Seat No.:		Q. Paper Code: FTC-A-033	SET	P

Fabtech Technical Campus, College of Engineering & Research, Sangola

(An Autonomous Institute)

Computer Science and Engineering, Artificial Intelligence and Data Science

Academic Year: -2025-26, Semester-I

Introduction to AI (25UAI11001)

Regular End Semester Examination 2025-26 [Dec./Jan.]

Class:	F. Y. B. Tech.	**Day & Date:**	Monday, 19/01/2026
Duration:	03 Hrs.	**Max. Marks:**	60 Marks
Time:	01:30 PM TO 04:30 PM		

Instructions:

1) Q. No. 1 is compulsory. It should be solved in the first 30 minutes in the Page No.3 of answersheet.
2) Don't forget to mention the question paper set (P/Q/R) on the top of the page 3.

Q. 1	Multiple Choice Questions (MCQs) Each question carries 1 mark	Marks: 10 CO	BL
1	What is the core definition of Artificial Intelligence (AI)? A) Machines learning from data B) Programming computers to mimic human intelligence/tasks C) Advanced robotics only D) Creating supercomputers	1	1
2	Which is an example of a DL application? A) Spam Filters B) Virtual Assistants (basic) C) Sentiment Analysis D) Simple Recommendation Systems	1	1
3	The set of all possible configurations of a system in AI is called the: a) Solution space b) Action space c) State space d) Problem space	2	1
4	Breadth-First Search (BFS) is optimal when: a) There are fewer nodes b) The branching factor is small c) All step costs are unequal d) All step costs are equal	2	1
5	Which logic represents knowledge using single symbols (letters) for propositions like "P" for "It is raining"? a) Predicate Logic b) First-Order Logic	3	1

	c) Propositional Logic d) Modal Logic		
6	What reasoning mechanism uses rules like "If X is a bird, then X can fly" to deduce new facts (e.g., "Tweety can fly")? a) Semantic traversal b) Frame inheritance c) Inference (Rule-Based Reasoning) d) Data mining	3	1
7	In supervised learning, the model is trained using: A) Labeled data B) Unlabeled data. C) No data. D) Only input data without any feedback.	4	1
8	Artificial Neural Networks (ANNs) are primarily inspired by: A) The functioning of the human liver. B) The structure and function of the human brain. C) The organization of social networks. D) The flow of traffic in a city.	4	1
9	ChatGPT is a prime example of which type of AI, known for generating human-like text? a) Computer Vision AI b) Generative AI c) Robotic Process Automation d) Predictive Analytics AI	5	1
10	A major societal challenge of AI, alongside bias, is: a) Increased data security b) Job displacement and economic inequality c) Improved transparency d) Better data privacy	5	1

Seat No.:		Q. Paper Code: FTC-A-033	SET	P

Fabtech Technical Campus, College of Engineering & Research, Sangola

(An Autonomous Institute)

Computer Science and Engineering, Artificial Intelligence and Data Science

Academic Year:-2025-26, Semester-I

Introduction to AI (25UAI11001)

Regular End Semester Examination 2025-26 [Dec./Jan.]

Class:	F. Y. B. Tech.	**Day & Date:**	Monday, 19/01/2026
Duration:	03 Hrs.	**Max. Marks:**	60 Marks
Time:	01:30 PM TO 04:30 PM		

Instructions:

1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw a neat diagram wherever necessary.
4) Make suitable assumptions if necessary and state it clearly.
5) Use of non-programmable calculator is allowed.

Q. No.	Questions	Marks	CO	BL
Q. 2	**Attempt any two of the following**	**10**		
1	Explain how AI systems mimic human intelligence.	**5**	1	2
2	Explain characteristics of AI in detail.	**5**	1	2
3	Describe Applications of AI in Various Domains	**5**	1	2
Q. 3	**Attempt any two of the following**	**10**		
1	Explain the importance of problem formulation in AI problem solving.	**5**	2	2
2	Explain state space representation with a suitable example.	**5**	2	2
3	Describe how state space helps in problem solving using search.	**5**	2	2
Q. 4	**Attempt any two of the following**	**10**		
1	Explain how predicate logic is more expressive than propositional logic.	**5**	3	2
2	Explain the difference between deductive and inductive reasoning.	**5**	3	2
3	Explain how a rule-based system works with an IF–THEN example.	**5**	3	2
Q. 5	**Attempt any two of the following**	**10**		
1	Explain the main differences between supervised and unsupervised learning with examples.	**5**	4	2

2	Explain why clustering is used in unsupervised learning.	**5**	4	2
3	Explain why machine learning is important in AI applications.	**5**	4	2
Q. 6	**Attempt any two of the following**	**10**		
1	Describe the role of robotics in modern industries.	**5**	5	2
2	Describe why fairness is critical in AI decision-making.	**5**	5	2
3	Explain why ethical guidelines are important in AI development.	**5**	5	2

Seat No.:		Q. Paper Code: FTC-A-033	SET	Q

Fabtech Technical Campus, College of Engineering & Research, Sangola

(An Autonomous Institute)

Computer Science and Engineering, Artificial Intelligence and Data Science

Academic Year: -2025-26, Semester-I

Introduction to AI (25UAI11001)

Regular End Semester Examination 2025-26 [Dec./Jan.]

