

PROJECT ENGINEERING AND MANAGEMENT

ENEE 301

Year/Part: III/I (3-1-0)

Teaching Schedule				Examination Scheme						Total
L	T	P	Total	Theory			Practical			
				Assessment Marks	Final		Assessment Marks	Final		
					Duration (Hrs)	Marks		Duration (Hrs)	Marks	
3	1	0	4	40	3	60	0	0	0	100

Depth Codes

E-Explanation	C-Circuit	D-Definition	DM-Demonstration
DV-Derivation	DW-Drawing	P-Proof	I-Illustration
NUM-Numerical	PRG-Programming	S-State	ACT-Activity-based Learning
MP- Mini Project	EXP-Experiment	REV-Review / Recap	PS- Problem Solving
QA- Question Answer	Q- Quiz	ST- Surprise Test	MT-Mid Term Test

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
1	Basics of Project Management			4			1,2
1.1	Fundamentals		Establishing the Baseline for Project Success	1.3			
1.1.1	Definition, objectives, evolution (Traditional to agile)	D, E	<p>Definition: A temporary endeavor (definite start and end) undertaken to create a unique product, service, or result, contrasting sharply with continuous operations.</p> <p>Objectives: satisfy stakeholder requirements by achieving project goals within constraints. Objectives should be SMART (Specific, Measurable, Achievable, Relevant, Time-bound).</p> <p>Traditional/Predictive (Waterfall): Linear, sequential phases. Originated in construction and defense (e.g., Henry Gantt's charts, PERT, CPM). Focuses on detailed upfront planning and adherence to the fixed plan. Best for projects with stable, well-known requirements.</p> <p>Agile/Adaptive: Iterative and incremental delivery. Focuses on customer collaboration, rapid response to change, and delivering working increments frequently. Common methods include Scrum and Kanban. Best for R&D and evolving software/embedded systems projects.</p>				
1.1.2	Types of projects (Infrastructures, research and development)	D, E, I	Construction: High capital, location-bound, tangible deliverables, high safety risk. Waterfall methodology is typically dominant (Ex. Building a new substation, installing a large-scale solar farm)				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
			IT: Intangible outputs (software, code), high uncertainty, rapid changes, suited for Agile. Ex: Developing SCADA software for grid automation, writing embedded firmware for IoT sensors, setting up a data center				
			R&D: Exploratory, high risk of failure, innovation-driven, flexible timelines but milestone-based funding. Ex. Designing a new energy storage technology, prototyping an advanced power electronics converter.				
1.1.3	Project vs. Operations	D, E, I	Operations: Continuous, repetitive outcome, sustaining the business, permanent functional teams. (E.g., Maintenance and routine monitoring of the Smart Grid system.)				
1.2	Key Elements		Understanding the Core Dynamics and Control Points	1.3			
1.2.1	Triple Constraints (Scope, time, cost)	D, E, I	Scope: The defined work required to deliver the product. What are the system specifications and features? Risk: <i>Scope Creep</i> (uncontrolled expansion of requirements).				
			Time: The schedule for completion. Involves planning milestones and determining the Critical Path (the sequence of activities that dictates the project's shortest duration).				
			Cost: The approved budget for all resources (labor, materials, equipment, overhead). Trade-off: Compressing time (crashing) often increases cost (overtime).				
1.2.2	Stakeholder management, risk, quality, communication	D, E, I	<ul style="list-style-type: none"> • Risk Identification: Brainstorming uncertain threats (e.g., supply chain shortages, weather delays, regulatory changes) and opportunities. • Assessment: Calculate Probability x Impact = Risk Exposure. • Response: Avoid, Mitigate, Transfer, or Accept. 				
			Ensuring the deliverables meet functional and non-functional requirements. <ul style="list-style-type: none"> • Quality Assurance (QA): Process-oriented (Are we following standards?). • Quality Control (QC): Product-oriented (Does the final circuit pass testing?). 				
			Communication: The most critical skill (PMs spend ~90% of their time communicating). Planning: Define who needs what information, when, and how (e.g., weekly status reports, formal documentation). Clear communication prevents rework and stakeholder misalignment.				
1.3	Project Life Cycle		The Process Groups in the Waterfall Model	1.3			

