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SEAT No. :

PF-12192

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[6651]-55
M.C.A. (Management Faculty)
SEP 505 MJ : SOFTWARE ENGINEERING AND PROJECT MANAGEMENT
(2025 Pattern) (Semester - I)

Time : 2½ Hours] *[Max. Marks : 45*

Instructions to the candidates:

1) *All questions are compulsory.*
2) *Figures to the right indicates full marks.*
3) *Use of scientific calculator is allowed.*

Q1) a) UG College conducts lectures through Learning Management System (LMS) which has facility to add notes & reference material. College authority has decided to upgrade LMS by adding new features for conducting examination & generating result. Write SRS in IEEE format for the above case. **[9]**

OR

b) Develop a detailed Software Requirements Specification (SRS) as per IEEE format for TravelGo, online bus reservation system.
The system enables passengers to search available routes, select seats, and make online bookings with instant ticket confirmation. Administrators can manage bus schedules, fares, and route information. **[9]**

Q2) a) Draw Use case and Class diagrams for leave management system The system should allow employees to apply for leave, managers to approve or reject leave requests, and administrators to manage employee records and leave policies. **[9]**

OR

b) Draw an activity diagram & Sequence diagram for the following case: A college's Training and Placement Cell system allows students to register by entering their personal details, academic qualifications, and kill sets. Students can also udate their profiles when necessary.Companies/ Organizations can register on the platform by providing details about their job openings, eligibility criteria, and other requirements. The system also provides a search facility that allows : **[9]**

i) Companies to search for suitable candidates based on qualifications or skills.

ii) Students to search and apply for relevant job opportunities.

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SPPUQuestionPapers.com

Q3) a) Suppose a project was estimated to be 500 KLOC. Calculate the effort and development time for embedded software development model. **[9]**

OR

b) UK based KPO company working on "License Management System". They are using number of expensive and licenced software tools. More than 5000 team members are sharing these tools. You have been deputed as project manager to ensure that a project finishes within original budget, with the required scope of work and within the required timescales, and to ensure that throughout this process all the stakeholders, especially the client, are satisfied with the project results. Prepare Risk management process based on below points. **[9]**

i) Risk identification

ii) Risk Analysis

iii) Risk mitigation

Q4) a) Identify and describe user stories for restaurant management system as a Manager, customer, Admin, staff. **[5]**

b) Describe in detail with suitable diagram and flow Project management life cycle. **[4]**

OR

c) Identify and describe user stories for a farming automation system from the perspectives of a Farm Owner, Field Worker, System Administrator and Agricultural Supplier. **[5]**

d) Summarize with suitable example the various techniques for estimating Story Points. **[4]**

Q5) a) Explain the key features of Microsoft Project as a project management tool. How does it support planning, scheduling, and resource management? **[5]**

b) What are the key roles in a Scrum team? Describe the responsibilities of each role and how they collaborate to deliver a product. **[4]**

OR

c) How can a Kanban board be created and used effectively for project management in Agile methodology? **[5]**

d) Explain Scrum Master, Product Owner, Development Team in detail. **[4]**

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