UNIT 3 : Software Engineering

TOPIC :- Engineering.
⇒ Engineering is the branch of science and technology which design, develope, and delivers new product and things.

TOPIC:- Software Engineering.
⇒ Software is the branch of science and technology which employed systamatic approach in the designing, development, operation, maintanance, till the software is used.

OR,

According to Boehm Software is the application of science and mathematics by which the capabilities of computer equipment are made useful to man via computer programs, procedures and associated documentation.

TOPIC:- Objective of S/w engineering.
⇒ Software engineering is used to produce high quality software at very low cost.

• It is a systamatic approach to develop

and design cost effective software.

Topic:- Importance of s/w engineering.

→ Software engineering is playing very important role in the field of software development.

* Now it is Nowadays s/w engineering has become more important and integral part of the s/w development companies, S/w engineering is an umbrella activity.

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Topic:- Characteristics of S/w.

→ S/w is developed it is not manufactured. Although s/w like other product

* Are design first and then it goes through many different channels and the final product is obtained.

* Most of the Softwares are develop and not created from the existing work, if we look at other engineering products we will find that a design its first prepare, identifying its various components, then put together as for the original design, since till very recently there has been no concept of software components so there has been no significant

afford to use any existing compone-
nts will upon.

- S/w are highly flexible, in case of S/w one can modify the product with little or no deficulty without making any necessary change in the design. Hence, software are highly flexible logical entities

TOPIC :- S/w Crisis.

⇒ S/w Crisis is term used in early days of computer industry at that time there was no concept of Software Engineering. Due to this there is a Imbalance or, mistmatch b/w the delivery of the software and actual requirment. Also the hardware of a computer system was developing at a rapid base but the software development was loping behind. Due to this S/w Crisis several probelms are faced by the computer industry such as —

- Project running over budget.
- Project running over time.
- S/w developed was inferior

quality.

- S/w maintanance was very Poor.

TOPIC :- SDLC (S/w Development life cycle).

=> SDLC also known as information system development or, aPPlication development. A SDLC should result in a high quality system which meets Customer acceptation with in given time and cost astimation. SDLC is a Systamatic approach to develoP a S/w. SDLC consist of Following steps Such as :—

i) ProP- ProJect Identification and Selection
ii) ProJect Initialization and Planning.
iii) Analysis
iv) Designing
v) Coding
vi) testing
vii) Implementation
viii) maintanance.

1) ProJect Identification and Selection.
=> This is the first Phase in the SDLC. In this Phase we Identify to need For the new system to develoP or, inhance the existing system. Many