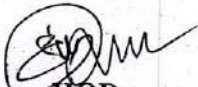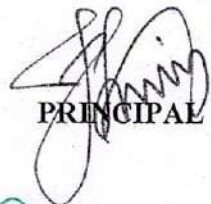## VALUE ADDED COURSES
2020-2021
Department of Electrical and Electronics Engineering
20EE01- Electric Power Quality
MARK SHEET

Sl. No	Register Number	Student Name	MARKS
1	17TE3101	GUNALAN.M	88

HOD

PRINCIPAL

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
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Sulthanpet Post,
Puducherry - 605 110

VALUE ADDED COURSES

2020-2021

Department of Electrical and Electronics Engineering

20EE01-Electric Power Quality

NAME:

CLASS:

DATE:

1. Which one is a set of electrical boundaries that allows a piece of equipment to function in its intended manner without significant loss of performance or life expectancy.

(A) Power field

(B) Power system

(C) Power factor

(D) Power quality

Answer

Correct option is D

2. The parameters that define the quality of electrical power.

(A) Voltage

(B) Current

(C) Frequency

(D) All of these

Answer

Correct option is D

3. Full form of IEEE

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(A) Institute of Electrical and Electronics Engineers

(B) Indian Electrical and Electronics Engineers

(C) Institute of Electronics and Electrical Engineers

(D) None of these

Answer

Correct option is A

4. It is possible that good power for one piece of equipment could be bad power for another one.

(A) Can not say

(B) Yes

(C) No

(D) None of these

Answer

Correct option is B

5. Types of electrical transients that occur in power system.

(A) Impulsive transient

(B) Oscillatory transient

(C) Both

(D) None of these

Answer

Correct option is C

6. Range of high frequency oscillatory transient.

(A) Less than 5 kHz

(B) 5 to 500 kHz

(C) 0.5 to 5 MHz

(D) None of these

Answer

Correct option is C

7. The CBEMA power quality graph plots the depth of voltage sags on the _____ axis against the duration of voltage sags on the _____ axis.

(A) horizontal, vertical

(B) vertical, horizontal

(C) Both

(D) None of these

Answer

Correct option is B

8. Cause of power interruption

(A) Power system faults

(B) Equipment failure

(C) Cascading failure

(D) All of the above

Answer

Correct option is D

9. Two identical devices or pieces of equipment might react differently to the same power quality parameters due to

(A) Component tolerance

(B) Differences in their manufacturing

(C) Both

(D) None of these

Answer

Correct option is C

10. Which one ensures that any fault current likely imposed on a metal part will be safely conducted to ground or other grid systems serving as ground

(A) Grounding

(B) Bonding

(C) Coupling

(D) Isolation

Answer

Correct option is B

11. The DVR is a _____ connected power electronic device used to inject _____ of required magnitude and frequency.

(A) series, voltage

(B) series, current

(C) shunt, volatge

(D) shunt, current

Answer

Correct option is A

12. DSTATCOM is a _____ connected device designed to regulate the _____ either by generating or absorbing the reactive power.

(A) series, voltage

(B) shunt, voltage

(C) series, current

(D) shunt, current

Answer

Correct option is B

13. Which is one means by which energy or electrical noise can couple from one electrical circuit to another.

(A) Reactance

(B) Capacitance

(C) Inductance

(D) Resistance

Answer

Correct option is B

14. Which is the process by which energy or electrical noise in one circuit can be transferred to another circuit that may or may not be electrically connected to it.

