Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code: R8861

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

One Credit Course

Information technology

R21UIT861– Generative AI

(Regulations R2021)

Duration:1.30 Hours   Maximum: 50 Marks

Answer ALL Questions

PART - A (5 x 10 = 50 Marks)

1. (a) Explain in detail about the Generative Adversarial Network (GAN).   CO1- U   (10)

Or

   (b) Explain in detail about the Variational Auto encoder(VAE)   CO1- U   (10)

2. (a) You are a machine learning engineer at a company developing an AI system for automated quality inspection in a manufacturing plant. Your team is considering using Vision Transformer (ViT) models for image classification of product defects. Propose a comprehensive approach to implementing ViT effectively while ensuring accuracy, efficiency, and explainability of the system.   CO2-App   (10)

Or

   (b) You are an AI specialist tasked with improving the performance of a natural language generation system used by a customer support chatbot. The system relies heavily on prompt engineering to generate accurate, helpful, and contextually relevant responses. Propose a strategy to optimize prompt engineering that ensures consistent, relevant, and user-friendly chatbot interactions.   CO2-App   (10)

3. (a) Explain in detail about Hugging Face Spaces   CO1- U   (10)

Or

   (b) Explain in detail about Leonardo.Ai   CO1- U   (10)

4. (a) You are the marketing manager at a mid-sized e-commerce CO2-App (10)
   company that recently adopted Copy.ai to generate creative
   marketing content. The company's social media engagement and
   conversion rates have been inconsistent, and your team has been
   relying heavily on Copy.ai to produce blog posts, product
   descriptions, and social media captions. Propose a strategy to
   optimize the use of Copy.ai while maintaining quality and
   originality in your marketing efforts.

Or

   (b) You are a creative director at a digital marketing agency that CO2-App (10)
   recently started using Leonardo.Ai to generate visual content
   for clients' advertising campaigns. How will you quickly
   produce concept art, social media graphics, and promotional
   images.

5. (a) You are the lead designer at a startup specializing in digital CO2- App (10)
   content creation. Your team recently integrated Playground AI to
   accelerate the generation of creative images and visual assets for
   your projects. Propose a strategy to effectively integrate
   Playground AI while maintaining high-quality, distinctive visual
   content that resonates with your target market.

Or

   (b) You work as a content producer for a multimedia company that CO2- App (10)
   creates podcasts, videos, and online courses. Recently, your
   team started using Soundful to generate background music and
   soundtracks for your projects.How will you create AI –
   generated music with creative input and ensure that the audio
   content enhances the overall user experience.