SISTec®	**SAGAR INSTITUTE OF SCIENCE & TECHNOLOGY**		
	DEPARTMENT OF CSE-ARTIFICIAL INTELLIGENCE & DATA SCIENCE		
	QUESTION BANK		

BRANCH	CSE-AIDS
SESSION	2023-24
SEMESTER	IV

SUBJECT/CODE: SEAM/ AD-403

Q No.	QUESTIONS	Bloom's Taxonomy	Course outcome
	Unit-2		
1.	Compare relative advantages of the object-oriented and function oriented approaches to software design.	2(Understand)	CO-2
2.	What problems are likely to arise if two modules have high coupling?	1(Remember)	CO-2
3.	What problems are likely to occur if a module has low cohesion?	1(Remember)	CO-2
4.	Distinguish between high-level and detailed designs. What documents should be produced on completion of high-level and detailed designs respectively?	3(Application)	CO-2
5.	What is meant by the term coupling in the context of software design? Is it true that in a good design, the modules should have low coupling? Why?	1(Remember)	CO-2
6.	What is an ADT? What advantages accrue when a software design technique is based on ADTs? Explain why the object paradigm is said to be based on ADTs.	1(Remember)	CO-2
7.	Draw level 0 (context level) and level 1 data flow diagram for the following students' academic record management software	2(Understand)	CO-2
8.	What do you understand by the terms "structured analysis" and "structured design"?	1(Remember)	CO-2
9.	Briefly outline the important steps involved in developing a software system using a popular object-oriented design methodology.	2(Understand)	CO-2
10.	"Traditional procedural design is carried out top-down whereas object-oriented design is normally carried out bottom-up"-Justify the statement.	3(Application)	CO-2
11	Distinguish between software verification and software validation. Can one be used in place of the other? Justify your answer. In which phase(s) of the iterative waterfall SDLC are the verification and validation activities performed?	3(Application)	CO-2
12	What are the activities carried out during testing software? Schematically represent these activities. Which one of these activities takes the maximum effort?	1(Remember)	CO-2

13	Which one of the following is the strongest structural testing technique —statement coverage-based testing, branch coverage-based testing, or multiple condition coverage-based testing? Justify your answer.	1(Remember)	CO-2
14	Briefly highlight the difference between code inspection and code walkthrough. Compare the relative merits of code inspection and code walkthrough.	3(Application)	CO-2
15	Answer the following. Show the steps of your computation, and justify your answer in each case. (a) Suppose a program contains N decision points, each of which has two branches. How many test cases are necessary for branch testing?	2(Understand)	CO-2
16	Suppose two programmers are assigned the same programming problem and they develop this independently. Explain how can you compare their programs with respect to testing.	2(Understand)	CO-2
17	Usually large software products are tested at three different testing levels, i.e.,, unit testing, integration testing, and system testing. What would be the disadvantage of performing a thorough testing only after the system has been completely developed, e.g., detect all the defects of the product during system testing?	2(Understand)	CO-2
18	Distinguish between alpha, beta, and acceptance testing. How are the test cases designed for these tests? Are the test cases for the three types of tests necessarily identical? Explain your answer.	2(Understand)	CO-2
19	Usability of a software product is tested during which type of testing: unit, integration, or system testing? How is usability tested?	1(Remember)	CO-2
20	Distinguish among a test case, a test suite, a test scenario, and a test script.	3(Application)	CO-2