Software Engineering is part of System Engineering Process”. Do you agree with the above

Statement? Justify your answer.

Yes,

Software engineering is concerned with all aspects of software production from the early stages

Of system specification through to maintaining the system after it has gone into use.

When System engineering is concerned with all aspects of computer-based systems development

Including hardware, software and process engineering. Combined with the Evolution of complex

Systems where software plays a Major Role.

Therefore, we can clearly conclude that the Software engineering is part of this more general

System Engineering Process.

What is “Software Crisis”?

“Software Crisis” is a term used in the field of Computer Science. In addition, the term “Software

Engineering” suggested at the conferences organized by NATO in 1968 and 1969 to discuss the

“Software Crisis”.

During the period of 1960’s and 1970’s, due to the rapid increment in Software demand,

Complexity of software and Software challenges. There were many difficulties of writing useful

And efficient Software’s within the required time. Due to that, so many difficulties regarding the

Development of large software systems arisen.

Many project failures resulted from the inability to apply the techniques used to develop small

Software Systems to the development of larger and more complex systems. This failure leads to

: Frequent cost overruns, Late or Never delivered projects, Incomplete system functionality,

Lower quality inefficient Software with errors, Software often did not meet requirements,

Projects were unmanageable and Codes difficult to maintain.

The negative consequences of failures in software range from simple user inconvenience to

Huge economic losses like incorrectly recorded transactions. Ultimately, software errors pose

Dangers to human lives and cause mission failures. Correction of errors were expensive and often

Results in skyrocketing software costs. Hardware costs got low while the software costs were

Skyrocketed rapidly. New techniques and methods needed to control the complexity in large

Software systems.

Therefore, “Software Crisis” was the name given to the difficulties encountered in developing

Large, complex systems in the 1960s. The Conference organized by NATO proposed that the

Adoption of an engineering approach to software development would reduce the costs of

Software development and lead to software that is more reliable.

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What are the professional responsibilities of a Software Engineer?

Software Engineering obviously bound by local, national and international laws. Most

Importantly, Software engineers must behave in an ethical and honest responsible way if they

Want to be respected as professionals.

Major professional responsibilities As a Software Engineer are,

Confidentiality

You should normally respect the confidentiality of your employers or clients irrespective of

Whether or not a formal confidentiality agreement has been signed.

Competence

You should not misrepresent your level of competence. You should not knowingly accept work

That is outside your competence.

Intellectual property rights

You should be aware of local laws governing the use of intellectual property such as patents and

Copyright. You should be careful to ensure that the intellectual property of employers and clients

Is protected.

Computer misuse

You should not use your technical skills to misuse other people’s computers. Computer misuse

Ranges from relatively trivial (game playing on an employer’s machine) to extremely serious

(dissemination of viruses or other malware).

“Component-based Software Engineering allows faster delivery”. State whether this

Statement is true or false. Justify your answer.

True,

Component-based Software Engineering allows to develop faster and more reliable system by

Reusing previously tested components.

With the use of “Reuse oriented compone