Subject Code:- ACSBS0702
                                                           Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VII - THEORY EXAMINATION (2024 - 2025)

Subject: IT Project Management

Time: 3 Hours   Max. Marks: 100

General Instructions:

IMP: *Verify that you have received the question paper with the correct course, code, branch etc.*

1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A   20

1. Attempt all parts:-

1-a.   State project management process involves identifying and documenting project   1
        roles, responsibilities, and reporting relationships? (CO1, K1)

        (a)   Develop Project Charter

        (b)   Develop Project Management Plan

        (c)   Acquire Project Team

        (d)   Plan Human Resource Management

1-b.   Define project management process involves obtaining final acceptance of the   1
        project deliverables from stakeholders?   (CO1, K1)

        (a)   Close Project or Phase

        (b)   Direct and Manage Project Work

        (c)   Validate Scope

        (d)   Control Quality

1-c.   List the key characteristic of PERT? (CO2, K1)   1

        (a)   It uses deterministic estimates for activity durations.

        (b)   It assumes all activities are independent of each other.

        (c)   It provides a single-point estimate for project completion time.

        (d)   It incorporates uncertainty in activity durations.

1-d.   PERT is primarily used for projects that: (CO2, K1)   1

        (a)   Have a fixed timeline and budget

(b) Require extensive risk analysis

(c) Involve complex technical requirements

(d) Require continuous monitoring and control

1-e. State the main parameters that you should use when computing the costs of a software development project? (CO3, K1)   1

    (a) travel and training costs

    (b) hardware and software costs

    (c) effort costs (the costs of paying software engineers and managers)

    (d) all of the mentioned

1-f. What is the formula to calculate the schedule variance (SV) in project management? (CO3, K1)   1

    (a) SV = Earned Value (EV) – Actual Cost (AC)

    (b) SV = Planned Value (PV) – Actual Cost (AC)

    (c) SV = Earned Value (EV) -/Planned Value (PV)

    (d) SV = Actual Cost (AC) – Planned Value (PV)

1-g. Define Scrum? (CO4, K1)   1

    (a) A software development methodology

    (b) A project management framework

    (c) A product management technique

    (d) A programming language

1-h. What happens during the Sprint Review in Scrum? (CO4, K1)   1

    (a) The team reflects on the past Sprint

    (b) The team plans for the next Sprint

    (c) The team demonstrates completed work

    (d) The team decides on the project budget

1-i. List the popular version control system used in DevOps? (CO5, K1)   1

    (a) Jenkins

    (b) Docker

    (c) Kubernetes

    (d) Git

1-j. Which of the following tools is used for containerization in DevOps? (CO5, K1)   1

    (a) Ansible

    (b) Jenkins

    (c) Puppet

    (d) Docker

2. Attempt all parts:-

2.a. Explain the concept of Slack in project management and its significance. (CO1, K2)   2

2.b.	Discuss in brief how does PERT help in estimating project duration? (CO2, K2)	2
2.c.	Explain the term Project Audit. (CO3, K2)	2
2.d.	Describe how the length of a Sprint is determined in Scrum? (CO4, K2)	2
2.e.	Describe the benefits of using version control. (CO5, K2)	2

SECTION-B   30

3. Answer any <u>five</u> of the following:-

3-a.	Demonstrate how PERT can be used to identify critical paths in an IT project. (CO1, K3)	6
3-b.	Discuss the advantages and disadvantages of using software tools for project scheduling. (CO1, K2)	6
3-c.	Describe how you would use PERT to address uncertainties and risks in an IT project management scenario. (CO2, K2)	6
3-d.	Describe the key factors to consider when creating a resource schedule for an IT project. (CO2,K2)	6
3.e.	Differentiate Between Agile and Scrum. (CO3, K4)	6
3.f.	Describe the concept of a sprint backlog and how it is created. (CO4, K2)	6
3.g.	Describe the key components of a typical "CI/CD pipeline". (CO5, K2)	6

SECTION-C   50

4. Answer any <u>one</u> of the following:-

4-a.	Demonstrate the CPM in network analysis in detail. (CO1, K3)	10
4-b.	Discuss the role of milestones in project scheduling. Why are they important for project monitoring and control? Describe the impact of uncertainties and risks on project scheduling. How can a project manager address these challenges? (CO1, K2)	10

5. Answer any <u>one</u> of the following:-

5-a.	Discuss the advantages and disadvantages of using PERT as a project management tool in the IT industry. (CO2, K2)	10
5-b.	Describe the concept of "dummy activities" in PERT and provide examples of their use in IT project scheduling. (CO2, K2)	10

6. Answer any <u>one</u> of the following:-

6-a.	Illustrate the different types of Agile methodologies. (CO3, K3)	10
6-b.	Differentiate between the Agile and software prototyping model. (CO3, K4)	10

7. Answer any <u>one</u> of the following:-

7-a.	Describe the concept of "sprint goal" in Scrum and why it is important to have a clear goal for each sprint. (CO4, K2)	10
7-b.	Describe the process and objectives of a sprint review in Scrum. (CO4, K2)	10

8. Answer any <u>one</u> of the following:-

8-a.	Discuss the significance of "Automated Testing" in the DevOps pipeline and how	10

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it helps in achieving faster and more reliable releases. (CO5, K2)

8-b.   Discuss the role of "Containerization" (e.g., Docker) in a DevOps environment.   10
Explain the benefits of using containers for application deployment and how they
help in achieving consistency across different environments.   (CO5, K2)

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