

Oct/Nov 2023

Total No. of Questions : 5]

SEAT No. :

P-5785

[Total No. of Pages : 3

[6120]-107

F.Y. M.C.A. (Management)

IT-22 : SOFTWARE PROJECT MANAGEMENT

(2020 Pattern) (Semester - II)



Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) All questions are compulsory.
- 2) Draw neat labeled diagram whenever necessary.
- 3) Basic calculator is allowed.

Q1) a) List out the five software projects risks & explain the strategies for reducing those risks. [6]

b) Explain Agile project management life cycle. [4]

OR

a) A multinational company working on the shopping Applications. They are using number of expensive and licenced software tools. More than 5500 team members are sharing these tools. You have been deputed as project manager to ensure that a project finishes with in original budget, with the required scope of work & within the required time scales and to ensure that throughout this process all the stakeholders, especially the client, are satisfied with the project results.

Prepare the risk management process based on below points.

- i) Risk Identification
  - ii) Risk Analysis
  - iii) Risk Mitigation
- b) Explain Agile Tools.

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- Q2) a) Demonstrate value driven development with suitable example. [6]  
b) Explain release planning & iteration (Sprint) planning in brief. [4]

OR

a) Consider the project with following. Functional unit.

- i) Number of User inputs = 50
- ii) Number of User outputs = 30
- iii) Number of User enquiries = 25
- iv) Number of User files = 04
- v) Number of External interfaces = 04

In addition to above, system requires.

- i) Significant data communication (4)
- ii) Performance is very critical (5)
- iii) Designed code may be moderately reusable (2)
- iv) System is not designed for multiple installation (0)

Other complexity factors are Average compute function point for project.

b) Describe project and its characteristics.

- Q3) a) A project of 200 KLOC is to be developed, software development team has average experience on similar type of projects. The project schedule is not very right. Calculate the effort, development time, average staff size of the project by using semi-detached mode of cocomo model. [6]  
b) Explain the 4g's of project management. [4]

OR

- a) Scenario : User wants to request cash from his/her account at any ATM.
- i) Write user story for the scenario above
  - ii) Write an acceptance criteria for the user story in Given/When/Then format.
- b) Explain planning poker story point estimation technique.



Q4) a) Consider a project with following : [6]

Suppose that a project was estimated to be 400 KLOC. Calculate the effort and development time for all 3 mode i.e. organic, semidetached, and embedded.

| Software Project | $a_b$ | $b_b$ | $c_b$ | $d_b$ |
|------------------|-------|-------|-------|-------|
| Organic          | 2.4   | 1.05  | 2.5   | 0.38  |
| Semidetached     | 3     | 1.12  | 2.5   | 0.35  |
| Embedded         | 3.6   | 1.2   | 2.5   | 0.32  |

b) Explain product Backlog and Sprint Backlog in brief. [4]

OR

- a) Explain the four values of Agile Manifesto with it's meaning.
- b) How to facilitate retrospective process in agile management with suitable example?

Q5) a) Avadhoot Developers which is the large construction organization in real estate construction business, decided to develop ERP through ACC software Ltd. The output of the system will be cost sheets detailing the relevant information for contracting, budgeting, progress monitoring & bill payment. ACC software Ltd team has no domain knowledge and have less experienced staff members. You as a project manager have been asked to identify risk involved in it and propose solution to mitigate these risks. [6]

b) What are the components of function point analysis? [4]

OR

- a) Explain the role of project manager and his responsibilities.
- b) Write short note on github.

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