L202B

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SECOND SEMESTER MCA DEGREE EXAMINATION, APRIL/MAY 2017

Course Code: RLMCA202 (ANSWER KEY)

Course Name: APPLICATION DEVELOPMENT AND MAINTENANCE

Max. Marks: 60 Duration: 3 Hours

PART A

Answer all questions. Each Question carries 3 marks.

1. Definition of release candidate- 1 mark
   Explanation- 2 Marks
2. Aim of a version control system is two-fold- 2 Marks
   Give examples of version control systems- Minimum two- 1 Mark
3. Continuous delivery – 1.5 Mark
   Continuous deployment- 1.5 Mark
4. How do you create a local copy of an existing repository in Git?
   Different Commands- 1 Mark
   Syntaxes- 1 Mark
   Examples- 1 Mark
5. Minimum 3 prerequisites- 1 Mark each.
6. Which of the following are probably genuine requirements? Restate those that are not to make them more useful (if possible).
   a) The response time must be less than 500 ms.
   b) The application will be organized as a number of front-end processes and a back-end server.
   c) If a user enters non-numeric characters in a numeric field, the system will beep and not accept them.
   (1 Mark each)
7. What are the techniques used to maintain orthogonality in a system?
   Minimum 3 techniques- 1 Mark each.
8. Blue green deployment and canary releasing. Explanation 1 Mark each

Diagrams- 1 Mark

(8 * 3 = 24 Marks)

PART B

Answer all questions. Each question carries 6 marks.

9. a) Principles of software delivery. (3 Marks)

   Valid explanation- 3 Marks

   OR

   b) Process of implementing a testing strategy. (3 Marks)

   Valid explanation- 3 Marks

10. a) Explain how the following is done in Git.

   i) Configure git

   ii) Create a new repository

   iii) See what has changed

   iv) Commit changes

   v) Stage changes to commit

   vi) Undo uncommitted changes (1 Mark each)

   Commands and explanation required.

   OR

   b) Create branches in Git- 1.5 Marks

   Switch branches in Git- 1.5 Marks

   View branches in Git- 1.5 Marks

   How to merge commits between branches? – 1.5 Marks

11. a) Advices for making the most effective use of version control. (3.5 Marks)

   Use of Git for version control. (2.5 Marks)

   OR

   b) Deployment pipeline-Definition- 1 Mark

   The anatomy of a deployment pipeline- Explanation- 2 Marks + a neat diagram- 1 Mark

   Comment on the various stages of a deployment pipeline.(2 Marks)

12. a) Principles and practices that make for an effective commit stage- 4 Marks

   Elaborate on the practices- 2 Marks

OR

b) Role of automated acceptance testing in the deployment pipeline. (3 Marks)

Create and maintain effective automated acceptance tests- (3 Marks)

13. a) Describe the approach to testing nonfunctional requirements, with a specific focus on testing capacity, throughput, and performance.

Testing capacity- 2 Marks

Throughput- 2 Marks

Performance- 2 Marks

OR

b) Stating the tips and tricks in deploying and releasing applications. (3 Marks)

Explanation of the same- 3 Marks

14. a) Best practices for software development- 4 Marks

Explanation of the practices- 2 Marks

b) Critical areas that can make or break a pragmatic project- 4 Marks

Real time examples- 2 Marks

(6 * 6 = 36 Marks)