(A) Bonding

(B) Grounding

(C) Isolation

(D) Coupling

Answer

Correct option is D

15. Ratio between the peak value and the root mean square (RMS) value of a periodic waveform is called as _____.

(A) Distortion factor

(B) Power factor

(C) Form factor

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(D) Crest factor

Answer

Correct option is D

16. Voltage imbalance is a condition in which the three-phase voltage differ in

(A) amplitude

(B) angle

(C) both

(D) none of these

Answer

Correct option is C

17. Which one indicates the deviation of a periodic wave from its ideal waveform characteristics.

(A) Noise

(B) Distortion

(C) Flicker

(D) Distortion factor

Answer

Correct option is B

18. The presence of a DC _____ in an AC power system is termed as DC offset.

(A) voltage

(B) current

(C) voltage or current

(D) none of these

Answer

Correct option is C

19. Ratio of the RMS of the harmonic content of a periodic wave to the RMS of the fundamental content of the wave, expressed as a percent. This is called as

(A) crest factor

(B) distortion factor

(C) power factor

(D) form factor

Answer

Correct option is B

20. Voltage fluctuation is an _____ phenomenon.

(A) electric

(B) electromagnetic

(C) magnetic

(D) none of these

Answer

Correct option is B

21. Variation of input voltage sufficient in duration to allow visual observation of a change in electric light source intensity is called as _____ .

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(A) harmonics

(B) distortion

(C) noise

(D) flicker

Answer

Correct option is D

22. Ratio between the RMS value and the average value of a periodic waveform. This is called as _____.

(A) form factor

(B) crest factor

(C) power factor

(D) fill factor

Answer

Correct option is A

23. Number of complete cycles of a periodic wave in a unit time, usually 1 sec is known as

_____.

(A) amplitude

(B) phase difference

(C) time-period

(D) frequency

Answer

Correct option is D

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24. Which one of the following device is used for improving the power factor of the system:-

(A) series reactor

(B) shunt reactor

(C) asynchronous generator

(D) synchronous phase modifier

Answer

Correct option is D

25. Which of the following is not a source of harmonic current?

(A) Capacitor switching

(B) Inductive load

(C) Resistive load

(D) None of these

Answer

Correct option is C

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VALUE ADDED COURSES

2020-2021

Department of Electrical and Electronics Engineering

20EE01-Electric Power Quality

NAME: GUNALAN. M

CLASS: IV/EEE

DATE: 20/08/2020

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$\frac{22}{25}$ 88%.

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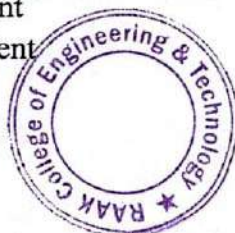
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Puduchery

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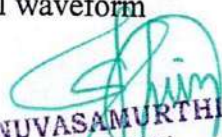No.1, Muthupillai Palayam Road,
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(D) frequency

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COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
An ISO 9001:2015 Certified Institution

Certificate of Completion

2020-2021

This is to certify that Mr/Ms .... GUNALAM. M. ....

Year ...IV..... Department ...E.E.E.... has successfully Completed the Value added course.

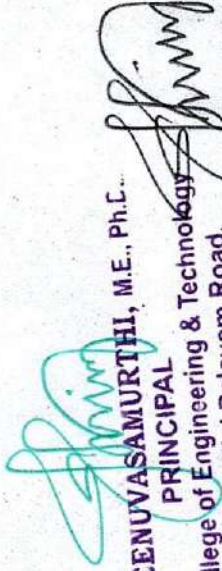COURSE TITLE: ...ELECTRIC POWER QUALITY...............

SCORE: .....88.......

COURSE DURATION: .....7.8.20 to 19.8.20..............

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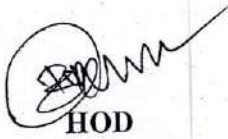
VALUE ADDED COURSES
2020-2021
Department of Electrical and Electronics Engineering
20EE02 Distribution System Automation
MARK SHEET
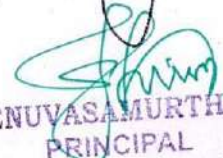
Sl. No	Register Number	Student Name	MARKS
1	18TE0852	MAHALAKSHMI.M	96
2	18TC1207	KAVITHA.U	88

