RAAK

COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)

VALUE ADDED COURSES

2019-2020

Department of Electrical & Electronics Engineering

19EE01-Modern Optimization Techniques for Electric Power Systems

MARK SHEET

Sl. No	Register Number	Student Name	MARKS
1	17TE3101	GUNALAN.M	96

HOD

PRINCIPAL

College of Engineering & Technology ★ RAAK

Dr. S. SEENUVASAMURTHI, M.E., Ph.D.
PRINCIPAL
RAAK College of Engineering & Technology
No.1, Muthupillai Palayam Road,
Sulthanpet Post,
Puducherry - 605 110

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VALUE ADDED COURSES

2019-2020

Department of Electrical and Electronics Engineering

19EE01-Modern Optimization Techniques for Electric Power System

NAME:

CLASS:

DATE:

1. Single line diagram of which of the following power system is possible?

a) Power system with LG fault

b) Balanced power system

c) Power system with LL fault

d) Power system with LLG fault

Answer: b

2. A power system will have greater flexibility of operation if they have _____

a) Only Base load plants operating in combination

b) Various types of power plants operating in combination

c) Only Peak load plants operating in combination

d) Only thermal power plants operating in combination

Answer: b

3. Single line diagram does not represents:

a) Ratings of machines

b) Neutral wire of transmission lines

c) Delta connection of transformer winding winding

d) Star connection of transformer

Answer: b.

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Sulthanpet Post,
Puducherry - 605 110

4. In impedance diagram different power system elements are represented by symbols.

a) False b) True

Answer: a

5. In combined operation of several power plants the reserve capacity requirement is reduced.

a) False b) True

Answer: b

6. For a given power system, its zero and maximum regulation will occur at the impedance angle of

a) 45 b) 60

c) 35 d) 50

Answer: a

7. A 200 bus power system has 160 PQ bus. For achieving a load flow solution by N-R in polar coordinates, the minimum number of simultaneous equation to be solved is _____

a) 359 b) 334

c) 357 d) 345

Answer: a

8. A 50 bus power system Ybus has 80% sparsity. The total number of transmission lines will be _____

a) 225 b) 563

c) 345 d) 456

Answer: a

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9. The given graph is the depiction of _____ on a large power system network.

a) Three phase motor getting short

b) L-G fault

c) Ratings of machines

d) Any of the mentioned

Answer: b

10. A protection system engineer is planning to provide the complete protection, he can achieve this by _____

a) a two phase fault relays and three earth fault relays

b) a two phase fault relays and two earth fault relays

c) two phase fault relays and three earth fault relays

d) three phase fault relays and two earth fault relays

Answer: d.

11. A power system has a maximum load of 15 MW. Annual load factor is 50%. The reserve capacity of plant is _____ if the plant capacity factor is 40%.

a) 3.75 MW

b) 7.75 MW

c) 46.75 MW

d) 8.75 MW

Answer: a

12. The area under the load curve represents _____

a) maximum demand

b) load factor

c) the average load on power system

d) number of units generated

Answer: d

13. If all the sequence voltages at the fault point in a power system are equal, then fault is _____

a) LLG fault

b) Line to Line fault

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Sulthanpet Post,
Puducherry - 605 110

c) Three phase to ground fault

d) LG fault

Answer: a

14. If the power system network is at Vs∠δ and receiving end voltage is Vr∠0 consisting of the impedance of TL as (R+j5)Ω. For maximum power transfer to the load, the most appropriate value of resistance R should be _____

a) 1.732

b) 3.45

c) 5.2

d) 0.33

Answer: a

15. Voltage regulation in the power system is _____

a) dip in voltage at sending end

b) rise in voltage at sending end

c) rise in voltage at receiving end

d) dip in voltage at receiving end

Answer: c

16. Which of the following is not neglected during formation of reactance diagram from impedance diagram?

a) Shunt component of Transformers

b) Static loads

c) Resistance of various power system components

d) Reactance of alternators

Answer: a

17. Which of the following is not a requirement for site selection of hydroelectric power plant?

a) Large catchment area

b) Rocky land

c) Sedimentation

d) Availability of water

Answer: c

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18. Which of the following is not an advantage of hydroelectric power plant?

a) no fuel requirement
b) continuous power source
c) low running cost
d) no standby losses

Answer: b

19. Which of the following element of hydroelectric power plant prevents the penstock from water hammer phenomenon?

a) Surge Tank
b) Draft tubes
c) Spillway
d) Valves and Gates

Answer: a

20. Which of the following part of thermal power plant causes maximum energy losses?

a) Alternator
b) Ash and unburnt carbon
c) Boiler
d) Condenser

Answer: d

21. Which of the following are the most widely used condensers in modern thermal power plants?

a) Low level counter flow type jet condenser
b) Parallel flow type jet condenser
c) High level counter flow type jet condenser
d) Surface condensers

Answer: d

22. Which of the following is most suitable fuel for thermal power plant?

a) Bituminous coal
b) Lignite coal
c) Anthracite coal
d) Peat coal

Answer: a

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23. Which of the following is most advantageous and most widely method of solid fuel firing?

a) Spreader stoker firing

b) Pulverised fuel firing

c) Underfeed firing

d) Stoker firing

Answer: b

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a) Open type heatre is used

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c) Close type heater is used

d) Steam is directly taken from main turbine and used to heat it feed water

Answer: d

25. Which of the following pollutant causes acid rain?

a) NO_2

b) SO_2

c) CO_2

d) NO

Answer: b

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Department of Electricaland Electronics Engineering

19EE01-Modern Optimization Techniques for Electric Power System

NAME: MAHALAKSHMI.M

CLASS: II / EEE

DATE: 20/8/2019

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24/25 96%

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Certificate of Completion

2019-2020

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

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

SCORE: ....9.6.....

