AKTU · 2ND YEAR · BAS301 / BAS401

Technical Communication

Unit 2 — Technical Writing Skills

- Nature and Style of Technical Writing
- Describing/Defining Objects, Mechanisms, and Processes
- Instructions, User Manuals, and Guidelines
- Formal Reports and Proposals
- Feasibility Reports
- Letter Writing: Official, Business, and Job Application Letters



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Nature and Style of Technical Writing

Technical writing is a specialized form of communication designed to convey complex information clearly and efficiently.

- Objective: To inform, instruct, or persuade a specific audience.
- Clarity: Use of precise, unambiguous language to avoid misinterpretation.
- Conciseness: Eliminating redundant words to save reader time.
- Accuracy: Data, facts, and figures must be verified and error-free.
- Audience-Centric: Tailoring the technical depth to the reader's expertise.
- Formal Tone: Maintaining a professional, impersonal, and unbiased perspective.

Style Guidelines for Technical Writing

Effective technical writing follows specific stylistic conventions to ensure readability.

- Use of Active Voice: Makes sentences direct and identifies the actor.
- Logical Organization: Following a structured hierarchy (Introduction, Body, Conclusion).
- Visual Aids: Incorporating charts, diagrams, and tables to simplify data.
- Consistency: Using uniform terminology, formatting, and style throughout the document.
- Avoidance of Jargon: Explaining technical terms unless the audience is expert.
- Formatting: Using headings, bullet points, and white space to improve scannability.

Describing Objects and Mechanisms

TECHNICAL DESCRIPTION

A detailed explanation of the physical characteristics, parts, and functions of an object or mechanism.

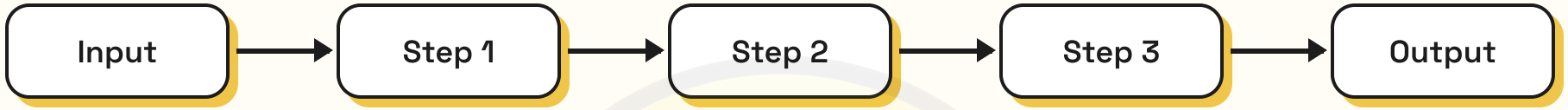
- Object: A static item (e.g., a tool, a building).
- Mechanism: A device with moving parts that performs a function (e.g., a pump).
- Structure: Introduction (general appearance), Body (parts/details), Conclusion (function/operation).
- Focus: Emphasize physical attributes like shape, size, material, and color.

Describing Processes

A process description explains how something is done or how it happens over time.

- Chronological Order: Steps are presented in the sequence they occur.
- Purpose: To explain the 'how' and 'why' of a procedure.
- Components: Introduction (overview), Sequence of steps, Conclusion (result).
- Language: Use of transition words (first, then, next, finally).
- Clarity: Each step must be distinct and actionable.
- Visuals: Flowcharts are highly recommended for complex processes.

Process Description Flow



A standard linear flow for describing a technical process.

Instructions and User Manuals

Instructions provide step-by-step guidance to help users perform a specific task.

- Imperative Mood: Use command verbs (e.g., 'Press the button', 'Insert the cable').
- Safety Warnings: Clearly highlight 'Caution', 'Warning', and 'Danger' notes.
- Structure: Title, Required Tools, Prerequisites, Numbered Steps, Troubleshooting.
- User Manuals: Comprehensive documents providing installation, operation, and maintenance instructions.
- Guidelines: Broad principles or recommendations for behavior or performance.
- Readability: Use short sentences and bulleted lists for complex procedures.

Formal Reports

Formal reports are structured documents used to communicate research, findings, or recommendations to decision-makers.

- Front Matter: Title page, Abstract, Table of Contents, List of Figures.
- Introduction: Purpose, scope, and background of the report.
- Methodology: Description of how data was collected or analyzed.
- Findings/Results: Presentation of facts without personal opinion.
- Discussion: Interpretation of the findings.
- Conclusions/Recommendations: Final summary and suggested actions.

