

Set No. 1

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

Objective Exam

Hall Ticket No.

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I. Choose the correct alternative:

- ## Cont....2

II Fill in the Blanks:

11. The rotational transformation matrix of a point in 3D space about y-axis is_____.
12. The first commercial language for robotics developed by Unimation, Inc. was known as_____
13. In Inverse kinematics, to determine the accurate angle in the range of $-\pi \leq \theta \leq \pi$, _____ function is used instead of *arc cosine* or *arc sine*.
14. Aggregation of fuzzy rules is _____ and _____.
15. AML programming language developed by_____
16. Analytical study of the geometry motion of robot arm is called as_____
17. The inputs for trajectory planner block diagrams are _____
18. The centroid method of defuzzification is expressed as _____.
19. The configuration at which the Jacobian of a manipulator is noninvertible is called_____.
20. Intermittent transfer can also called as _____

Set No. 2

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

Objective Exam

Name: _____ **Hall Ticket No.** _____

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. Path end points in robots arm can be specified in _____. []

a) Joint co-ordinates b) Cylindrical co-ordinates
c) Polar co-ordinates d) Nuetral co- ordinates
2. The inputs of fuzzy logic system are _____. []

a) Imprecise data b) vague statements c) Inaccuracy d) all of the above
3. AL robot language developed by _____ []

a) STANFORD UNIVERSITY b) IBM c) IIT DELHI d) APPLE
4. Lagrangian Function $L = f(\text{Kinetic Energy}, \text{Potential Energy}) =$ _____ []

a) $KE + PE$ b) $KE - PE$ c) $KE \div PE$ d) $PE \div KE$
5. Tee first textual language was _____ []

a) AML b) VAL c) AL d) WAVE
6. _____ is a binary conversion technique by which each piece is converted into a binary value, either black or white. []

a) Region growing b) edge detection c) Thresholding d) none
7. The easiest membership function is _____ []

a) Triangular membership function b) Trapezoidal membership function
c) Gauss membership function d) pi membership function
8. Simulation software is used for: _____ []

a) Teach pendants b) for on-line programming
c) For off-line programming d) optical sensors
9. Newton – Euler formulation is used to analyze the _____ behavior of the manipulator. []

a) Static b) Dynamic c) Kinematic d) Kinetic
10. An N-joint manipulator will have _____ number of trajectories. []

a) N b) N+1 c) N-1 d) N+2

Cont....2

II Fill in the Blanks:

11. Aggregation of fuzzy rules is _____ and _____.
12. AML programming language developed by _____
13. Analytical study of the geometry motion of robot arm is called as _____
14. The inputs for trajectory planner block diagrams are _____
15. The centroid method of defuzzification is expressed as _____.
16. The configuration at which the Jacobian of a manipulator is noninvertible is called _____.
17. Intermittent transfer can also called as _____
18. The rotational transformation matrix of a point in 3D space about y-axis is _____.
19. The first commercial language for robotics developed by Unimation, Inc. was known as _____
20. In Inverse kinematics, to determine the accurate angle in the range of $-\pi \leq \theta \leq \pi$, _____ function is used instead of *arc cosine* or *arc sine*.