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
1.3.1	Initiation, Planning, Execution, Monitoring, Closure	D, E, I	Initiation: Defining the project at a high level and authorize its existence. Key Activities: Feasibility study, defining business need. Key Output: <i>Project Charter</i> (Formal authorization).				
			Planning: Developing the comprehensive roadmap. Key Activities: Defining scope (Work Breakdown Structure, WBS), creating the schedule (Gantt Chart), budgeting, risk planning. Key Output: <i>Project Management Plan (PMP)</i> .				
			Execution: Performing the work defined in the PMP. Key Activities: Managing resources, quality assurance, procurement, developing the team. This phase consumes most of the budget.				
			Monitoring and Control: Tracking progress against the plan and manage changes. Key Activities: Measuring performance (KPIs like CPI/SPI), forecasting completion, implementing corrective actions. Occurs in parallel with Execution.				
			Closure: Formalizing project acceptance and hand off the final product. Key Activities: Obtaining final sign-off, handing over documentation to operations, archiving records, conducting Lessons Learned sessions.				
1.3.2	Role of project management body of knowledge, agile frameworks	D, E, I	PMBOK (Project Management Body of Knowledge): A globally recognized standard defining 10 Knowledge Areas (Integration, Scope, Time, etc.) and 5 Process Groups (Initiation through Closure). Provides a structured, process-based approach, often associated with Waterfall.				
			Scrum, Kanban: Providing lightweight, iterative approaches for managing dynamic projects. Focus on short cycles (Sprints) for quick feedback and adaptation. Often used for software development in EE (firmware, control systems).				
	Evaluation	Q, QA					
	Reference book		https://scrumguides.org/ , Project Management: A Systems Approach ,				
2	Project Initiation and Planning		-	8			2,3,4
2.1	Project Initiation			3			
2.1.1	Opportunity analysis	E, Ex	The process of identifying new business opportunities. In EE, this often stems from: Market Demand (e.g., rising EV adoption requiring charging stations), Technological Advance (e.g., new wide-bandgap				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
			semiconductors), or Legal Requirements (e.g., new grid emission standards).				
	SWOT Analysis	E, I	A strategic tool to evaluate the project environment:				
			• Strengths (Internal): Skilled R&D team, proprietary patents.				
			• Weaknesses (Internal): Lack of capital, outdated testing equipment.				
			• Opportunities (External): Government subsidies for solar energy.				
	Business Case	D, E	<ul style="list-style-type: none"> • Justification of project investment, reasoning for initiating a project, • compares the benefits (increased reliability, revenue) against the cost, 				
2.1.2	Project charter	D, E	Formal document for the project existence, Project Manager as the authorized person to use organizational resources; including high-level requirements, assigned PM, and summary budget.				
	Scope Statement (SMART Goals)	D, E, Ex	Define the project boundaries, what is in scope and what is out of scope. Objectives must be SMART:				
• Specific (Upgrade Substation A)							
• Measurable (Increase capacity by 50 MVA)							
• Achievable (Technology exists)							
• Relevant (Aligns with grid strategy)							
			• Time-bound (Complete by Dec 2025).				
2.2	Feasibility Study	I	"Can we do it?" and "Should we do it?"	2.5			
2.2.1	Technical Feasibility	D, Ex	Assessment of technical resources and expertise to convert the idea into a working system, and organization capacity				
	Financial, Economic Feasibility	D, E	Financial: Focuses on profit for the investor. (Will this power plant make money for the shareholders?)				
			Economic: Broader view including societal impact. (Does this project benefit the country's economy, regardless of direct profit?)				
Environmental Feasibility	D, Ex	Legal: Compliance with laws (e.g., Right-of-way transmission lines, IP rights).					
		Environmental: Impact Assessment (EIA). Critical for infrastructure. (e.g., Effect of a hydro dam on local fish populations; electromagnetic interference compliance).					
2.2.2	Cost Estimation: Top-Down	D, E	Analogous Estimating: cost comparison with previous, similar project as the basis for the current one.				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
			<ul style="list-style-type: none"> • <i>Pros</i>: Fast, cheap. • <i>Cons</i>: Less accurate. • <i>Use</i>: Early phases (Initiation). 				