HOD

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VALUE ADDED COURSES

2020-2021

Department of Electrical and Electronics Engineering

20EE02-Distribution System Automation

NAME:

CLASS:

DATE:

1. What is the main type of distribution system in India?

a. Radial

b. Parallel

c. Network

d. Both (b) and (c)

ANSWER: a. Radial

2.Which component connects the substation to the area where power is to be distributed?

a. Distributors

b. Service mains

c. Feeders

d. All of these

ANSWER: c. Feeders

3. The cost of material used in a distribution circuit per kVA of the distributed power varies as

a. Square of linear dimensions of supply area.

b. Directly according to (supply area)2

c. Cube of linear dimensions of supply area.

d. None of these

ANSWER: b. Directly according to (supply area)2

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Puducherry - 605 110.

4.Name the cable which connects the distributor to the consumer terminals.

a. Distributors

b. Service mains

c. Feeders

d. All of these

ANSWER: b. Service mains

5. What is the permissible limit of voltage variations allowed in the distribution systems?

a. ± 2 %

b. ± 5 %

c. ± 10 %

d. ± 6 %

ANSWER: d. ± 6 %

6. Where the radial systems are generally employed?

a. Where power is generated at low voltage.

b. Where power is generated at high voltage.

c. Where power is generated at low voltage and substation is located at the centre of the load.

d. Where power is generated at high voltage and substation is located at the centre of the load.

ANSWER: c. Where power is generated at low voltage and substation is located at the centre of the load.

7. What is the main advantage of ring main system over radial system?

i. Voltage drop in the feeder is less.

ii. Power factor is higher.

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iii. Supply is more reliable.

Which among the above statements are correct?

a. i and ii only.

b. ii and iii only.

c. i and iii only.

d. i, ii and iii.

ANSWER: c. i and iii only.

8. Where the null point of a uniformly loaded distributor feed at equal voltage at both ends lies at?

a. Mid point

b. Either end

c. Two third distance from one end

d. One fourth distance from one end

ANSWER: a. Mid point

9. In a distribution system, which of the following items shares the major cost?

a. Conductors

b. Earthing systems

c. Distribution transformer

d. Insulators

ANSWER: c. Distribution transformer

10. Which type of distribution is preferred in residential areas?

a. Single phase, two wire.

b. Three phase, three wire

c. Three phase, four wire

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d. Two phase, four wire

ANSWER: c. Three phase, four wire

11. In a dc 3 wire distributor using having unequal loads on the two sides

a. Both balancers operate as generators.

b. Both balancers operate as motors.

c. Balancers connected to the lightly loaded sides operate as a generator.

d. Balancers connected to the heavily loaded sides operate as a generator.

ANSWER: d. Balancers connected to the heavily loaded sides operate as a generator.

12. Why are the balancers fields cross connected in a three wire distribution system?

a. Equalise voltage on positive and negative outer

b. Boost the generated voltage.

c. Make both machines operate as unloaded motors.

d. All of these.

ANSWER: a. Equalise voltage on positive and negative outer

13. Which distribution system is energised by two or more generating stations or substations?

a. Radial systems.

b. Interconnected systems.

c. Ring main systems.

d. All of these.

ANSWER: b. Interconnected systems

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14. A three wire dc distribution makes available how many voltages?

a. One

b. Two

c. Three

d. Both (a) and (b)

ANSWER: c. Three

15. If the voltage of the system is about 230 V, then what would be the highest and the lowest permissible voltage?

a. 242 and 214 V

b. 240 and 210 V

c. 244 and 216 V

d. 244 and 212 V

ANSWER: c. 244 and 216 V

16.A uniformly loaded dc distributor is fed at both ends with equal voltages. In comparison to a similar distributor fed at one end only, what will be the maximum voltage drop?

a. One fourth

b. Half

c. One third

d. One sixth

ANSWER: a. One fourth

17. A uniformly loaded dc distributor is fed at both ends with equal voltages. In comparison to a similar distributor fed at one end only, what will be the drop at the midpoint be?

a. One fourth

b. Half

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c. One third

d. One sixth

ANSWER: c. One third

18. Installation of capacitors at suitable locations and of optimum size in a distribution system results in

i. Improved voltage regulation.

ii. Reduction in distribution power losses.

iii. Reduction of kVA rating of distribution transformers.

