



Paper id: 252756

Printed Page: 1 of 2
Subject Code: KMC201

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BTECH
(SEM II) THEORY EXAMINATION 2024-25
AI FOR ENGINEERING

TIME: 3 HRS**M.MARKS: 100****Note:** Attempt all Sections. In case of any missing data; choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 10 = 20**

Q No.	Question	CO	Level
a.	Why is it important for engineers to learn about artificial intelligence?	1	K1
b.	List two different approaches to artificial intelligence.	1	K1
c.	What is the importance of data in artificial intelligence?	2	K1
d.	Differentiate between regression and classification.	2	K2
e.	List any two real-life applications of natural language processing.	3	K1
f.	Define machine translation with an example.	3	K1
g.	What are convolutional neural networks used for?	4	K1
h.	How deep learning is different from machine learning?	4	K2
i.	What is speech recognition in artificial intelligence?	5	K1
j.	Name two areas where robots are used in artificial intelligence.	5	K1

SECTION B**2. Attempt any three of the following:****10 x 3 = 30**

a.	Explain the evolution of artificial intelligence from its inception to the present day.	1	K2
b.	Discuss the importance of data visualization. Discuss various types of data visualization techniques used in artificial intelligence.	2	K2
c.	Explain how speech recognition systems work. What are the major challenges?	3	K2
d.	Compare biological and artificial neural network. What is universal approximation theorem?	4	K2
e.	Explain at least three AI application areas in healthcare, agriculture, and transport.	5	K2

SECTION C**3. Attempt any one part of the following:****10 x 1 = 10**

a.	Explain the role of AI in modern technology and how it integrates with other emerging technologies like IoT and Big Data.	1	K2
b.	What are the major ethical concerns in AI deployment? Suggest methods to overcome them.	1	K2

4. Attempt any one part of the following:**10 x 1 = 10**

a.	Discuss the different stages of data processing?	2	K2
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b.	Illustrate how algorithms are designed for different types of learning: supervised, unsupervised, and reinforcement learning.	2	K2
5. Attempt any one part of the following:		10 x 1 = 10	
a.	Discuss the steps involved in natural language understanding.	3	K2
b.	Draw a neat and clean diagram to represent the working of chatbot. Differentiate between chatbot and virtual assistant.	3	K2
6. Attempt any one part of the following:		10 x 1 = 10	
a.	Explain convolutional neural networks with architecture and applications.	4	K2
b.	What are generative adversarial networks? How are they trained? Discuss the working of generative adversarial network.	4	K2
7. Attempt any one part of the following:		10 x 1 = 10	
a.	Describe how computer vision is applied in real-time applications like self-driving cars and surveillance systems.	5	K2
b.	Describe the process of image recognition in artificial intelligence systems with an example.	5	K2

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