	Cost Estimation: Bottom-Up	D, E	<p>Aggregating the costs of individual work packages or activities from the lowest level of the Work Breakdown Structure (WBS).</p> <ul style="list-style-type: none"> • <i>Pros</i>: Most accurate. • <i>Cons</i>: Time-consuming, expensive to create. • <i>Use</i>: Detailed Planning phase. 				
2.3	Project Appraisal	I	Quantitative Decision Making	2.5			
2.3.1	NPV (Net Present Value)	D, E	<p>The difference between the present value of cash inflows and the present value of cash outflows over a period.</p> <ul style="list-style-type: none"> • <i>Concept</i>: Money today is worth more than money tomorrow (Time Value of Money). • <i>Rule</i>: If $NPV > 0$, the project adds value (Accept). If $NPV < 0$, Reject. 				
	IRR (Internal Rate of Return)	D, E	<p>The discount rate that makes the NPV of all cash flows equal to zero. It represents the break-even interest rate.</p> <ul style="list-style-type: none"> • <i>Rule</i>: If $IRR > \text{Cost of Capital (Interest Rate)}$, Accept the project. 				
	Payback Period	D, E, Ex	<p>The amount of time required for the project to recover its initial investment cost from the cash inflows.</p> <p><i>Drawback</i>: Ignores the time value of money and cash flows after the payback period.</p>				
	Social Cost-Benefit Analysis	D, E	Used for public sector projects (e.g., Rural Electrification). Monetizes social benefits (e.g., improved literacy due to lighting, reduced carbon emissions) and compares them to social costs.				
2.3.2	Risk Assessment: Qualitative	D, E, I	<p>Prioritizes risks by assessing their Probability of occurrence and Impact on objectives using a pre-defined scale (e.g., High/Medium/Low).</p> <ul style="list-style-type: none"> • <i>Tool</i>: Probability and Impact Matrix. 				
	Risk Assessment: Quantitative	D, E, I	<p>Numerically analyzes the effect of identified risks on overall project objectives.</p> <ul style="list-style-type: none"> • <i>Tools</i>: Monte Carlo Simulation (computerized simulation of thousands of scenarios), EMV (Expected Monetary Value = Probability % \times Impact \$). 				
	Relevant Texts	E	<ol style="list-style-type: none"> 1. Engineering Economy by William G. Sullivan et al. (Best for Section 2.3 - NPV, IRR, Cost Benefit). 2. PMBOK® Guide (Project Management Institute) - (Best for Section 2.1 - Charter, Stakeholders). 				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
			3. Project Management: A Systems Approach... by Harold Kerzner (Comprehensive coverage of Feasibility).				
	Evaluation	Q, QA					
3	Project Scheduling and Resource Management			8			5,6,7
3.1	3.1 Scheduling Techniques	I	Building the Project Roadmap and Timeline	4			
3.1.1	Work Breakdown Structure (WBS)	D, E, I	A foundational, deliverable-oriented hierarchical decomposition of the total scope of work to be carried out by the project team. WBS ensures all required work is accounted for and serves as the input for schedule creation.				
		E, Ex, N	Rule of Thumb: WBS elements should typically represent 8 to 80 hours of work, making them easily manageable and trackable.				
	Gantt charts	D, E, Ex, N	A bar chart showing the schedule of activities against a time scale. It clearly illustrates activity start/end dates, dependencies, and duration.				
			• <i>Benefit:</i> Excellent for visual tracking and communicating timelines to stakeholders.				
3.1.2	PERT (Program Evaluation and Review Technique)	D, E, N	A scheduling method used when activity durations are highly uncertain. It uses a weighted average of three estimates (Optimistic, Pessimistic, Most Likely) to derive the expected duration. Numerical examples.				
			• <i>Use:</i> R&D projects or new technology integration where exact duration is unknown. Numerical examples.				
	CPM (Critical Path Method)	D, E, I, N	A scheduling technique used to determine the longest path through the project network diagram, which defines the shortest possible duration for the project. Numerical examples				
			• <i>Critical Path:</i> Any delay on an activity on the critical path <i>will</i> delay the final project date. Numerical examples				
			• <i>Float (Slack):</i> The amount of time an activity can be delayed without delaying the project finish date. Critical activities have zero float. Numerical examples				
3.1.3	Milestone Tracking	D, E	A Milestone is a significant point or event in the project, typically an interim deliverable completion or a key decision point (e.g., 'Design Approved', 'Equipment Delivered').				
			• <i>Use:</i> Milestones have zero duration and are used for high-level reporting and payment triggers.				
3.2	Resource Management	I	Optimizing Manpower and Materials	4			7,8