Which among the following is/are the correct codes?

a. i only

b. i and ii only

c. all of these

d. iii only

ANSWER: c. all of these

19. What are boosters?

a. Is a high voltage and low circuit machine.

b. Is a series wound dc generator driven by dc shunt motor

c. Is a low voltage and high current generator operating on straight or linear portion of its voltage current characteristics

d. Both (b) and (c).

ANSWER: d. Both (b) and (c)

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20. Why are the boosters inserted in the circuit?

a. Reduce current.

b. Increase current.

c. Reduce voltage drop.

d. Compensate for voltage drop.

ANSWER: d. Compensate for voltage drop.

21. Why are the floating neutral in a three phase supply considered undesirable?

a. High voltage across the load.

b. Low voltage across the load.

c. Unequal line voltages across the load.

d. None of above

ANSWER: c. Unequal line voltages across the load.

22.For purely domestic loads which type of distribution is employed?

a. Single phase two wire.

b. 3 phase 3 wire

c. 3 phase 4 wire

d. None of these

ANSWER: a. Single phase two wire.

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23. Which type of loads use 3 phase 4 wire ac system of distribution?

a. Balanced

b. Unbalanced

c. Both (a) and (b)

d. None of these.

ANSWER: b. Unbalanced

24. What are ground detectors?

a. Used for detecting earth faults for all cables.

b. Used for detecting ground faults for underground cables.

c. Used for detecting all types of fault in a underground cables.

d. None of these.

ANSWER: b. Used for detecting ground faults for underground cables.

25. An industrial consumer has a load pattern of 2000 kW, 0.8 lag for 12 hours and 1000 kW UPF for 12 hours. What is its load factor?

a. 10.5

b. 0.75

c. 0.6

d. 2.0

ANSWER: b. 0.75

NAME: KAVITHA.U
CLASS: III /EEE
DATE: 20/08/2020

1. What is the main type of distribution system in India?

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$\frac{22}{25}$ 88%

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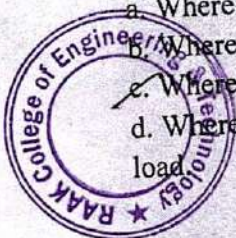4. Name the cable which connects the distributor to the consumer terminals.

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13. Which distribution system is energised by two or more generating stations or substations?

a. Radial systems.

b. Interconnected systems.

c. Ring main systems.

d. All of these.

14. A three wire dc distribution makes available how many voltages?

a. One

b. Two

c. Three

d. Both (a) and (b)

15. If the voltage of the system is about 230 V, then what would be the highest and the lowest permissible voltage?

a. 242 and 214 V

b. 240 and 210 V

c. 244 and 216 V

d. 244 and 212 V

16. A uniformly loaded dc distributor is fed at both ends with equal voltages. In comparison to a similar distributor fed at one end only, what will be the maximum voltage drop?

a. One fourth

b. Half

c. One third

d. One sixth

17. A uniformly loaded dc distributor is fed at both ends with equal voltages. In comparison to a similar distributor fed at one end only, what will be the drop at the midpoint be?

a. One fourth

b. Half

c. One third

d. One sixth

18. Installation of capacitors at suitable locations and of optimum size in a distribution system results in

i. Improved voltage regulation.

ii. Reduction in distribution power losses.

iii. Reduction of kVA rating of distribution transformers.

Which among the following is/are the correct codes?

a. i only

b. i and ii only

c. all of these

d. iii only

19. What are boosters?

a. Is a high voltage and low circuit machine.

b. Is a series wound dc generator driven by dc shunt motor

c. Is a low voltage and high current generator operating on straight or linear portion of its voltage current characteristics

d. Both (b) and (c).

