

2 Marks (Last 2 sems)

① Software Engineering:

Software engineering is the technological and managerial discipline concerned with systematic production and maintenance of software products that are developed and modified on time with cost estimation.

② Define the term - Managerial issue:

\* Managerial issues include methods of planning, Organizing, Execution, Monitoring, controlling and closing of a project.

\* Methods of cost estimation techniques and methods of resource allocation policies.

③ Planning Activity:

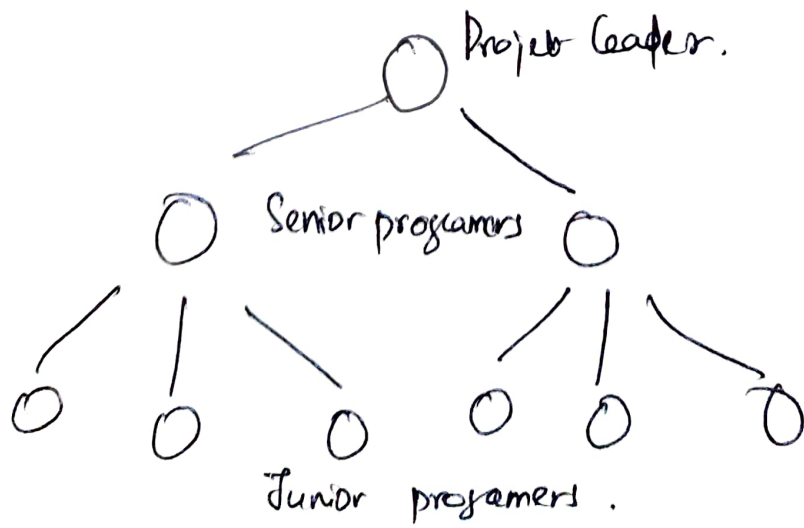
Project planning is an organized and integrated management process, which focus on activities required for successful completion of the project.

#### ④ Maintenance Cost:

Software maintenance cost is derived from the changes made to software after it has been delivered to the end user. Software does not wear out but it will become less useful as it gets older, plus there will always be issues within the software itself. Software cost will typically form 75% of TCO.

#### ⑤ Hierarchical team Structure?

The hierarchical team structure occupies a middle position between the extremes of democratic teams and chief programmer teams. In a hierarchical team the project leader assigns the tasks, attends reviews and walkthroughs, detects problems areas, balances the workload and participates in technical activities.



⑥ Decision table: Decision tables provide a mechanism for recording complex decision logic. Decision tables are widely used in data processing applications and have an extensively developed literature.

⑦ Data flow diagram: Data flow diagrams ("bubble charts") are directed graphs in which the nodes specify processing activities and the arcs specify data items transmitted between processing nodes.

⑧ Typeless language: Typeless languages are tailored to specific application areas and are usually of limited utility in other applications.  
Example: pure lisp is not suited to numeric applications, nor is BASIC suitable for list processing.

⑨ Test plan: A test plan refers to a detailed document that catalogs the test strategy, objectives, schedule, estimations, deadlines and the resources required for completing that particular project.

⑩ Verification: Verification is the process of checking that a software achieves its goal without any bugs. It is the process to ensure whether the product that is developed is right or not. Verification is static testing.

⑪ Quality Assurance: Software Quality Assurance is a simple way to assure quality in the software. It is the process of which works parallel to development of software.

⑫ Acceptance testing: Acceptance testing involves planning and execution of functional tests, performance tests, stress tests in order to demonstrate that the implemented system satisfies its requirements.



⑬ Software project: A software project is the complete procedure of software development from requirement gathering to testing and maintenance, carried out according to the chosen methodologies.

⑭ Module: A module is defined as the unique and addressable components of the software which can be solved and modified independently without disturbing other modules of the software.

⑮ Size factors in S/W engineering: Software industry uses various sizing techniques to <sup>quantify</sup> ~~quantify~~ the software size. They are lines of code, Function points, Feature points, Use case points, Object points and internet points.

⑯ Documentation: Software documentation is the information that describes the product to the people who develop, deploy and use it. It includes the technical manuals and online materials, such as online versions of manuals and help capabilities.

⑪ Planning Activity: The planning process includes steps to estimate the size of the software work products and the resources needed, produce a schedule, identify and assess software risks.

⑫ What are s/w maintenance: It is used to describe the software engineering activities that occur following delivery of a software product to the customer. The development cycle for a software product spans 1 or 2 years, while the maintenance phase spans 5 to 10 years.

⑬ Static analysis: Static analysis is also called static code analysis, is a method of computer program debugging that is done by examining the code without executing the program.

⑭ Name three maintenance tools:

- \* Text editors
- \* Comparators
- \* Debugging tools
- \* Version control systems.
- \* Linkage editors

②① Software design: The . According to Webster, the process of design involves "conceiving and planning out the mind" and "making a drawing, pattern, or sketch of."

\* External design \* Architectural design X  
\* detailed design.

②② Inspection: Inspection in software ~~engineer~~ engineering refers to peer review of any work product by trained individuals who look for defects using a well defined process.

②③ Validation: This is the process of evaluating software during or at the end of the development process to determine whether it satisfies specified requirements.