

Submitted Dated : Friday ,August 21, 2020 2020.

Online Mid – Term Examination Summer Semester 2020

INTRODUCTION TO SOFTWARE ENGINEERING

Total Marks :30

Submitted to :

Sir. Engr. Ghassan Husnain

Submitted by :

Muhammad Sameed Khan

ID = 6843

BS (SE) Section B



IQRA NATIONAL UNIVERSITY

Page 1 of 1

Submitted Dated : Friday ,August 21, 2020 2020.

Question 1:

What are the four important attributes that all professional software should have? Suggest four other attributes that may sometimes be significant.

Answer:

Four (4) important Attributes of Professional Software are:

1. Maintainability
2. Dependability and security
3. Efficiency
4. Acceptability/Usability

Other attributes that are also significant are:

1. Response time (non-functional attribute)
2. Interactivity
3. Reliable
4. Evolution

Question .2:

Explain why professional software is not just the programs that are developed for a customer.

Answer:

Professional software is not just the programs developed for a customer because the software is almost always packaged with associated documentation such as requirements, design models, and user manuals.

Queztion 3:

Giving reasons for your answer based on the type of system being developed, suggest the most appropriate generic software process model that might be used as a basis for managing the development of the following systems: (12 marks)

Submitted Dated : Friday ,August 21, 2020 2020.

- A system to control anti-lock braking in a car
- A virtual reality system to support software maintenance
- A university accounting system that replaces an existing system
- An interactive travel planning system that helps users plan journeys with the lowest environmental impact

Answer:

a) This is a safety-critical system so requires a lot of up-front analysis before the implementations. A waterfall model is therefore the most appropriate approach to use, perhaps with formal transformation between the different development stages.

b) This is a system where the requirements will change and there will be an extensive user interface of component. An agile process may be for used in this sytem.

c) This is a system whose requirements are fairly well-known and which will be used in an environment in conjunction. Therefore, a reuse-based approach is likely to bethat appropriate for this system.

d) An incremental development approach is the most appropriate as the system requirements will change as real user experience to with the system is gained of planning.

Question .4:

Explain why incremental development is the most effective approach for developing business software systems. Why is this model less appropriate for real-time systems engineering?
(5 marks)

Answer:

Business software systems usually as complex, software intensive, and frequently being changes when the business goals or processes are the changed. Also real-time systems usually critical which needed to be built based on well planned process system engineering.

Question .5:

Suggest why it is important to make a distinction between developing the user requirements and developing system requirements in the requirements engineering process.
(5 marks)

Answer:

There is a the fundamental difference between the user requirements and the system requirements that mean they should be considered separately.

- a) The user requirements are intended to describe the system's functions and features from a user perspective and it is essential that users understand these of requirements of users.
- b) The system requirements are much more detailed than the user requirements and are intended to be a precise specification of the system that may be part of a system contracts.

Submitted Dated : Friday ,August 21, 2020 2020.

End of the Paper