Class:	F. Y. B. Tech.	**Day & Date:**	Monday, 19/01/2026
Duration:	03 Hrs.	**Max. Marks:**	60 Marks
Time:	01:30 PM TO 04:30 PM		

Instructions:

1) Q. No. 1 is compulsory. It should be solved in the first 30 minutes in the Page No.3 of answersheet.
2) Don't forget to mention the question paper set (P/Q/R) on the top of the page 3.

Q. 1	Multiple Choice Questions (MCQs) Each question carries 1 mark	Marks: 10 CO	BL
1	What reasoning mechanism uses rules like "If X is a bird, then X can fly" to deduce new facts (e.g., "Tweety can fly")? a) Semantic traversal b) Frame inheritance c) Inference (Rule-Based Reasoning) d) Data mining	3	1
2	In supervised learning, the model is trained using: A) Labeled data B) Unlabeled data. C) No data. D) Only input data without any feedback.	4	1
3	Artificial Neural Networks (ANNs) are primarily inspired by: A) The functioning of the human liver. B) The structure and function of the human brain. C) The organization of social networks. D) The flow of traffic in a city.	4	1
4	ChatGPT is a prime example of which type of AI, known for generating human-like text? a) Computer Vision AI b) Generative AI c) Robotic Process Automation d) Predictive Analytics AI	5	1
5	A major societal challenge of AI, alongside bias, is: a) Increased data security b) Job displacement and economic inequality	5	1

	c) Improved transparency d) Better data privacy		
6	What is the core definition of Artificial Intelligence (AI)? A) Machines learning from data B) Programming computers to mimic human intelligence/tasks C) Advanced robotics only D) Creating supercomputers	1	1
7	Which is an example of a DL application? A) Spam Filters B) Virtual Assistants (basic) C) Sentiment Analysis D) Simple Recommendation Systems	1	1
8	The set of all possible configurations of a system in AI is called the: a) Solution space b) Action space c) State space d) Problem space	2	1
9	Breadth-First Search (BFS) is optimal when: a) There are fewer nodes b) The branching factor is small c) All step costs are unequal d) All step costs are equal	2	1
10	Which logic represents knowledge using single symbols (letters) for propositions like "P" for "It is raining"? a) Predicate Logic b) First-Order Logic c) Propositional Logic d) Modal Logic	3	1

Seat No.:		Q. Paper Code: FTC-A-033	SET	Q

Fabtech Technical Campus, College of Engineering & Research, Sangola

(An Autonomous Institute)

Computer Science and Engineering, Artificial Intelligence and Data Science

Academic Year:-2025-26, Semester-I

Introduction to AI (25UAI11001)

Regular End Semester Examination 2025-26 [Dec./Jan.]

Class:	F. Y. B. Tech.	**Day & Date:**	Monday, 19/01/2026
Duration:	03 Hrs.	**Max. Marks:**	60 Marks
Time:	01:30 PM TO 04:30 PM		

Instructions:

1) All Questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat diagram wherever necessary.
4) Make suitable assumptions if necessary and state it clearly.
5) Use of non-programmable calculator is allowed.

Q. No.	Questions	Marks	CO	BL
Q. 2	**Attempt any two of the following**	**10**		
1	Explain how AI systems mimic human intelligence.	**5**	1	2
2	Explain characteristics of AI in detail.	**5**	1	2
3	Describe Applications of AI in Various Domains	**5**	1	2
Q. 3	**Attempt any two of the following**	**10**		
1	Explain the importance of problem formulation in AI problem solving.	**5**	2	2
2	Explain state space representation with a suitable example.	**5**	2	2
3	Describe how state space helps in problem solving using search.	**5**	2	2
Q. 4	**Attempt any two of the following**	**10**		
1	Explain how predicate logic is more expressive than propositional logic.	**5**	3	2
2	Explain the difference between deductive and inductive reasoning.	**5**	3	2
3	Explain how a rule-based system works with an IF–THEN example.	**5**	3	2
Q. 5	**Attempt any two of the following**	**10**		
1	Explain the main differences between supervised and unsupervised learning with examples.	**5**	4	2

2	Explain why clustering is used in unsupervised learning.	**5**	4	2
3	Explain why machine learning is important in AI applications.	**5**	4	2
Q. 6	**Attempt any two of the following**	**10**		
1	Describe the role of robotics in modern industries.	**5**	5	2
2	Describe why fairness is critical in AI decision-making.	**5**	5	2
3	Explain why ethical guidelines are important in AI development.	**5**	5	2

Seat No.:		Q. Paper Code: FTC-A-033	SET	R

Fabtech Technical Campus, College of Engineering & Research, Sangola

(An Autonomous Institute)

Computer Science and Engineering, Artificial Intelligence and Data Science

Academic Year: -2025-26, Semester-I

Introduction to AI (25UAI11001)

Regular End Semester Examination 2025-26 [Dec./Jan.]

