Software Engineering, ESOF 322, Fall 2019
Exam 1, Sept. 30

Multiple Choice

1. "When a valid report request is submitted, the report shall be displayed within 3 seconds" is most likely to be categorized as what type of requirement?

   (4 pts.)

   a. Functional requirement
   b. Project requirement
   c. Design constraint
   d. Quality attribute
   e. All of the above

2. "The system shall be web-based using a RESTful architecture" is most likely to be categorized as what type of requirement?

   (4 pts.)

   a. Functional requirement
   b. Project requirement
   c. Design constraint
   d. Quality attribute
   e. All of the above

3. What is the most likely response when asked about an early process model, that was once the most popular agile process model, and formed the foundation for many of the more recent agile processes? (4 pts.)
   a. waterfall
   b. incremental
   c. XP
   d. Kaban
   e. Scrum

4. WordPress allows users to build websites, create a blog, a business site, a portfolio, or an online store. WordPress is most likely to be categorized as what type of service?

(4 pts.)

    a. Infrastructure as a service
    b. Platform as a service
    c. Cloud application services
    d. None of the above
    e. All of the above

5. Unit testing is most likely to be categorized as what type of testing?
    a. Whitebox   (4 pts.)
    b. Blackbox
    c. Neither
    d. Both

6. The goal of CMM is mostly likely to be described as which of the following?

(4 pts.)

    a. Helps a software organization define it software development process
    b. Helps a software organization promote continuous improvement
    c. Helps a software organization assess how well they are adhering to a process model
    d. Can be used as a marketing tool for software organizations
    e. All of the above

Acronyms

7. Expand the acronym CMM.   (4pts.)

8. Expand the acronym REST.   (4pts.)

9. Expand the acronym XP.   (4 pts.)

10. Expand the acronym RUP.   (4 pts.)

Short answer

11. Describe the role of a moderator in the code inspection process that we used in class, and plan to use during Sprint 1. Include the activities of the moderator before the inspection meeting, during the inspection meeting, and after the inspection meeting.
(10 pts.)

Essays

12. List the four Agile principles. For each principle, discuss how this differs from non-agile process models in addressing the software crisis.   (20 pts.)

    Clarity, grammar, spelling, organization   (5 pts.)
    Agile principles   (10 pts.)
    Discussion of how the principles differ from non-agile processes
                                                                    (5 pts.)

13. Describe what is meant by loose coupling and high cohesion and relate these concepts to Tom Killalea's article "Velocity in Software Engineering".   (30 pts.)

Clarity, grammar, spelling, organization   (5 pts.)
Definitions of loose coupling and high cohesion   (10 pts.)
Accuracy and completeness of Tom Killalea's article   (10 pts.)
Relation of the two topics   (5 pts.)

Extra Credit

Define the term "software engineering" and relate your definition to what is needed for startups and next-generation technology companies.   (5 pts.)