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
3.2.1	Resource Allocation	D, E	Assigning specific resources to specific tasks identified in the WBS. This converts the schedule from an activity list to an executable plan.				
	Resource Leveling	D, E, I	A technique used to adjust resource schedules when resource demand exceeds supply (over-allocation). This often involves delaying non-critical tasks to smooth out peaks and valleys in resource usage, usually increasing the project duration.				
	Resource Optimization	E	A broader goal focusing on utilizing resources efficiently across all projects. Includes maximizing utilization, minimizing bottlenecks, and optimizing resource quality (assigning the right person for the job).				
3.2.2	Budgeting (Cost Aggregation)	D, E	Taking the cost estimates for all work packages (labor, materials, equipment, reserves) and summing them up to establish the project baseline budget. The baseline is the approved budget against which actual costs are monitored.				
	Material Planning	D, E, Ex	Determining the exact quantities, and delivery timings for physical goods.				
	Human Resource Planning	D, E	Identifying the team structure, roles, responsibilities, and the number of people needed for each type of expertise (e.g., Control Systems Engineer, Field Technician) and when they are required throughout the project life cycle.				
	Evaluation	Q, QA					
	Relevant Texts		<ol style="list-style-type: none"> 1. Project Management: A Systems Approach to Planning, Scheduling, and Controlling by Harold Kerzner (Excellent for CPM/PERT and Resource Management techniques). 2. PMBOK® Guide (Project Management Institute) - (Detailed processes for Scope, Schedule, and Resource Management Knowledge Areas). 3. Construction Project Scheduling and Control by Saleh Mubarak (Strong focus on WBS, network diagrams, and techniques relevant to engineering infrastructure). 				
4	Procurement and Contracts			6			9,10
4.1	Procurement Strategies	I	Deciding What to Buy and How to Contract	3			
4.1.1	Make-or-Buy Decision	D, E, I	Analysis to determine whether a product, service, or component should be produced internally or purchased from an external vendor. Deciding the balance of cost, capacity, core competency, and control.				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
4.1.2	Vendor Selection	D, E, Ex	The process of evaluating potential sellers based on predefined criteria, including technical capability, past performance, financial stability, quality management systems, and competitive price.				
4.1.3	Expression of interest, requests for proposal,	D, E	RFP (Request for Proposal): Used when the project scope is clearly defined, but the vendor's approach or solution needs to be proposed. The Bidding Process involves formal solicitation to ensure fair competition and value.				
	Contract Types (Fixed-Price)	D, E, Ex	Fixed-Price (FP): The buyer pays a set lump sum, shifting the risk of cost overruns primarily to the seller. <i>Best for:</i> Well-defined, stable scopes.				
	Contract Types (Cost-Plus)	D, E, Ex	Cost-Plus (CP): The buyer reimburses the seller for all actual costs incurred plus a negotiated fee (profit). These transfers risk primarily to the buyer. <i>Best for:</i> High-uncertainty projects with undefined scope.				
	Bidding Process		Expression of interest, requests for proposal, bidding process, contract types (Fixed-price, cost-plus)				
4.2	Supply Chain and Legal Aspects	I	Managing Vendor Relationships and Legal Compliance	3			
4.2.1	Procurement in agile vs. traditional projects	E, I	Traditional (Waterfall): Focuses on long contracts, detailed specifications upfront, and fixed scope. Agile: Uses adaptive contracts (e.g., Time & Material, or fixed price per short iteration) allowing for flexibility and joint requirement definition over time.				
4.2.2	Contract Management	D, E	The administration process ensuring both parties meet their obligations. This includes tracking performance against contract terms, managing formal change requests, verifying invoices, and ensuring quality compliance.				
	Dispute Resolution	D, E	The mechanism of establishing the contract to settle disagreements. Methods range from Negotiation (direct discussion), Mediation (non-binding third party), to Arbitration (binding third party decision, often faster than courts).				
	Evaluation	QA, Q					
	Relevant Texts	E	<ol style="list-style-type: none"> 1. PMBOK® Guide (Project Management Institute) - The definitive guide for the Procurement Management Knowledge Area, covering all phases. 2. Contract Management: Planning, Controlling, and Administering Construction Projects by Jimmie Hinze (Specific to engineering/construction contracts and dispute mechanics). 				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
			3. Legal and Ethical Issues in Project Management by John C. Morris (Excellent for understanding the legal implications of contract types and dispute resolution processes).				
5	Monitoring, Control and Information Systems			4			11,12
5.1	Project Control	I	The Science of Staying on Track	2			
5.1.1	Earned Value Management (EVM)	D, E, I	A powerful objective method to integrate scope, schedule, and cost performance. Key Metrics:				
			• PV (Planned Value): Budgeted cost of work scheduled.				
			• EV (Earned Value): Budgeted cost of work performed.				
			• AC (Actual Cost): Actual cost of work performed.				
	EVM allows forecasting the final project cost and schedule outcome.						
5.1.2	Key performance indicators (KPIs), Dashboards	D, E	KPIs (Key Performance Indicators): Specific, measurable values that demonstrate project effectiveness (e.g., Schedule Performance Index (SPI), Cost Performance Index (CPI), Defect Rate).				
	• Dashboards: Visual reports that present KPIs in a readily understandable format for quick management decisions.						
5.1.2	Variance Analysis	D, E	The process of calculating the difference between planned performance and actual performance.				
			• Cost Variance (CV): $CV = EV - AC$. (Negative is bad).				
			• Schedule Variance (SV): $SV = EV - PV$. (Negative is bad).				
			Variance analysis triggers corrective or preventative actions				
5.2	Information Systems	I	The Tools for Reporting and Communication	2			
5.2.1	Software and Tools	D, Ex	Project Management Information Systems (PMIS) are essential.				
			• Traditional/Construction: MS Project (strong on CPM/PERT).				
			• Agile/R&D: JIRA, Trello, Asana (strong on task tracking and visual workflow).				
			• Purpose: Facilitate data collection, calculation of EVM, and distribution of reports.				
5.2.2	Reporting and Communication Plans	D, E	Reporting: Defining the format, frequency, and audience (e.g., Weekly status report for the team, Monthly summary for the sponsor).				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
			<ul style="list-style-type: none"> • Communication Plan: A document that formally defines how information will be shared among stakeholders, preventing miscommunication and ensuring timely delivery of status updates. 				
	References for Section 5	E	<ol style="list-style-type: none"> 1. Project Management: A Systems Approach to Planning, Scheduling, and Controlling by Harold Kerzner (Strong coverage of EVM and performance tracking). 2. PMBOK® Guide (Project Management Institute) - Details all processes within the Monitoring & Controlling Process Group. 				
6	Evaluation, Auditing and Impact			4			13,14
6.1	Project Evaluation	I	Looking Back to Look Forward	3			
6.1.1	Post-Mortem Analysis, Lessons Learned	D, E	Post-Mortem/Lessons Learned: A structured meeting after project closure to identify what went well, what could be improved, and why certain outcomes occurred. The findings are documented for the benefit of future projects (organizational process assets).				
6.1.2	Return on Investment (ROI)	D, E	A profitability ratio used to evaluate the efficiency of an investment. ROI Formula, A positive ROI suggests the project was financially successful				
	Social & Environmental Impact	D, E, Ex	Evaluating the project's long-term effect beyond financial metrics.				
			<ul style="list-style-type: none"> • <i>Social</i>: Job creation, improved public services (e.g., reliable power supply). • <i>Environmental</i>: Reduction in emissions, noise pollution, land disruption, adherence to carbon offset goals. 				
6.2	Auditing: Compliance, Quality Audits, ISO Standards	I	Verifying Adherence and Quality	3			
	Compliance & Quality Audits	D, E	Compliance Audits: Verifying that the project processes and deliverables adhered to external laws (e.g., OSHA safety), regulations (e.g., FCC), and internal policies.				
			Quality Audits: A structured, independent review to determine if project activities comply with quality standards and organizational policies.				
	ISO Standards	D, E, I	International Organization for Standardization.				
			<ul style="list-style-type: none"> • Relevance: <i>ISO 9001</i> (Quality Management Systems) and <i>ISO 14001</i> (Environmental Management) often dictate mandatory procedures and documentation for major engineering projects. 				

