish the framework for the Development of a computer system."	Remember	CO 3	CLO 13	ACS008.13
23	Define an architectural pattern?	An architectural pattern is a general, reusable solution to a commonly occurring problem in software architecture within a given context. Architectural patterns are Often documented as software design patterns.	Remember	CO 3	CLO 13	ACS008.13
24	Define the principle of user interface design?	The design should make simple, common tasks easy, communicating clearly and simply in the user's own language, and providing good shortcuts that are meaningfully related to longer procedures.	Remember	CO 3	CLO 14	ACS008.14
25	Define component based development?	Component-based development (CBD) is a procedure that accentuates the design and development of computer-based systems with the help of reusable software components. With CBD, the focus shifts from software programming to software system composing.	Remember	CO 3	CLO 15	ACS008.15
26	What is a component design?	The Component Design Activity is an activity of the Product Design Activity for creating a Component Design. The Product Architecture identifies a set of Adaptable Components that may be used to implement a work product family. A Component Design is a design specification for one of these Adaptable Components.	Remember	CO 3	CLO 15	ACS008.15
27	What is Transform mapping?	The transform mapping is a set of design steps applied on the DFD in order to map the transformed flow characteristics into specific architectural style.	Remember	CO 3	CLO 13	ACS008.13
28	Define Procedural cohesion?	When processing elements of a module are related with one another and must be executed in some specific order then such module is called procedural cohesion.	Remember	CO 3	CLO 11	ACS008.11
29	Define Content coupling?	Content coupling occurs when one module makes use of data or control information maintained in another module.	Remember	CO 3	CLO 15	ACS008.15
30	Define Logically cohesive?	A module that performs the tasks that are logically related with each other is called logically cohesive.	Remember	CO 3	CLO 15	ACS008.15
31	Define cardinality in data modeling?	Cardinality in data modeling, cardinality specifies how the number of occurrences of one object is related to the number of occurrences of another object.	Remember	CO 3	CLO 15	ACS008.15

UNIT - IV

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code

1	What is coupling?	Coupling is a measure that defines the level of inter-dependability among modules of program.	Remember	Co 4	CLO 16	ACS008.16
2	Define bug tracking system?	A bug tracking system or defect tracking system is a software application that keeps track of reported software bugs in software development projects. It may be regarded as a type of issue tracking system.	Remember	Co 4	CLO 16	ACS008.16
3	Define Requirements tracing?	Requirements tracing is the process of recording logical links between individual requirements and other system elements.	Remember	Co 4	CLO 17	ACS008.17
4	Define test plan?	A test plan is a document detailing the objectives, resources, and processes for a Specific test for a software or hardware product. The plan typically contains a detailed understanding of the eventual workflow.	Remember	Co 4	CLO 19	ACS008.19
5	What is the difference between bug and a defect?	A bug is a fault in a program which causes it to behave abruptly. Bugs are usually found either during unit testing done by developer of module testing by testers. Defect is found when the application does not conform to the requirement Specification. A defect can also be found when the client or user is testing.	Remember	Co 4	CLO 19	ACS008.19
6	Define Accessibility testing?	Accessibility testing is a subset of usability testing where in the users under consideration people with all abilities and disabilities are. The significance of this testing is to verify both usability and accessibility.	Remember	Co 4	CLO 20	ACS008.20
7	Define the term Refinement?	Refinement is a generic term of computer science that encompasses various approaches for producing correct computer programs and simplifying existing programs to enable their formal verification.	Remember	Co 4	CLO 19	ACS008.19
8	Define Stepwise refinement?	Stepwise refinement is the idea that software is developed by moving through the levels of abstraction, beginning at higher levels and, incrementally refining the software through each level of abstraction, providing more detail at each increment.	Remember	Co 4	CLO 17	ACS008.17
9	Define the term Stub?	Stubs are used during Top-down integration testing, in order to simulate the behaviour of the lower-level modules that are not yet integrated. Stubs are the modules that act as Temporary replacement for a called module and give the same output as that of the actual product.	Remember	Co 4	CLO 20	ACS008.20
10	Define Drivers?	Drivers are used in bottom up testing approach. Drivers are dummy code, which is used when the sub modules are ready but the main module is still not ready.	Remember	Co 4	CLO 18	ACS008.18
11	Define Component testing?	Component testing is a method where testing of each component in an application is done separately. Component testing is also known as module, unit or program testing. It finds the defects in the module and verifies the functioning of software.	Remember	Co 4	CLO 20	ACS008.20
12	Define test stubs?	Test stubs are programs that simulate the behaviors of software components (or modules) that a module undergoing tests depends on.	Remember	Co 4	CLO 18	ACS008.18
13	Define manual testing?	Manual testing is performed without taking help of automated testing tools. The software tester prepares test cases for different sections and levels of the code, executes the tests and reports the result to the manager.	Remember	Co 4	CLO 17	ACS008.17

