



Course Code: CS3009	Course Name: Software Engineering
Instructor Name: Dr. Syed Muazzam Ali Shah	
Student Roll No:	Section No:

Time: 15 minutes.

Max Marks: 10 Points

Questions 01: Briefly discuss why it is usually cheaper in the long run to use software engineering methods and techniques for software systems.

Solution:

If a S.E process is not followed, issues occur in the software and are found later in the life cycle of the project. They cost more to solve such issues as multiple previous activities and tasks may need to be redone.

Question 02: What is the purpose of a prototype?

Solution:

Prototypes are a requirement engineering and validation technique. They allow the developers to elicit information from customers by demonstrating some functionality and/or the UI of the system.

Question 03: Briefly describe the issues of professional responsibilities regarding ethical issues in software engineering?

Solution:

- ✧ Confidentiality
 - Engineers should normally **respect the confidentiality of their employers or clients** irrespective of whether or not a formal confidentiality agreement has been signed.
- ✧ Competence
 - Engineers should not misrepresent their level of competence. They should **not knowingly accept work that is out of their competence.**
- ✧ Intellectual property rights
 - **Engineers should be aware of local laws governing the use of intellectual property such as patents, copyright, etc.** They should be careful to ensure that the intellectual property of employers and clients is protected.
- ✧ Computer misuse

- Software engineers should **not use their technical skills to misuse other people's computers**. Computer misuse ranges from relatively trivial (game playing on an employer's machine, say) to extremely serious (dissemination of viruses).

Question 04: Briefly describe the following characteristics/properties of extreme program.

- Pair Programming
- Collective ownership
- Refactoring

Solution:

Pair programming	Developers work in pairs , checking each other's work and providing the support to always do a good job.
Collective ownership	The pairs of developers work on all areas of the system, so that no islands of expertise develop and all the developers take responsibility for all of the code . Anyone can change anything.
Refactoring	All developers are expected to refactor the code continuously as soon as possible code improvements are found. This keeps the code simple and maintainable. e.g., a function may get deprecated.

Question 05: Suggest the most appropriate generic software process model that might be used as a basis for managing the development of 'A university accounting system that replaces an existing system'.

Solution:

Incremental: Because a system is already working, it will make sense to introduce the new system in stages and in parallel with the existing system.