



B.Com Honours

Semester VI

Calicut University

OFFICE AUTOMATION TOOLS

Course Code: COM6EJ307 • Module 4 Notes

Module IV: Internet Foundations, AI, & ChatGPT Applications

Covers Internet concepts, TCP/IP protocol suite, distributed Client-Server architecture, Artificial Intelligence in business, OpenAI platforms, ChatGPT, and Prompt Engineering frameworks.

Unit 4.1: Internet Concepts, Architecture, & TCP/IP Suite

Internet Architecture: Global network of networks operating on Client-Server model. **TCP/IP Protocol Suite:**

- **Application Layer:** HTTP/HTTPS, FTP, SMTP, DNS.
- **Transport Layer:** TCP (reliable connection) & UDP (fast datagrams).
- **Internet Layer:** IP Addressing (IPv4 / IPv6) & routing.

Unit 4.2: Artificial Intelligence, OpenAI, & ChatGPT Prompting

AI in Business: Machine Learning, Natural Language Processing (NLP), & Generative AI. **ChatGPT & OpenAI:** Large Language Models (LLMs) automating content generation, data analysis, coding, & customer service. **Prompt Engineering:** Crafting structured prompts (Role, Context, Task, Constraints) to maximize AI output quality.

Practical Case Framework 1 (TCP/IP Protocol Stack Layered Architecture Matrix): Compare TCP/IP stack layer, core protocol name, primary technical function, and internet application.

TCP/IP Protocol Stack Reference Table:		
TCP/IP Layer	Core Protocols Used	Primary Technical Function
Application Layer	HTTP, HTTPS, SMTP, FTP, DNS	Provides user interface & network services to software
Transport Layer	TCP (Transmission Control Protocol), UDP	Ensures end-to-end data delivery & error correction
Internet Layer	IP (IPv4 / IPv6), ICMP, ARP	Routes data packets across distributed networks

Practical Case Framework 2 (ChatGPT Prompt Engineering Framework Matrix): Compare prompt component, structural purpose, corporate example, and AI response quality impact.

ChatGPT Structured Prompting Table:		

Prompt Component	Structural Purpose	Corporate Prompt Example
Role Definition	Sets AI perspective & expertise level	"Act as a Senior Financial Analyst"
Task & Context	Specifies precise output required	"Summarize Q4 financial ratio trends for board"
Constraints & Format	Restricts length, tone, & format	"Limit to 3 bullet points in markdown table"

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