14	Define Pair-wise Testing?	The behavior of software depends on multiple parameters. In pair wise testing, the multiple parameters are tested pair-wise for their different values.	Remember	Co 4	CLO 17	ACS008.17
15	Define State-based testing	The system changes state on provision of input. These systems are tested based on their states and input.	Remember	Co 4	CLO 17	ACS008.17
16	Define software testing?	Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design, and coding.	Remember	Co 4	CLO 16	ACS008.16
17	Define System Testing?	The groups of components are integrated to create a system or sub- system is done. These tests are based on the system specification.	Remember	Co 4	CLO 16	ACS008.16
18	Define Component testing?	Individual components are tested. Tests are derived from developer's experience not from customers.	Remember	Co 4	CLO 17	ACS008.17
19	Define black box testing?	The black box testing is also called as behavioral testing. This method fully focuses on the functional requirements of the software. Tests are derived that fully exercise all Functional requirements.	Remember	Co 4	CLO 19	ACS008.19
20	What is a boundary value analysis?	A boundary value analysis is a testing technique in which the elements at the edge of the domain are selected and tested. It is a test case design technique that complements equivalence partitioning technique. Here instead of focusing on input conditions only, the test cases are derived from the output domain	Remember	Co 4	CLO 19	ACS008.19
21	What is Cyclomatic complexity?	Cyclomatic complexity is software metric that gives the quantitative measure of logical complexity of the program. The Cyclomatic complexity defines the number of independent paths in the basis set of the program that provides the upper bound for the number of tests that must be conducted to ensure that all the statements have been executed at least once.	Remember	Co 4	CLO 20	ACS008.20
22	Define white box testing?	White Box Testing is a software testing method in which the internal structure/ design/ implementation of the item being tested is known to the tester.	Remember	Co 4	CLO 19	ACS008.19
23	Define Alpha testing?	The Alpha testing is attesting in which the version of complete software is tested by the customer under the supervision of developer. This testing is performed at developer's site.	Remember	Co 4	CLO 17	ACS008.17
24	Define Beta testing?	The Beta testing is a testing in which the version of the software is tested by the customer without the developer being present. This testing is performed at customer's site.	Remember	Co 4	CLO 20	ACS008.20
25	Define debugging?	Debugging is defined as the process of removal of defect. It occurs as a consequence of successful testing.	Remember	Co 4	CLO 18	ACS008.18
26	Define refactoring?	Refactoring is the process of changing a software system in such a way that it does not alter the external behavior of the code, yet improves its internal structure.	Remember	Co 4	CLO 20	ACS008.20
27	Define Smoke testing?	SMOKE TESTING, also known as "Build Verification Testing", is a type of software testing that comprises of a non-exhaustive set of tests that aim at ensuring that the most important functions work. The result of this testing is used to decide if a build is stable enough to proceed with further testing.	Remember	Co 4	CLO 18	ACS008.18

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
28	Define Basis path testing?	Basis path testing, or structured testing, is a white box method for designing test cases. The method analyzes the control flow graph of a program to find a set of linearly independent paths of execution.	Remember	Co 4	CLO 17	ACS008.17
29	Define Unit testing?	Unit testing is a level of software testing where individual units or components of software are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of any software. It usually has one or a few inputs and usually a single output.	Remember	Co 4	CLO 17	ACS008.17
30	Define Integration testing?	Integration testing is a level of software testing where individual units are combined and tested as a group. The purpose of this level of testing is to expose faults in the interaction between integrated units. Test drivers and test stubs are used to assist in Integration Testing.	Remember	Co 4	CLO 17	ACS008.17