Unit	Topic/ Sub topic	Depth Code	Description of Depth	L	T	P	week
	References for Section 6	E	<ol style="list-style-type: none"> 1. Quality Audits for Improved Performance by David L. Goetsch (Reference for quality and compliance standards, including ISO). 2. Engineering Economy by William G. Sullivan et al. (Best for Section 6.1.2 - ROI and Financial Evaluation). 3. PMBOK® Guide (Project Management Institute) - Guidance on organizational process asset updates. 				
7	Project Closure			4			15
7.1	Closing Process	I	Formalizing Acceptance and Handover	2			
7.1.1	Handover, Documentation, Final Reports	D, E	Handover: Formally transferring the final product (e.g., the commissioned substation) to the Operations/Maintenance team, including training and support contracts.				
• Documentation: Ensuring all technical drawings (as built), specifications, and test results are finalized and archived.							
• Final Reports: Summarizing performance against the PMP baseline (Scope, Cost, Schedule).							
7.1.2	Contract Closure, Resource Release	D, E	Contract Closure: Completing all commercial agreements, making final payments, and formally closing out external contracts.				
			• Resource Release: Releasing team members, equipment, and facilities back to the functional organization or external pool for assignment to new projects.				
7.2	Lessons Learned: Best Practices, Failure Analysis	D, E	A reinforcement of Section 6.1.1, emphasizing the collection of institutional knowledge:				
			• Best Practices: Documenting innovative solutions and efficient processes for future teams.	2			
			• Failure Analysis: Critically analyzing the root causes of major variances or quality issues to prevent recurrence.				
	References	E	<ol style="list-style-type: none"> 1. PMBOK® Guide (Project Management Institute) - The definitive guide for the Closing Process Group. 2. Project Management: A Systems Approach to Planning, Scheduling, and Controlling by Harold Kerzner (Detailed sections on administrative and contractual closure). 				