20. Why are the boosters inserted in the circuit?

a. Reduce current.

b. Increase current.

c. Reduce voltage drop.

d. Compensate for voltage drop.

21. Why are the floating neutral in a three phase supply considered undesirable?

a. High voltage across the load.

b. Low voltage across the load.

c. Unequal line voltages across the load.

d. None of above

22. For purely domestic loads which type of distribution is employed?

a. Single phase two wire.

b. 3 phase 3 wire

c. 3 phase 4 wire

d. None of these

23. Which type of loads use 3 phase 4 wire ac system of distribution?

a. Balanced

b. Unbalanced

c. Both (a) and (b)

d. None of these.

24. What are ground detectors?

a. Used for detecting earth faults for all cables.

b. Used for detecting ground faults for underground cables.

c. Used for detecting all types of fault in a underground cables.

d. None of these.

25. An industrial consumer has a load pattern of 2000 kW, 0.8 lag for 12 hours and 1000 kW UPF for 12 hours. What is its load factor?

a. 10.5

b. 0.75

c. 0.6

d. 2.0

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2020-2021

This is to certify that Mr/Ms ...... MAHALAKSHMI..M

Year ..III...... Department ...EEE... has successfully Completed the Value added course.

COURSE TITLE: DISTRIBUTION SYSTEM AUTOMATION

SCORE: ...96...

COURSE DURATION: 9.18.20 to 12.18.20

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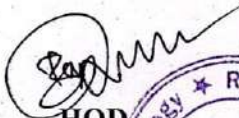
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VALUE ADDED COURSES

2020-2021
Department of Electrical and Electronics Engineering
20EE03- Non linear control system
MARK SHEET

Sl. No	Register Number	Student Name	MARKS
1	19TE0551	NIRMAL GEORGE.A	96
2	19TE0552	BRANAN.D	88
3	19TE0553	SANJAIDHARAN.G	84
4	19TE0554	KEERTHIKA.N	84
5	19TE0555	KAVIMANI.M	88
6	19TE0556	MUTHUKUMARAN.V	88
7	19TE0557	RAKESH.M	84
8	19TE0558	VEDA.S	92
9	19TE0559	YUVARAJ.P	92
10	19TEL032	DINESHKAR.M	96

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VALUE ADDED COURSES

2020-2021

Department of Electrical and Electronics Engineering

20EE03-Non Linear Control System

NAME:

CLASS;

DATE:

1. Stability of a system implies that :

a) Small changes in the system input does not result in large change in system output

b) Small changes in the system parameters does not result in large change in system output

c) Small changes in the initial conditions does not result in large change in system output

d) Small changes in the initial conditions result in large change in system output

Answer: a

2. A linear time invariant system is stable if :

a) System in excited by the bounded input, the output is also bounded

b) In the absence of input output tends zero

c) Both a and b

d) None of the mentioned

Answer: c

3. Asymptotic stability is concerned with :

a) A system under influence of input

b) A system not under influence of input

c) A system under influence of output

d) A system not under influence of output

Answer: b

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4. If a system is given unbounded input then the system is:

a) Stable

b) Unstable

c) Not defined

d) Linear

Answer: c

5. Linear mathematical model applies to :

a) Linear systems

b) Stable systems

c) Unstable systems

d) All of the mentioned

Answer: b

6. For non-linear systems stability cannot be determined due to:

a) Possible existence of multiple equilibrium states

b) No correspondence between bounded input and bounded output stability and asymptotic stability

c) Output may be bounded for the particular bounded input but may not be bounded for the bounded inputs

d) All of the mentioned

Answer: d

7. If the impulse response in absolutely integrable then the system is :

a) Absolutely stable

b) Unstable

c) Linear

d) None of the mentioned

Answer: a

8. The roots of the transfer function do not have any effect on the stability of the system.

a) True

b) False

Answer: b

9. Roots with higher multiplicity on the imaginary axis makes the system :

a) Absolutely stable

b) Unstable

c) Linear

d) None of the mentioned

Answer: b

10. The techniques of linear system can be used in the non-linear system entirely:

a) True

b) False

Answer: b

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11. The disadvantages of the linear system are:

a) The constraints on the linear operation over wide range demands unnecessarily high quality.

