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PRESIDENCY UNIVERSITY BENGALURU

SCHOOL OF ENGINEERING

MAKEUP EXAMINATION – JULY 2024

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| **Semester :V** | **Date :02-07-2024** |
| **Course Code : CSE3040** | **Time :9:30AM -12:30PM** |
| **Course Name : AGILE STRUCTURES AND FRAMEWORKS** | **Max Marks : 100** |
| **Program : B.Tech.** | **Weightage :50%** |

**Instructions:**

1. *Read all questions carefully and answer accordingly.*
2. *Question paper consists of 3 parts.*
3. *Scientific and non-programmable calculator are permitted.*
4. *Do not write any information on the question paper other than Roll Number.*

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| **PART A** | | | |
| **ANSWER ANY 5 QUESTIONS 5Q X 2M=10M** | | | |
| 1 | Define iterative development. | (CO 1) | [**Remember]** |
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| 2 | List two characteristics of Agile development. | (CO 1) | [**Remember]** |
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| 3 | **Define the concept of a sprint backlog in Agile.** | (CO 2) | **[Understand]** |
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| 4 | Name one life cycle phase in the Unified Process and explain its role in software development. | (CO 3) | [**Remember]** |
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| 5 | What is EVO in software development methodologies? | (CO 3) | [**Remember]**] |
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| 6 | What are Agile product development principles, and how do they differ from traditional development approaches? | (CO 4) | [**Apply**] |
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| 7 | Name one Agile technology tool used to support distributed Agile teams, and explain its role in enhancing team collaboration. | (CO 4) | [**Apply**] |
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| **PART B** | | | |
| **ANSWER ANY 5 QUESTIONS 5Q X 10M=50M** | | | |
| 8 | Explain the core values of the Agile Manifesto and provide examples of how they are applied in software development projects. | (CO 1) | [**Remember]** |
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| 9 | Compare and contrast Agile methodologies with traditional waterfall methods in terms of flexibility, customer involvement, and project management. | (CO 1) | [**Remember]** |
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| 10 | Discuss the importance of the planning game in Agile. How does it facilitate effective sprint planning and prioritization of work? | (CO 2) | **[Understand]** |
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| 11 | Explain the life cycle phases of each methodology (XP, UP, and EVO) and how they contribute to the iterative and incremental delivery of software products | (CO 3) | [**Remember]** |
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| 12 | Compare and contrast Extreme Programming (XP), Unified Process (UP), and Evolutionary Project Management (EVO) methodologies | (CO 3) | [**Remember]** |
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| 13 | Discuss the key principles and practices of Feature Driven Development (FDD). How does FDD support the incremental and iterative delivery of software features? | (CO 4) | [**Apply**] |
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| 14 | Explain the importance of Agile metrics in monitoring and improving team performance, product quality, and project progress. Identify at least three Agile metrics and describe how they can be applied in a software development project to measure success | (CO 4) | [**Apply**] |
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| **PART C** | | | |
| **ANSWER ANY 2 QUESTIONS 2Q X 20M=40M** | | | |
| 15 | ABC Software Solutions is a mid-sized software development company that recently transitioned from traditional waterfall methodology to Agile development. They are working on a project to develop a new e-commerce platform for a retail client. The project is in its early stages, and the team has just completed the second sprint. The following issues have been identified: some team members are struggling to adapt to the Agile process and prefer the structured nature of waterfall methodology; the client has requested significant changes to the requirements based on recent market research, which were not part of the initial project scope; the team is finding it challenging to maintain a sustainable pace, leading to concerns about potential burnout; and communication between the development team and the client has been inconsistent, leading to misunderstandings about priorities and expectations.  What steps should the Agile team take to effectively manage and incorporate the significant changes requested by the client?  How can the team ensure a sustainable pace and prevent burnout while maintaining productivity in the project? | (CO 1) | [**Apply**] |
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| 16 | XYZ Tech Solutions is a startup specializing in mobile application development. They have recently signed a contract with a client to develop a new social media platform. The project is expected to be completed in six months, with regular updates and feature additions planned throughout the development cycle. The team consists of experienced developers but is new to Agile methodologies, having previously worked primarily with traditional waterfall approaches. The client emphasizes the importance of quick iterations and continuous feedback to ensure the app meets evolving user expectations and market trends.  Identify two key Agile principles that XYZ Tech Solutions should prioritize to successfully implement Agile methodologies in the development of the social media platform. Explain how these principles can benefit the project. | (CO 3) | [**Apply**] |
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| 17 | GlobalTech Enterprises, a multinational corporation, is expanding its software development operations to include teams across different continents. They are adopting Agile methodologies to improve collaboration, efficiency, and product quality across their global software projects. The teams are tasked with developing a new cloud-based enterprise solution that integrates advanced analytics capabilities. The project involves diverse teams with varying cultural backgrounds, time zones, and technological infrastructures.  Recommend Agile technology tools that GlobalTech Enterprises can utilize to support distributed Agile teams and enhance collaboration, communication, and project management. Explain how these tools can address the challenges of global software development. | (CO 4) | [**Apply**] |
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