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| Serial No: |
| **Sessional Exam-I** |
| **Total Time: 1 Hour** |
| **Total Marks: 50** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Signature of Invigilator |

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| **SE-4003: Fundamentals of Software Project Management** |
| Tuesday, 26th September, 2023 |
| **Course Instructors** |
| Uzma Mahar |

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| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  Student Name Roll No. Course Section Student Signature |

## DO NOT OPEN THE QUESTION BOOK OR START UNTIL INSTRUCTED.

**Instructions:**

1. Attempt on question paper. Attempt all of them. Read the question carefully, understand the question, and then attempt it.
2. No additional sheet will be provided for rough work. Use the back of the last page for rough work.
3. If you need more space, write on the back side of the paper and clearly mark question and part number etc.
4. After asked to commence the exam, please verify that you have **twelve (12)** different printed pages including this title page. There are total of **2** questions.
5. Calculator or any other stuff sharing is strictly prohibited.
6. Use permanent ink pens only. Any part done using soft pencil will not be marked and cannot be claimed for rechecking.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Q-1** | **Q-2** | **Total** |
| **Marks Obtained** |  |  |  |
| **Total**  **Marks** | **40** | **10** | **50** |

**Question 1 [40 Marks]**

Choose the correct answer (just one) and fill in the table below. Over-writing/cutting will lead to zero mark in the respective question. Please also note that filling/marking the answer outside the answer table will not be evaluated.

**Right way to attempt (for example):**

|  |  |
| --- | --- |
| **Q#** | **Correct option** |
| 1 | A |

**Answer Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Q# | Correct option | Q# | Correct option | Q# | Correct option |
| 1 | B | 16 | D | 31 | B |
| 2 | A | 17 | B | 32 | D |
| 3 | D | 18 | C | 33 | B |
| 4 | B | 19 | A | 34 | D |
| 5 | C | 20 | B | 35 | B |
| 6 | B | 21 | B | 36 | A |
| 7 | B | 22 | D | 37 | C |
| 8 | C | 23 | B | 38 | A |
| 9 | D | 24 | C | 39 | D |
| 10 | B | 25 | D | 40 | B |
| 11 | C | 26 | B |
| 12 | C | 27 | C |
| 13 | C | 28 | B |
| 14 | C | 29 | D |
| 15 | A | 30 | B |

1. Any upgrades required to other systems to enable them to work with the new site is the example of
2. In scope
3. **Out Scope**
4. Planning
5. Others
6. There is ------------------- correlation between project complexities and project risks.
7. **Positive**
8. Negative
9. Neutral
10. Unknown
11. Stakeholder mapping implies that stakeholders with \_\_\_\_\_\_ interest and \_\_\_\_\_\_ power should be kept informed of proposals.
12. High, High
13. Low, Low
14. Low, High
15. **High, Low**
16. The risk and uncertainty is --------- at the start of project and------------- as later stages of SDLC.
17. High, High
18. **High, Low**
19. Low, High
20. Low, Low
21. The cost to correct a requirement is -------------- at early stages and --------------- at later stages in SDLC.
22. High, High
23. High, Low
24. **Low, High**
25. Low, Low
26. Acceptance of deliverable or events to measure the project progress is referred to --------------
27. Deliverable
28. **Milestones**
29. Phase Completion
30. both a & b
31. The quality of software cannot be assessed before the completion of software.
32. True
33. **False**
34. Both
35. None of above
36. The Concept Elaboration phase in SDLC is referred to ------------ phase
37. How
38. What
39. **Why**
40. Do
41. Which of the following issue is addressed in risk management plan?
42. Risk Avoidance
43. Risk Mitigation
44. Risk Monitoring
45. **All Given**
46. Probability of risk occurrence and its consequences on the project outcomes is called
47. Risk identification
48. **Risk analysis**
49. Risk control
50. Risk response
51. The environment that supports the software project is called
52. CLSS
53. Fast
54. **SEE**
55. CBSE
56. Which project management process involves defining and documenting the features and functions of the products produced during the project?
57. Scope Planning
58. Scope Verification
59. **Scope Definition**
60. Scope Control
61. Selecting and training people for positions in the organization is:
62. Planning
63. Organizing
64. **Staffing**
65. Directing
66. Establishing, measuring, and evaluating performance of activities toward planned objectives is:
67. Planning
68. Organizing
69. **Controlling**
70. Directing
71. Why is software maintenance more expensive than development?
72. **Due to the complexity of software**
73. Because of the initial investment
74. Lower demand for maintenance
75. Rapid advancements in technology
76. What is the primary focus during the software development phase?
77. Reducing maintenance costs
78. Enhancing software complexity
79. Designing user interfaces
80. **Writing efficient code**
81. \_\_\_\_\_\_\_\_\_\_ refers to the quality of the deliverable from the project.
82. Process quality
83. **Product quality**
84. Both
85. None of the above
86. Project quality is affected by balancing the following triple constraints:
87. Scope, resources, cost
88. Scope, cost, quality
89. **Scope, time, cost**
90. Cost, quality, time
91. Silver-bullet syndrome is a \_\_\_\_\_\_\_\_ related mistake
92. **Technology**
93. Product
94. Process
95. People
96. Feature creep is a \_\_\_\_\_\_\_\_\_\_\_ related mistake
97. Technology
98. **Product**
99. Process
100. People
101. Developer gold plating is a \_\_\_\_\_\_\_\_\_\_ related mistake
102. Technology
103. **Product**
104. Process
105. People
106. What did Fred Brooks refer to by saying “pouring gasoline on a fire”?
107. Uncontrolled problem employees
108. Undermined motivation
109. Unrealistic expectations
110. **Adding people to a late project**
111. As per the Standish Group survey (1994) what is one of the top five factors needed to ensure the success of an in-house business-software project?
112. High motivation
113. **Realistic expectations**
114. Efficient coding
115. Better documentation
116. As per Lary Constantine, the “all-rounders” are:
117. Researchers
118. Isolationists
119. **Generalists**
120. Politicians
121. Setting an overly optimistic schedule sets a project up for failure by:
122. under scoping the project
123. undermining effective planning
124. abbreviating critical upstream development activities
125. **All of the above**
126. The “fuzzy front end” refers to the time
127. After the project has started
128. **Before the project starts**
129. During the project
130. None of the above
131. The classic mistake “shortchanged upstream activities” means
132. Jumping into code
133. Lack of analysis and design
134. **Both**
135. None of the above
136. Developing extra requirements than required refers to
137. Developer gold plating
138. **Requirement gold plating**
139. Feature creeping
140. Enhancing quality
141. Developer gold plating refers to
142. Developers trying out new technology
143. Developers anxious to try out new features
144. to create their own implementation of a slick feature they saw in another product
145. **All of the above**
146. Software research schedules are
147. Predictable
148. **Not predictable**
149. Theoretically predictable
150. Do not require predictions
151. How many process groups are listed by PMI for any sort of project?
152. Four
153. **Five**
154. Six
155. Seven
156. Project Charter is the process of developing a document that:
157. Formally authorize a project
158. Formally authorize a phase of an existing project
159. Formally start the development of the project
160. **Both a &b**
161. RFP (request for proposal) is \_\_\_\_\_ of project charter
162. Outside the scope of
163. **Part of**
164. The latter part of
165. The deliverable
166. “Business case” of a project refers to
167. The consequences of not doing the project
168. How the project fits the business goals
169. The reasons of undertaking the project
170. **All of the above**
171. The “who” part of the communication plan refers to
172. The receivers of the communication
173. **The one responsible for the communication**
174. The team
175. None of the above
176. Is “risk” one of the project constraints recognized by PMBOK guide?
177. **Yes**
178. No
179. May be
180. We didn’t study it in class
181. You’ll be given only 3 database engineers for the project is a \_\_\_\_\_\_\_ constraint.
182. Scope
183. Quality
184. **Resource**
185. Budget
186. \_\_\_\_\_\_\_\_\_ refers to ‘when the project/phase is complete’.
187. **Milestone**
188. Deliverable
189. Artefact
190. Product
191. The 3-step approach of stakeholders’ analysis process is
192. Understand key stakeholders, identify, and prioritize
193. Prioritize, understand, and identify key stakeholders
194. Identify, understand, and prioritize key stakeholders
195. **Identify, prioritize, and understand key stakeholders**
196. Completion measured against the project management plan refers to
197. Product scope
198. **Project scope**
199. Both
200. None of the above