Class:	F. Y. B. Tech.	**Day & Date:**	Monday, 19/01/2026
Duration:	03 Hrs.	**Max. Marks:**	60 Marks
Time:	01:30 PM TO 04:30 PM		

Instructions:

1) Q. No. 1 is compulsory. It should be solved in the first 30 minutes in the Page No.3 of answersheet.
2) Don't forget to mention the question paper set (P/Q/R) on the top of the page 3.

Q. 1	Multiple Choice Questions (MCQs) Each question carries 1 mark	Marks: 10	
		CO	BL
1	Artificial Neural Networks (ANNs) are primarily inspired by: A) The functioning of the human liver. B) The structure and function of the human brain. C) The organization of social networks. D) The flow of traffic in a city.	4	1
2	ChatGPT is a prime example of which type of AI, known for generating human-like text? a) Computer Vision AI b) Generative AI c) Robotic Process Automation d) Predictive Analytics AI	5	1
3	A major societal challenge of AI, alongside bias, is: a) Increased data security b) Job displacement and economic inequality c) Improved transparency d) Better data privacy	5	1
4	What is the core definition of Artificial Intelligence (AI)? A) Machines learning from data B) Programming computers to mimic human intelligence/tasks C) Advanced robotics only D) Creating supercomputers	1	1
5	Which is an example of a DL application? A) Spam Filters B) Virtual Assistants (basic) C) Sentiment Analysis	1	1

	D) Simple Recommendation Systems		
6	The set of all possible configurations of a system in AI is called the: a) Solution space b) Action space c) State space d) Problem space	2	1
7	Breadth-First Search (BFS) is optimal when: a) There are fewer nodes b) The branching factor is small c) All step costs are unequal d) All step costs are equal	2	1
8	Which logic represents knowledge using single symbols (letters) for propositions like "P" for "It is raining"? a) Predicate Logic b) First-Order Logic c) Propositional Logic d) Modal Logic	3	1
9	What reasoning mechanism uses rules like "If X is a bird, then X can fly" to deduce new facts (e.g., "Tweety can fly")? a) Semantic traversal b) Frame inheritance c) Inference (Rule-Based Reasoning) d) Data mining	3	1
10	In supervised learning, the model is trained using: A) Labeled data B) Unlabeled data. C) No data. D) Only input data without any feedback.	4	1

Seat No.:		Q. Paper Code: FTC-A-033	SET	R

Fabtech Technical Campus, College of Engineering & Research, Sangola

(An Autonomous Institute)

Computer Science and Engineering, Artificial Intelligence and Data Science

Academic Year:-2025-26, Semester-I

Introduction to AI (25UAI11001)

Regular End Semester Examination 2025-26 [Dec./Jan.]

Class:	F. Y. B. Tech.	**Day & Date:**	Monday, 19/01/2026
Duration:	03 Hrs.	**Max. Marks:**	60 Marks
Time:	01:30 PM TO 04:30 PM		

Instructions:

1) All Questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat diagram wherever necessary.
4) Make suitable assumptions if necessary and state it clearly.
5) Use of non-programmable calculator is allowed.

Q. No.	Questions	Marks	CO	BL
Q. 2	**Attempt any two of the following**	**10**		
1	Explain how AI systems mimic human intelligence.	**5**	1	2
2	Explain characteristics of AI in detail.	**5**	1	2
3	Describe Applications of AI in Various Domains	**5**	1	2
Q. 3	**Attempt any two of the following**	**10**		
1	Explain the importance of problem formulation in AI problem solving.	**5**	2	2
2	Explain state space representation with a suitable example.	**5**	2	2
3	Describe how state space helps in problem solving using search.	**5**	2	2
Q. 4	**Attempt any two of the following**	**10**		
1	Explain how predicate logic is more expressive than propositional logic.	**5**	3	2
2	Explain the difference between deductive and inductive reasoning.	**5**	3	2
3	Explain how a rule-based system works with an IF–THEN example.	**5**	3	2
Q. 5	**Attempt any two of the following**	**10**		
1	Explain the main differences between supervised and unsupervised learning with examples.	**5**	4	2

2	Explain why clustering is used in unsupervised learning.	**5**	4	2
3	Explain why machine learning is important in AI applications.	**5**	4	2
Q. 6	**Attempt any two of the following**	**10**		
1	Describe the role of robotics in modern industries.	**5**	5	2
2	Describe why fairness is critical in AI decision-making.	**5**	5	2
3	Explain why ethical guidelines are important in AI development.	**5**	5	2