PRESIDENCY UNIVERSITY

BENGALURU

Make Up Examinations – December 2025

Date: 26 – 12- 2025   **Time:** 1.00pm to 04.00pm

School: SOCSE	Program: B.TECH
Course Code : CSE3348	Course Name : GENERATIVE AI
Semester: MK	Max Marks: 100 / Weightage: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	24	24	26	26	N/A

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	Generative AI took off with the release of ChatGPT in November 2022. Name the company which created ChatGPT.	2 Marks	L1	CO1
2	Name a text-to-image model released by OpenAI.	2 Marks	L1	CO1
3	Name the component of a prompt which is mandatory.	2 Marks	L1	CO2
4	State true or false. BERT uses both the encoder and the decoder parts of the transformer.	2 Marks	L1	CO2
5	Name the Langchain tool which helps us find out information about academic papers.	2 Marks	L1	CO3
6	State what "React" means in the context of React Agents.	2 Marks	L1	CO3
7	Expand RALM.	2 Marks	L1	CO3
8	Expand GAN.	2 Marks	L1	CO4
9	State one example of a Diffusion Model and the company which made it.	2 Marks	L1	CO4
10	Name the 2 steps in Diffusion Models.	2 Marks	L1	CO4

Part B

Answer the Questions   **Total 80 Marks.**

11.	a.	Match the year with the important work:	**10 Marks**	**L2**	**CO1**

Work #	Work	Year #	Year
1	BERT: Bidirectional Encoder Representations from Transformers	A	1950
2	Learning Representations by Back-propagating Errors	B	1986
3	Computing Machinery and Intelligence	C	1991
4	DALL-E	D	2019
5	Long Short-Term Memory	E	2021

Eg. If you think that BERT came out in 1950, you need to only write **1A**.

	b.	Infer the concepts of Text-to-Text Generative models with examples	**10 Marks**	**L3**	**CO1**

Or

12.	a.	Interpret the following task with the type of neural model:	**10 Marks**	**L2**	**CO1**

Task #	Task	Model #	Model
1	Image Captioning	A	One-to-one
2	Machine Translation	B	One-to-Many
3	Part-of-Speech Tagging	C	Many-to-One
4	Sentiment Analysis	D	Many-to-Many (different size)
5	Image Classification	E	Many-to-Many (same length)

Eg. If you think that image captioning is one-to-one, you need to only write **1A**.

	b.	Interpret the best practices of prompt design and how we mitigate the limitations of the design	**10 Marks**	**L3**	**CO1**

13.	a.	Explain the various types of RNN, with a suitable application for each.	**10 Marks**	**L2**	**CO2**
	b.	Identify the various components of RAG in Langchain with neat illustrations.	**10 Marks**	**L3**	**CO2**

Or

14.	a.	Explain the types of Embedding with an example	10 Marks	L2	CO2
	b.	Illustrate the two phases of GPT namely Pre-training and fine-tuning for text classification with neat illustrations.	10 Marks	L3	CO2

15.	a.	Outline the types of conversational memory and distinguish between them.	10 Marks	L2	CO3
	b.	Explain the working principle of Langchain with a neat sketch	10 Marks	L3	CO3

Or

16.	a.	Summarize the advantages and disadvantages of using Conversation Buffer Memory and how Conversation Window Buffer Memory and Conversation Summary Memory mitigate those disadvantages.	10 Marks	L2	CO3
	b.	Discuss about the steps involved in creating Agents	10 Marks	L3	CO3

17.	a.	Explain any 3 applications of GAN and how GANs are used in them.	10 Marks	L2	CO4
	b.	Explain about Forward and Reverse Diffusion models with an example	10 Marks	L3	CO4

Or

18.	a.	Explain any 3 applications of Autoencoders and how Autoencoders are used in those applications.	10 Marks	L2	CO4
	b.	Explain Latent Diffusion Model (LDM) and infer its loss function.	10 Marks	L3	CO4