**Question 2 [10 Marks]**

**Case Study: Development of a Mobile Application for Ride-Sharing Services**

RideSwift is a startup company aiming to launch a mobile application that provides ride-sharing services, competing with existing industry giants. The app will connect drivers with passengers, offering convenience, safety, and competitive pricing. The app will include features such as real-time tracking, payment integration, and a rating system for drivers.

The project is expected to be completed within 12 months and has a budget of $2 million. The application needs to be available on both Android and iOS platforms and should be user-friendly and efficient.

**Project Objectives:**

* Develop a mobile application for ride-sharing services on both Android and iOS platforms.
* Ensure the app is user-friendly, secure, and provides a seamless experience for both drivers and passengers.
* Integrate real-time tracking, secure payment systems, and a driver-passenger rating mechanism.
* Launch the app in multiple cities, ensuring scalability and performance even during peak usage times.
* Continuously monitor and enhance the app based on user feedback and changing market trends.

**Your Task:**

Create a detailed **Work Breakdown Structure (WBS)** for the development of the RideSwift mobile application. Outline major phases, sub-phases, and work packages. Provide a hierarchical structure (Organizational chart format) that represents the breakdown of tasks and activities required to complete this project.

Project: Development of RideSwift Mobile Application

1. Project Management

1.1 Project Initiation

1.1.1 Develop Project Charter

1.1.2 Define Project Scope

1.1.3 Identify Stakeholders

1.2 Project Planning

1.2.1 Develop Project Management Plan

1.2.2 Create Work Breakdown Structure (WBS)

1.2.3 Define Project Schedule

1.2.4 Resource Planning

1.3 Project Execution

1.3.1 Team Formation and Training

1.3.2 Kickoff Meeting

1.3.3 Procurement Planning

1.4 Project Monitoring and Controlling

1.4.1 Quality Control

1.4.2 Risk Management

1.4.3 Performance Monitoring

1.5 Project Closure

1.5.1 Client Handover

1.5.2 Documentation and Lessons Learned

2. Requirements Analysis

2.1 Market Research

2.2 User Needs Assessment

2.3 Define Feature Requirements

2.4 Legal and Compliance Requirements

3. System Design and Architecture

3.1 High-Level System Design

3.2 Detailed System Design

3.3 Database Design

3.4 UI/UX Design

4. Development

4.1 Front-end Development

4.1.1 Android App Development

4.1.2 iOS App Development

4.2 Back-end Development

4.2.1 Server Setup and Configuration

4.2.2 Database Development

4.3 Integration of Features

4.4 Testing (Unit, Integration, System)

5. App Launch and Deployment

5.1 App Deployment on Android Platform

5.2 App Deployment on iOS Platform

5.3 Marketing and Promotion

6. Post-Launch Support and Maintenance

6.1 User Support and Feedback

6.2 Bug Fixes and Updates

6.3 Performance Monitoring and Optimization

Good Luck! 😊