

Code No: 56080

Set No. 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

INSTRUMENTATION AND PROCESS CONTROL

Objective Exam

Name: _____ Hall Ticket No.

						A				
--	--	--	--	--	--	---	--	--	--	--

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

I Choose the correct alternative:

1. For a critically damped system, the damping factor is _____ []
a) < 1 b) $= 1$ c) > 1 d) None
2. Time required for the response to first reach its ultimate value is _____ []
a) Overshoot b) Rise time c) Decay ratio d) None
3. The overall AR is obtained from individual ARs by _____ []
a) Addition b) Subtraction c) Multiplication d) None
4. AR for proportional controller is _____ []
a) Proportional gain b) Proportional band c) Reset d) None
5. No Bode diagram for _____ controller []
a) PID b) PD c) PI d) P
6. _____ Controller is used for blending two liquid streams []
a) Cascade b) Feed forward c) Ratio d) None
7. _____ is the component of control system []
a) Process b) Measuring element c) Controller d) All the above
8. The amplitude ratio for transportation lag is _____ []
a) 0 b) 1 c) -1 d) None
9. Example of second order system []
a) Liquid level system b) Mixing process c) Thermometer d) Damped vibrator
10. The term reset rate is used for _____ controller []
a) P b) PI c) PD d) PID

Cont.....2

II Fill in the blanks

11. The function that grows without limit is _____ function.
12. _____ is the error required to move the valve from fully closed to fully open.
13. The offset is zero for _____ controller.
14. The transfer function for first order system is _____ .
15. If output response is bounded for all bounded inputs then the system is _____ .
16. The frequency at which the maximum AR is attained is called _____ frequency.
17. Typical design specifications for phase margin is _____ .
18. The phase angle for transportation lag is _____ .
19. The response of system to a sinusoidal forcing function is known as _____ response.
20. Mathematical expression for impulse forcing function of magnitude A is _____ .

-oOo-

Code No: 56080

Set No. 2

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

INSTRUMENTATION AND PROCESS CONTROL

Objective Exam

Name: _____ Hall Ticket No.

						A			
--	--	--	--	--	--	---	--	--	--

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

I Choose the correct alternative:

1. AR for proportional controller is _____ []
a) Proportional gain b) Proportional band c) Reset d) None
2. No Bode diagram for _____ controller []
a) PID b) PD c) PI d) P
3. _____ Controller is used for blending two liquid streams []
a) Cascade b) Feed forward c) Ratio d) None
4. _____ is the component of control system []
a) Process b) Measuring element c) Controller d) All the above
5. The amplitude ratio for transportation lag is _____ []
a) 0 b) 1 c) - 1 d) None
6. Example of second order system []
a) Liquid level system b) Mixing process c) Thermometer d) Damped vibrator
7. The term reset rate is used for _____ controller []
a) P b) PI c) PD d) PID
8. For a critically damped system, the damping factor is _____ []
a) < 1 b) $= 1$ c) > 1 d) None
9. Time required for the response to first reach its ultimate value is _____ []
a) Overshoot b) Rise time c) Decay ratio d) None
10. The overall AR is obtained from individual ARs by _____ []
a) Addition b) Subtraction c) Multiplication d) None

Cont.....2

II Fill in the blanks

11. The transfer function for first order system is _____ .
12. If output response is bounded for all bounded inputs then the system is _____ .
13. The frequency at which the maximum AR is attained is called _____ frequency.
14. Typical design specifications for phase margin is _____ .
15. The phase angle for transportation lag is _____ .
16. The response of system to a sinusoidal forcing function is known as _____ response.
17. Mathematical expression for impulse forcing function of magnitude A is _____ .
18. The function that grows without limit is _____ function.
19. _____ is the error required to move the valve from fully closed to fully open.
20. The offset is zero for _____ controller.

-oOo-

Code No: 56080

Set No. 3

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

INSTRUMENTATION AND PROCESS CONTROL

Objective Exam

Name: _____ Hall Ticket No.

						A			
--	--	--	--	--	--	---	--	--	--

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

I Choose the correct alternative:

1. _____ Controller is used for blending two liquid streams []
a) Cascade b) Feed forward c) Ratio d) None
2. _____ is the component of control system []
a) Process b) Measuring element c) Controller d) All the above
3. The amplitude ratio for transportation lag is _____ []
a) 0 b) 1 c) - 1 d) None
4. Example of second order system []
a) Liquid level system b) Mixing process c) Thermometer d) Damped vibrator
5. The term reset rate is used for _____ controller []
a) P b) PI c) PD d) PID
6. For a critically damped system, the damping factor is _____ []
a) < 1 b) $= 1$ c) > 1 d) None
7. Time required for the response to first reach its ultimate value is _____ []
a) Overshoot b) Rise time c) Decay ratio d) None
8. The overall AR is obtained from individual ARs by _____ []
a) Addition b) Subtraction c) Multiplication d) None
9. AR for proportional controller is _____ []
a) Proportional gain b) Proportional band c) Reset d) None
10. No Bode diagram for _____ controller []
a) PID b) PD c) PI d) P

Cont.....2

II Fill in the blanks

11. The frequency at which the maximum AR is attained is called _____ frequency.
12. Typical design specifications for phase margin is _____ .
13. The phase angle for transportation lag is _____ .
14. The response of system to a sinusoidal forcing function is known as _____ response.
15. Mathematical expression for impulse forcing function of magnitude A is _____ .
16. The function that grows without limit is _____ function.
17. _____ is the error required to move the valve from fully closed to fully open.
18. The offset is zero for _____ controller.
19. The transfer function for first order system is _____ .
20. If output response is bounded for all bounded inputs then the system is _____ .

-oOo-

Code No: 56080

Set No. 4

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

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

INSTRUMENTATION AND PROCESS CONTROL

Objective Exam

Name: _____ Hall Ticket No.

						A			
--	--	--	--	--	--	---	--	--	--

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

I Choose the correct alternative:

1. The amplitude ratio for transportation lag is _____ []
a) 0 b) 1 c) - 1 d) None
2. Example of second order system []
a) Liquid level system b) Mixing process c) Thermometer d) Damped vibrator
3. The term reset rate is used for _____ controller []
a) P b) PI c) PD d) PID
4. For a critically damped system, the damping factor is _____ []
a) < 1 b) $= 1$ c) > 1 d) None
5. Time required for the response to first reach its ultimate value is _____ []
a) Overshoot b) Rise time c) Decay ratio d) None
6. The overall AR is obtained from individual ARs by _____ []
a) Addition b) Subtraction c) Multiplication d) None
7. AR for proportional controller is _____ []
a) Proportional gain b) Proportional band c) Reset d) None
8. No Bode diagram for _____ controller []
a) PID b) PD c) PI d) P
9. _____ Controller is used for blending two liquid streams []
a) Cascade b) Feed forward c) Ratio d) None
10. _____ is the component of control system []
a) Process b) Measuring element c) Controller d) All the above

Cont.....2

II Fill in the blanks

11. The phase angle for transportation lag is _____ .
12. The response of system to a sinusoidal forcing function is known as _____ response.
13. Mathematical expression for impulse forcing function of magnitude A is _____ .
14. The function that grows without limit is _____ function.
15. _____ is the error required to move the valve from fully closed to fully open.
16. The offset is zero for _____ controller.
17. The transfer function for first order system is _____ .
18. If output response is bounded for all bounded inputs then the system is _____ .
19. The frequency at which the maximum AR is attained is called _____ frequency.
20. Typical design specifications for phase margin is _____ .

-oOo-