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Code No: 58058

Set No. 3

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

ROBOTICS AND AUTOMATION

Objective Exam

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. AL robot language developed by _____ []
a) STANFORD UNIVERSITY b) IBM c) IIT DELHI d) APPLE
2. Lagrangian Function $L = f(\text{Kinetic Energy, Potential Energy}) =$ _____ []
a) $KE + PE$ b) $KE - PE$ c) $KE \div PE$ d) $PE \div KE$
3. Tee first textual language was _____ []
a) AML b) VAL c) AL d) WAVE
4. _____ is a binary conversion technique by which each piece is converted into a binary value, either black or white. []
a) Region growing b) edge detection c) Thresholding d) none
5. The easiest membership function is _____ []
a) Triangular membership function b) Trapezoidal membership function
c) Gauss membership function d) pi membership function
6. Simulation software is used for: _____ []
a) Teach pendants b) for on-line programming
c) For off-line programming d) optical sensors
7. Newton – Euler formulation is used to analyze the _____ behavior of the manipulator. []
a) Static b) Dynamic c) Kinematic d) Kinetic
8. An N-joint manipulator will have _____ number of trajectories. []
a) N b) N+1 c) N-1 d) N+2
9. Path end points in robots arm can be specified in _____ []
a) Joint co-ordinates b) Cylindrical co-ordinates
c) Polar co-ordinates d) Nuetral co- ordinates
10. The inputs of fuzzy logic system are _____. []
a) Imprecise data b) vague statements c) Inaccuracy d) all of the above

Cont.....2

II Fill in the Blanks:

11. Analytical study of the geometry motion of robot arm is called as _____
12. The inputs for trajectory planner block diagrams are _____
13. The centroid method of defuzzification is expressed as _____.
14. The configuration at which the Jacobian of a manipulator is noninvertible is called _____.
15. Intermittent transfer can also called as _____
16. The rotational transformation matrix of a point in 3D space about y-axis is _____.
17. The first commercial language for robotics developed by Unimation, Inc. was known as _____
18. In Inverse kinematics, to determine the accurate angle in the range of $-\pi \leq \theta \leq \pi$, _____ function is used instead of *arc cosine* or *arc sine*.
19. Aggregation of fuzzy rules is _____ and _____.
20. AML programming language developed by _____

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Code No: 58058

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

IV B.Tech. II Sem., II Mid-Term Examinations, April-2014

ROBOTICS AND AUTOMATION

Objective Exam

Name: _____ Hall Ticket No.

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Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

1. The first textual language was []
a) AML b) VAL c) AL d) WAVE
2. _____ is a binary conversion technique by which each pixel is converted into a binary value, either black or white. []
a) Region growing b) edge detection c) Thresholding d) none
3. The easiest membership function is []
a) Triangular membership function b) Trapezoidal membership function
c) Gauss membership function d) pi membership function
4. Simulation software is used for: []
a) Teach pendants b) for on-line programming
c) For off-line programming d) optical sensors
5. Newton – Euler formulation is used to analyze the _____ behavior of the manipulator. []
a) Static b) Dynamic c) Kinematic d) Kinetic
6. An N-joint manipulator will have _____ number of trajectories. []
a) N b) N+1 c) N-1 d) N+2
7. Path end points in robot's arm can be specified in _____ []
a) Joint co-ordinates b) Cylindrical co-ordinates
c) Polar co-ordinates d) Neutral co-ordinates
8. The inputs of a fuzzy logic system are _____. []
a) Imprecise data b) vague statements c) Inaccuracy d) all of the above
9. AL robot language developed by []
a) STANFORD UNIVERSITY b) IBM c) IIT DELHI d) APPLE
10. Lagrangian Function $L = f(\text{Kinetic Energy, Potential Energy}) =$ _____ []
a) $KE + PE$ b) $KE - PE$ c) $KE \div PE$ d) $PE \div KE$

Cont.....2

II Fill in the Blanks:

11. The centroid method of defuzzification is expressed as _____.
12. The configuration at which the Jacobian of a manipulator is noninvertible is called _____.
13. Intermittent transfer can also called as _____
14. The rotational transformation matrix of a point in 3D space about y-axis is _____.
15. The first commercial language for robotics developed by Unimation, Inc. was known as _____
16. In Inverse kinematics, to determine the accurate angle in the range of $-\pi \leq \theta \leq \pi$, _____ function is used instead of *arc cosine* or *arc sine*.
17. Aggregation of fuzzy rules is _____ and _____.
18. AML programming language developed by _____
19. Analytical study of the geometry motion of robot arm is called as _____
20. The inputs for trajectory planner block diagrams are _____

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