National University of Computer and Emerging Sciences, Lahore Campus

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	Section:	CS-E &D	Page(s):	2
	Exam Type:	Midterm 1	Instructor	Dr.Wafa Basit

Student: Name:_____ **Roll No.**_____ **Section:**_____

Instruction/Notes: Cutting and over writing will not be acceptable. Attempt all questions. Question Paper should be attached with the answer sheet.

Note: The exam is closed book. Make necessary assumptions where required.

Question # 1: Circle the most appropriate answer: (5 points)

A.   Which of the following is not an Extreme Programming practice?
 1.   Prototyping (an early working model is created in order to assess usability).
 2.   Pair programming (all code is written by two programmers at one machine).
 3.   Unit tests (programmers continuously write unit tests).
 4.   Continuous integration of deliverables

B.   Which of the following is not a feature of Unified process?

 1.   Incremental and Iterative
 2.   One dimensional
 3.   Within each increment the developers have to iterate until task is complete
 4.   Consecutive series of waterfall models

C.   Which process model has the highest visibility (Process visibility is defined by the number of documents produced)?

 1.   Waterfall
 2.   Evolutionary development
 3.   Reuse oriented Development
 4.   Agile software development

D.   Which process model responds worst to changing requirements?
 1.   Unified Process
 2.   Waterfall
 3.   Evolutionary development
 4.   Agile software development

E.   In a safety critical system the most important software quality attribute is:
 1.   Maintainability
 2.   Reliability
 3.   testability
 4.   Usability

Question # 2 : Case study 1 (10 points)

The management team of Asian airline Inc is frustrated by long-running projects that failed to deliver results in the expected timeframe. In fact, many projects in the IT portfolio span multiple years in length and still fail to satisfy important functional requirements. Management also feels that the airline needed to be more responsive to the marketplace in general. So they have hired you to achieve the following:

- Teams can adapt to changing requirements while maintaining a clear focus on the project vision.
- Projects should deliver the most valuable features sooner, embrace change, and provide better project visibility
- Your team of Agile coaches has to work alongside internal personnel to provide training and guidance as more project teams follow to the agile approach.

1. Which Agile methodology would you suggest to them and why?SCRUM
2. What would be the team structure?SCRUM MASTER, TEAM LEAD, DEVELOPERS
3. What would be the length of iterations?15-30 days
4. Which testing techniques would you suggest at different stages of development life cycle?Unit testing at development phase, System testing, Integration testing and acceptance testing prior to deployment.

Question # 3: Case study 2 (10 points)

SLATE needs to be developed in a newer technology. FAST has asked you to develop the new system and has provided you with all the documentation regarding functionality and use of SLATE. In the documents FAST has not given any major revisions in functionality of SLATE which is working satisfactorily for the last few years.
   a. Which process model(s) seem(s) the most appropriate for the project of developing an alternate to SLATE?Waterfall
   b. Justify your choice of the process model(s) Requirements can be frozen at an early stage

Question # 4 : (5 points)

Order the following tasks w.r.t. the waterfall model from 1 to 10:

Stage	Number	Stage	Number
Acceptance testing	9	High level design	4
Project planning	3	Low level design	5
Deployment	10	System testing	8
Unit testing	7	Implementation	6
Requirements Specification	2	Requirements definition.	1

Good Luck