UNIT - V

S.NO	QUESTION	ANSWER	Blooms Level	CO	CLO	CLO Code
1	What is software quality?	It is the degree to which the correct software was produced.	Remember	CO 5	CLO 23	ACS008.23
2	Define Corrective Maintenance?	This includes modifications and updation done in order to correct or fix problems, which are either discovered by user or concluded by user error reports.	Remember	CO 5	CLO 21	ACS008.21
3	Define reverse engineering?	It is a process to achieve system specification by thoroughly analyzing, understanding the existing system. This process can be seen as reverse SDLC model.	Remember	CO 5	CLO 23	ACS008.23
4	Define Preventive Maintenance?	This includes modifications and updation to prevent future problems of the software. It aims to attend problems, which are not significant at this moment but may cause serious issues in future.	Remember	CO 5	CLO 21	ACS008.21
5	What are project management tools?	These tools are used for project planning, cost and effort estimation, project scheduling and resource planning.	Remember	CO 5	CLO 22	ACS008.22
6	Define Adaptive Maintenance?	This includes modifications and updation applied to keep the software product up-to date and tuned to the ever changing world of technology and business environment.	Remember	CO 5	CLO 21	ACS008.21
7	What are change control tools?	Change control tools deals with changes made to the software after its baseline is fixed or when the software is first released.	Remember	CO 5	CLO 22	ACS008.22
8	Define Perfective Maintenance?	This includes modifications and updates done in order to keep the software usable over long period of time. It includes new features, new user requirements for refining the software and improve its reliability and performance.	Remember	CO 5	CLO 24	ACS008.24
9	What are the various phases of SDLC?	The generic phases of SDLC are: Requirement Gathering, System Analysis and Design, Coding, Testing and implementation. The phases depend upon the model we choose to develop software.	Remember	CO 5	CLO 24	ACS008.24
10	Define Software scope?	Software scope is a well-defined boundary, which encompasses all the activities that are done to develop and deliver the software product.	Remember	CO 5	CLO 23	ACS008.23
11	What is project estimation?	It is a process to estimate various aspects of software product in order to calculate the cost of	Remember	CO 5	CLO 23	ACS008.23

		development in terms of efforts, time and resources. This estimation can be derived from past experience, by consulting experts or by using pre-defined formulas.				
12	What is baseline?	Baseline is a measurement that defines completeness of a phase. After all activities associated with a particular phase are accomplished, the phase is complete and acts as a baseline for next phase.	Remember	CO 5	CLO 24	ACS008.24
13	Define the term Change control?	Change control is function of configuration management, which ensures that all changes made to software system are consistent and made as per organizational rules and regulations.	Remember	CO 5	CLO 25	ACS008.25
14	What is concurrency and how it is achieved in software?	Concurrency is the tendency of events or actions to happen simultaneously. In software, when two or more processes execute simultaneously, they are called concurrent processes.	Remember	CO 5	CLO 25	ACS008.25
15	What is software maintenance?	Software maintenance is an activity in which program is modified after it has been put into use.	Remember	CO 5	CLO 23	ACS008.23
16	Define software metric?	A software metric is a standard of measure of a degree to which a software system or process possesses some property.	Remember	CO 5	CLO 21	ACS008.21
17	Define software measurement?	Measurement is defined as a quantitative indication of the extent, amount, dimension, or size of some attribute of a product or process.	Remember	CO 5	CLO 23	ACS008.23
18	Define Indirect metrics?	It refers to the aspects that are not immediately quantifiable or measurable. Example: functionality of a program.	Remember	CO 5	CLO 21	ACS008.21
19	Define Configuration management plan?	Configuration management plan focuses on the configuration management procedures and structures to be used.	Remember	CO 5	CLO 22	ACS008.22
20	Define Maintenance plan?	The purpose of maintenance plan is to predict the maintenance requirements of the system, maintenance cost and efforts required.	Remember	CO 5	CLO 21	ACS008.21
21	Define Software re-engineering?	New features can be added to existing system and then the system is reconstructed for better use of it in future.	Remember	CO 5	CLO 22	ACS008.22
22	Define task set?	Task set is the collection of software engineering work tasks, milestones, and deliverables that must be accomplished to complete a particular project. Task sets are designed to accommodate different types of projects and different degrees of rigor.	Remember	CO 5	CLO 24	ACS008.24
23	Define task networks?	Constraints among tasks are expressed in the form of networks, called (hierarchical) task networks. A task network is a set of tasks and constraints among them. Such a network can be used as the precondition for another compound or goal task to be feasible.	Remember	CO 5	CLO 24	ACS008.24
24	Define risk management?	Risk management is the process of identifying risk, assessing risk, and taking steps to reduce risk to an acceptable level. The risk management approach determines the processes, techniques, tools, and team roles and responsibilities for a specific project.	Remember	CO 5	CLO 23	ACS008.23
25	Define risk mitigation?	Risk mitigation planning is the process of developing options and actions to enhance opportunities and reduce threats to project objectives. Risk mitigation implementation is the process of executing risk mitigation actions.	Remember	CO 5	CLO 23	ACS008.23
26	Define bug tracking system?	A bug tracking system or defect tracking system is a software application that keeps track of	Remember	CO 5	CLO 24	ACS008.24

27	Define proactive risk management?	Proactive risk management consists of focusing on mitigating the risks of threat events before these might possibly occur and negatively impact the organization	Remember	CO 5	CLO 25	ACS008.25
28	Define reactive risk management?	Reactive risk management consists of responding to risk events as they occur to mitigate negative impacts to the organization.	Remember	CO 5	CLO 25	ACS008.25

"reported software bugs in software development projects. It may be regarded as a type of issue tracking system."

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