



PRESIDENCY UNIVERSITY

BENGALURU

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End Term Examinations - December 2025

Date: 05-12-2025

Time: 01:00pm - 04:00pm

School: SOCSE/SOE	Program: B. Tech Computer and Science Technology -Big Data		
Course Code: CBD3414	Course Name: GENERATIVE AI AND LARGE LANGUAGE MODELS		
Semester: VII	Max Marks: 100	Weightage: 50%	

CO - Levels	C01	C02	C03	C04
Marks	24	24	26	26

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Mention two uses of generative modeling.	2 Marks	L1	C01
2.	What is the main purpose of a GAN?	2 Marks	L2	C01
3.	Mention two key feature that differentiates Transformers from RNNs	2 Marks	L1	C02
4.	Write any two advantages of multi-head attention.	2 Marks	L4	C02
5.	What is zero-shot prompting? Give one example.	2 Marks	L2	C03
6.	How does few-shot prompting improve model performance?	2 Marks	L4	C03
7.	How does zero-shot prompting differ from few-shot prompting?	2 Marks	L2	C03
8.	What is the purpose of BLEU and ROUGE scores?	2 Marks	L2	C04
9.	What does a lower perplexity value mean?	2 Marks	L2	C04
10.	What is hallucination in AI?	2 Marks	L1	C04

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Discuss the significance of generative models in content creation and simulation.	10 Marks	L4	C01
	b.	Compare autoregressive, variational autoencoder models with their applications.	5 Marks	L4	C01
	c.	Explain the tokenization process with examples.	5 Marks	L2	C01
Or					
12.	a.	Explain in detail Word2Vec model, its working, advantages, and limitations.	10 Marks	L2	C01
	b.	Discuss the evolution, architecture, importance of LLMs.	5 Marks	L4	C01
	c.	Explain next-word prediction and its use in causal language models.	5 Marks	L2	C01

13.	a.	Explain in detail the architecture and working principle of the Transformer model with its key components.	10 Marks	L2	C02
	b.	Explain multi-head attention.	5 Marks	L2	C02
	c.	Analyze how decoder-only and encoder-decoder models differ in architecture and information flow during text generation.	5 Marks	L4	C02
Or					
14.	a.	Describe how attention helps Transformers capture both local and long-range dependencies.	10 Marks	L2	C02
	b.	Describe how self-attention helps in capturing relationships between distant words.	5 Marks	L2	C02
	c.	Explain the structure and operation of an encoder-decoder model with a neat diagram.	5 Marks	L2	C02

15.	a.	Analyze the role of zero-shot prompting in improving model adaptability across diverse tasks.	10 Marks	L4	C03
	b.	Explain how few-shot prompting helps in domain adaptation of LLMs.	5 Marks	L4	C03
	c.	Explain the step-by-step process of creating an effective prompt.	5 Marks	L2	C03

Or

16.	a.	Discuss the architecture and stages of text generation with suitable examples.	10 Marks	L4	C03
	b.	How can prompts be designed to produce accurate and relevant AI responses? Explain with examples.	5 Marks	L3	C03
	c.	Explain how clarity, specificity, and creativity contribute to building better AI prompts	5 Marks	L2	C03

17.	a.	Write in detail about hallucination, causes, and how to prevent it.	10 Marks	L4	C04
	b.	Explain how we can protect AI models from misuse and data leaks.	5 Marks	L2	C04
	c.	Write how AI systems filter or block harmful content.	5 Marks	L3	C04

Or

18.	a.	Describe explainability in detail — what it means, tools used, and benefits.	10 Marks	L2	C04
	b.	Explain the concept of LangChain and how it supports retrieval-augmented generation in large language models.	5 Marks	L2	C04
	c.	Write about OpenAI API and how it helps developers use LLMs.	5 Marks	L2	C04