Proposals

A proposal is a persuasive document designed to convince a client or management to accept a project or idea.

- Problem Statement: Defining the issue that needs a solution.
- Proposed Solution: Detailed plan to address the problem.
- Budget and Timeline: Estimated costs and project schedule.
- Qualifications: Evidence of the team's ability to execute the project.
- Persuasive Tone: Focusing on the benefits to the reader.
- Solicited vs. Unsolicited: Responding to a request vs. offering an idea.

Feasibility Reports

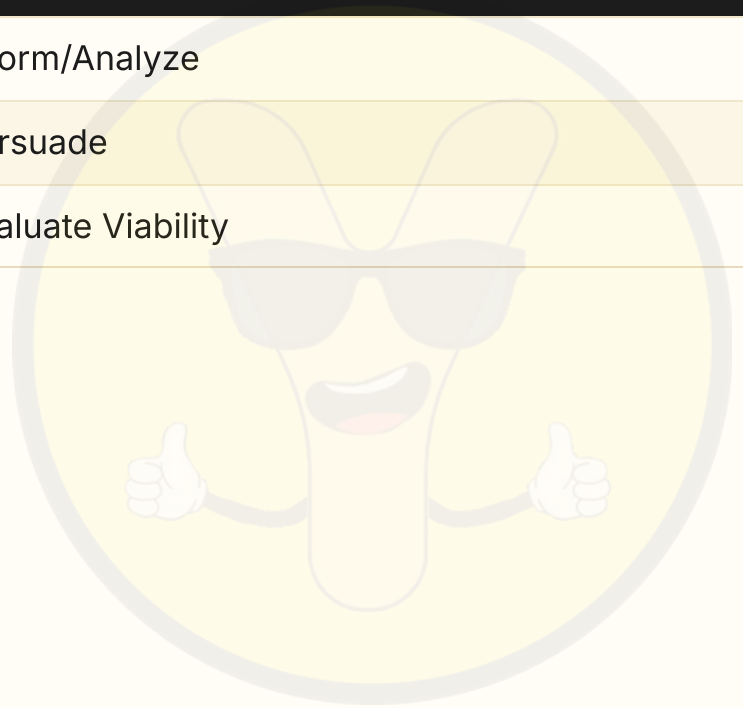
FEASIBILITY STUDY

An evaluation of a proposed project to determine if it is viable, profitable, and practical.

- Economic Feasibility: Cost-benefit analysis.
- Technical Feasibility: Availability of technology and expertise.
- Operational Feasibility: How well the solution fits existing workflows.
- Schedule Feasibility: Can the project be completed on time?
- Outcome: Recommends whether to proceed, modify, or abandon the project.

Comparison of Report Types

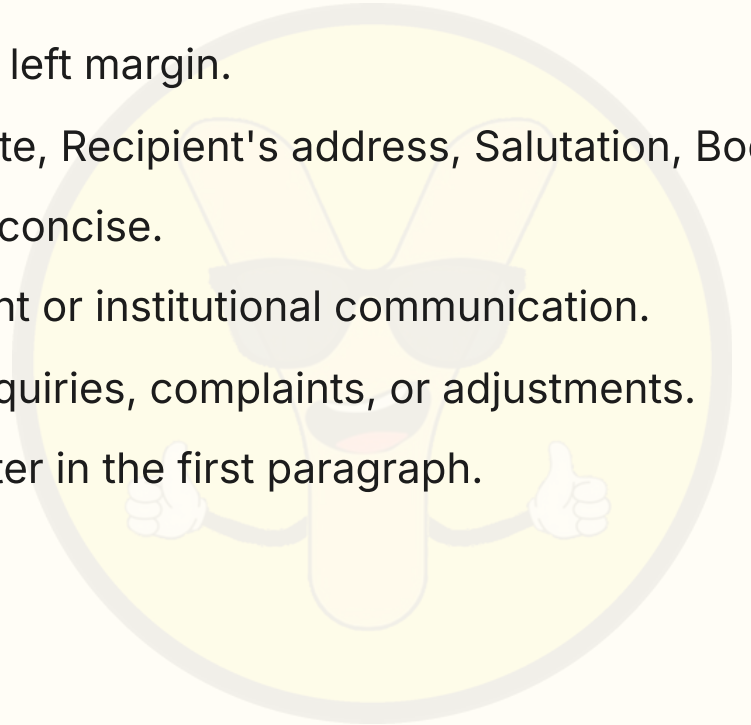
Report Type	Primary Purpose	Audience
Formal Report	Inform/Analyze	Management
Proposal	Persuade	Potential Client
Feasibility	Evaluate Viability	Decision Makers