b) The restriction to the linear theory may inhibit the designer's curiosity to deliberately introduce the non-linear components.

c) Practically systems are non-linear

d) All of the mentioned

Answer: d

12. System non-linearities are taken account by:

a) Analytical

b) Graphical and numerical techniques

c) Both a and b

d) None of the mentioned

Answer: c

13. The superposition theorem is :

a) Homogeneity

b) Additivity

c) Combination of homogeneity and additivity

d) Applied to non-linear systems

Answer: c

14. The standard test signal can be applied to give output to:

a) Linear systems

b) Non-linear systems

c) Time variant systems

d) Time invariant systems

Answer: a

15. The amplitude of the standard test signal does not matter in linear systems:

a) True

b) False

Answer: a

16. The non-linear systems:

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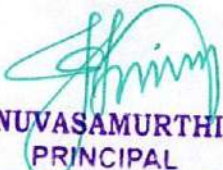
d) All of the mentioned

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17. The stability of the linear system:

a) Determined by the location of the poles

b) Dependent entirely of whether or the system is driven

c) The stability of the undriven linear system is dependent on the magnitude of the final initial state.

d) Stability cannot be determined by the open loop poles

Answer: a

18. In non-linear system stability is :

a) Dependent on the input

b) Independent on initial state

c) Independent on input

d) Dependent on input and initial state.

Answer: d

19. Non-linear elements may exhibit_____

a) Linear systems

b) Non-linear systems

c) Limit cycles

d) Time invariant systems

Answer: c

20. The necessary condition of stability are:

a) Coefficient of characteristic equation must be real and have the same sign

b) Coefficient of characteristic equation must be non-zero

c) Both of the mentioned

d) Coefficient of characteristic equation must be zero

Answer: c

21. None of the coefficients can be zero or negative unless one of the following occurs:

a) One or more roots have positive real parts

b) A root at origin

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d) All of the mentioned

Answer: d

22. The _____ of the coefficients of characteristic equation is necessary as well as sufficient condition for the stability of system of first and second order.

a) Negativeness

b) Positiveness

c) Positiveness and Negativeness

d) None of the mentioned

Answer: b

23. The Positiveness of the coefficients of characteristic equation is necessary as well as sufficient condition for:

a) First order system

b) Second order system

c) Third order system

d) None of the mentioned

Answer: c

24. Assertion (A): Routh criterion is in terms of array formulation, which is more convenient to handle.

Reason (R): This method is used to investigate the method of stability of higher order systems.

a) Both A and R are true and R is correct explanation of A

b) Both A and R are true and R is not correct explanation of A

c) A is true but R is false

d) A is False but R is true

Answer: b

25. Which of the following can be used as a tacho generator in control systems?

a) Microsyn

b) DC servomotor

c) AC servomotor

d) Magnetic Amplifier

Answer: c

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VALUE ADDED COURSES
2020-2021
Department of Electrical and Electronics Engineering
20EE03-Non Linear Control System

NAME: BRANAN.D

CLASS: II/EEE

DATE: 20/08/2020

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$\frac{22}{25}$ 88%

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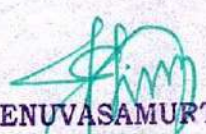a) True
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Year...11...... Department.........E.E.E....... has successfully Completed the Value added course.

COURSE TITLE: .NON.-.LINEAR..CONTROL..SYSTEM...

SCORE: ....88..........

COURSE DURATION: ...9.18.120..to.....14.18.120..............

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