MODEL QUESTIONS

FM: 60
Time: 3 hrs.

Attempt All Questions

1. a. Define Project and explain the life cycle of the project. [5]
b. Explain the significance of SWOT Matrix in project initiation phase. [5]
2. a. For the development of hydropower projects in Nepal, how do you carry out Environmental feasibility study? Explain based on rule and regulation of hydropower development in Nepal [6]
b. Define NPV and payback period of project and discuss its significance in project appraisal [4]
3. a. What is the significance of critical path in network diagram? Draw the network for the following activities with their duration tabulated below. Calculate EST, EFT, LST, LFT, Total Float, Free Float and Independent float and also determine the critical path. [1+6]

SN	Activity	Duration
1	1-2	10
2	1-3	12
3	2-5	8
4	2-7	12
5	3-4	6
6	3-6	5
7	4-5	8
8	5-6	8
9	5-7	10
10	6-7	6
11	7-8	12

- b. What is Work Breakdown Structure (WBS)? Explain it with reference to project of connecting remote village of Nepal with 11 kV distribution line. [5]
4. a. What types of procurement methods can be adopted in the project. [4]
b. Explain Fixed Price Contract, Time and Material Contract and Cost Reimbursable Contract. [4]
5. a. 50 units of plantation have to be done in two weeks' period. Per unit cost of plantation is estimated as Rs. 200 of which progress monitoring was done one week after the work was started. Only 40 % work was found completed and the account record showed that the actual expenditure

(cost) for plantation per unit was Rs. 250. Perform Earned Value analysis.

[5]

b. What do you understand by Project Management Information system? Explain it with its importance. [5]

6. a. What is Post-Mortem Analysis in Project Management? List out the steps to perform Post-Mortem analysis. [5]

b. Explain the key steps of project closure. [5]

(Note: Number of questions and distribution of marks are indicative only.)