Letter Writing: Official and Business

Business letters are formal communications used for external or internal professional interaction.

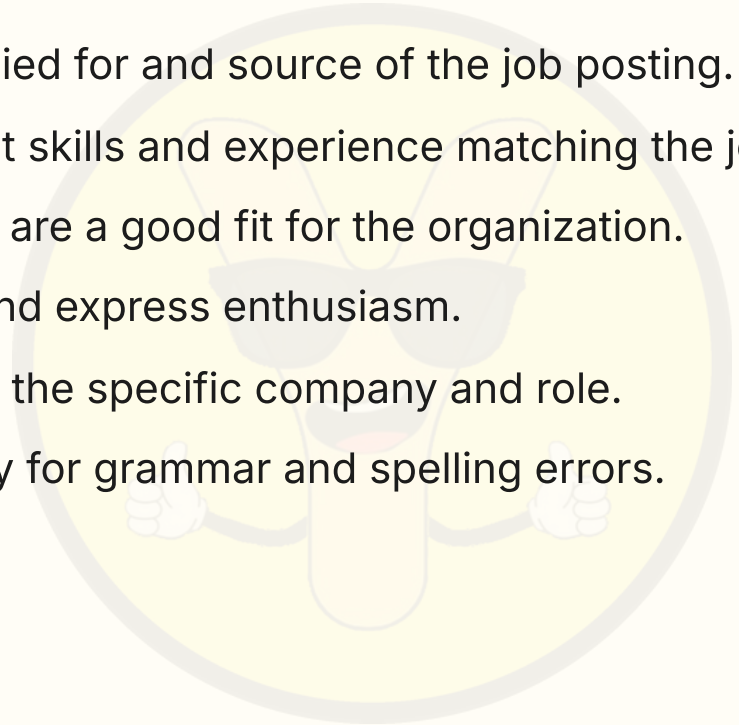
- Block Format: All text aligned to the left margin.
- Components: Sender's address, Date, Recipient's address, Salutation, Body, Closing, Signature.
- Tone: Professional, courteous, and concise.
- Official Letters: Used for government or institutional communication.
- Business Letters: Used for sales, inquiries, complaints, or adjustments.
- Clarity: State the purpose of the letter in the first paragraph.



Job Application Letters

A cover letter accompanying a resume to express interest in a specific position.

- Introduction: State the position applied for and source of the job posting.
- Body Paragraph 1: Highlight relevant skills and experience matching the job description.
- Body Paragraph 2: Explain why you are a good fit for the organization.
- Conclusion: Request an interview and express enthusiasm.
- Customization: Tailor every letter to the specific company and role.
- Professionalism: Proofread carefully for grammar and spelling errors.



Exam corner

- **Q1** Define technical writing and explain its key characteristics.
- **Q2** Differentiate between describing an object and describing a process with examples.
- **Q3** What are the essential components of a formal report?
- **Q4** Explain the importance of feasibility reports in project management.
- **Q5** Draft a sample job application letter for a junior engineer position.
- **Q6** Discuss the structure and purpose of a technical proposal.
- **Q7** What are the stylistic guidelines for writing effective user manuals?

Unit 2 done. You are exam-ready.

Revise the Exam corner once more, then open Unit 3 on theycotes.com. Every AKTU subject, unit by unit, free. Notes by Chirag Jain, Ycotes.

