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Question Paper Code: 59824

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Elective

Computer Science and Engineering

15UIT924 - AGILE SOFTWARE DEVELOPMENT

(Common to Information Technology)

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. "Which Practice prescribe ""the code is always written by two programmers at one machine""
(a) Twin programming (b) Peer Programming
(c) Pair programming (d) Buddy Programming
CO1- R
2. Which of the following is a characteristic of an Agile leader?
(a) Task focused (b) Process oriented (c) Supportive (d) Disengaged
CO2- R
3. You are an experienced developer working on a project following Extreme programming (XP). A rookie developer joined your team recently and you see him copy-pasting code from one module to another and running unit tests. What do you think he is doing?
(a) He is stealing some ones intellectual property.
(b) He Is doing alright. You are allowed to copy paste colleagues code.
(c) He is in violation of a design principle
(d) He is in violation of organization policy.
CO3- R
4. An Agile project _____
(a) Should have no control over its progress
(b) Should be able to demonstrate control of its progress
(c) Is always out of control
(d) Is controlled by the velocity of the most junior team member
CO4- R

5. During an iteration (sprint) (timebox) the developers should be: CO5- R
- (a) Able to contact the customer to clarify aspects of the work
 - (b) Completely uninterrupted by the customer
 - (c) In twice-daily contact with the customer
 - (d) Able to work without needing to disturb the customer

PART – B (5 x 3= 15 Marks)

6. Differentiate Agile project management with Traditional project management. CO1- R
7. Discuss the strategy for determining the velocity of agile team. CO2- R
8. Compare and contrast agile testing techniques with waterfall testing techniques. CO3- R
9. When refactoring is needed? Discuss with an example. CO4- R
10. Analyze the business benefits of choosing agile software development. CO5- R

PART – C (5 x 16= 80 Marks)

11. (a) Assume yourself as a business analyst for a project to create mobile interface for a cut-down set of the functionality available through our client's current website. The project scheduled on a short duration of 6-sprint Scrum project that had a nearly full-time BA allocated as a resource to the team. Describe the work to be performed by business analyst in coordination with, CO1- App (16)
- 1. Agile Development team
 - 2. Product Owner

Or

- (b) Cerner Corporation is a global supplier of health information technology solutions, services, devices and hardware. The company's proven health information technologies connect systems, people, and information to increase quality of care while reducing costs at approximately 14,000 health care facilities around the world. Cerner knew it had to accelerate its products' time to market to help clients navigate health care reform and to stay competitive in the rapidly changing industry. The company has to reduce its product time to market by 75% by adopting agile methodologies. Devise the strategy to achieve this objective by choosing an appropriate agile methodology. Explain the technique in detail. CO1- App (16)

12. (a) Demonstrate the process of Agile software development considering the scrum process flow for the following application system. CO2- App (16)

“Sentiment Analysis in Twitter”- Goal of the project is to develop an automated machine learning system for sentiment analysis in social media texts such as Twitter. The students should collect experimental data on their own using the twitter API; they will manually annotate the collected tweets and provide analysis of the data. The system should be capable of identifying the sentiment in the tweets.

Or

- (b) For the following user stories, indicate if it is a good user story or not. If not, why? CO2- Ana (16)
- All runtime errors are logged in a consistent manner
 - A user can edit the address on a resume
 - A user can add, edit and delete multiple resumes

13. (a) Analyze the advantages and disadvantages of Behavior Driven development and Acceptance Test Driven development. CO3- Ana (16)

Or

- (b) In the agile lifecycle, discuss the significant role of the tester in the following categories, CO3- Ana (16)
- Team work
 - Test Planning
 - Sprint zero
 - Integration
 - Agile testing practices

14. (a) Demonstrate the Dependency Inversion principle with appropriate example. CO4- U (16)

Or

- (b) Consider the bowling game. The class named Game has two separate responsibilities. It was keeping track of the current frame and it was calculating score. In the end the pair programmers separated these two responsibilities in two different classes. The Game class kept the responsibility to keep track of frames and the scorer class got the responsibility to calculate the score. Why was it important to separate these two responsibilities into separate classes? CO4- Ana (16)
15. (a) Describe the applicability of agile in software development with suitable examples. CO5- U (16)
- Or
- (b) Whether agile is a variant of rapid application development? Discuss. CO5- U (16)