COURSE TITLE: .....MODERN OPTIMIZATION TECHNIQUE FOR ELECTRIC POWER SYSTEM

COURSE DURATION: ..9.8.19 to 14.8.19..

HOD

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VALUE ADDED COURSES

2019-2020

Department of Electrical & Electronics Engineering

19EE02-Vehicular Electric Power Systems

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

2019-2020

Department of Electrical and Electronics Engineering

19EE02-Vehicular Electric Power System

NAME:

CLASS:

DATE:

1. What is an electric drive?

a) A machine that converts electrical energy into kinetic energy

b) A machine that converts mechanical energy into electrical energy

c) A machine that converts electrical energy into mechanical energy

d) A machine that converts kinetic energy into electrical energy

Answer: c

2. Which of the following is used to build a electric drive?

a) Source

b) Motor

c) Control unit

d) All of the mentioned

Answer: d

3. Which of the following is/are components of an electric drive?

a) Control unit and Power Modulator

b) Electric Motor and Control System

c) Input Command

d) Sensing Device and Electric Motor

Answer: b

4. Which of the following is a function of electric drive?

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4. Which of the following is a function of electric drive?

a) Transport energy from the storage system to the wheels

b) Transport energy from the control system to the wheels

c) Transport fuel from the electric motor to the wheels

d) Transport fuel from the storage system to the wheels

Answer: a

5. What are electric drives?

a) Engines of 2-wheelers

b) Laptops

c) Robotics

d) Both a & c

Answer: d

6. Which of the following exhibits linearly rising load torque characteristics?

a) Rolling Mills

b) Fan load

c) Separately excited dc generator connected to the resistive load

d) Elevators

Answer: c

7. Type-A chopper is used for obtaining which type of mode?

a) Reverse motoring mode

b) Motoring mode

c) Reverse regenerative braking mode

d) Regenerative braking mode

Answer: b

8. Which of the following converter circuit operations will be unstable for a large duty cycle ratio?

a) Boost converter

b) Boost converter and Buck-Boost converter

c) Buck converter

d) Buck-Boost converter

Answer: b

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9. Which of the following devices should be used as a switch for high power and high voltage application?

a) TRIAC
b) Thyristor
c) GTO
d) MOSFET

Answer: b

10. Which of the following motor can be referred as a universal motor?

a) Permanent magnet motor
b) DC shunt motor
c) DC series motor
d) DC compound motor

Answer: c

11. What is the unit of the apparent or complex power?

a) VA
b) ohm
c) Volt
d) VAR

Answer: a

12. Which of the following device is NOT suitable for parallel operation?

a) BJT
b) MOSFET
c) TRIAC
d) IGBT

Answer: a

13. The frame of an induction motor is made of _____

a) Silicon steel
b) Aluminum
c) Stainless steel
d) Cast iron

Answer: d

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14. Which of the following are used in preventing the hunting phenomenon in synchronous generators?

a) Distributed winding

b) Damper bars and short pitch chords

c) Short pitch chords

d) Damper bars

Answer: d

15. Which of the following core has linear characteristics?

a) CRGO core

b) Iron core

c) Air core

d) Steel core

Answer: c

16. Which one of the following methods would give a lower than the actual value of regulation of the alternator?

a) EMF method

b) ASA method

c) ZPF method

d) MMF method

Answer: d

17. The most suitable control-motor application is _____

a) AC one-phase induction motor

b) DC shunt motor

c) AC shunt motor

d) DC separately motor

Answer: d

18. What is the unit of the distance?

a) atm/m

b) Volt

c) m

d) m/s

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Answer: c

19. In the rotor voltage injection method, when an external voltage source is in phase with the main voltage then speed will _____

a) Decrease
b) First increases then decrease
c) Increase
d) Remain unchanged

Answer: c

20. Which of the following is the unit of displacement?

a) m/s
b) m
c) atm/m
d) Volt

Answer: a

21. Which of the following is the correct abbreviation of SCIM?

a) Solid cage induction motor
b) Square cage induction motor
c) Squirrel cage inverter motor
d) Squirrel cage induction motor

Answer: d

22. Which braking method is the best method for obtaining high braking torque?

a) Plugging
b) Regenerative braking
c) Rheostatic braking
d) Dynamic braking

Answer: a

23. Which of the following is the correct abbreviation of IFOC?

a) Insight field oriented control
b) Indirect field oriented control
c) Inverter field oriented control
d) Isolated field oriented control

Answer: b

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24. When 30 A current flows into the positive terminal of current source 8 V. Calculate the power delivered by the source.

a) -240 W

b) 356 W

c) -234 W

d) 243 W

Answer: a

25. Which of the following is the correct abbreviation of NENO?

a) Neither even nor original

b) Neither even nor odd

c) Neither even nor orthogonal

d) Neither energy nor odd

Answer: b

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NAME: MAHALAKSHMI. M

CLASS: II / EEE

DATE: 20/08/2019

24/25

96%

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

COURSE TITLE: VEHICULAR ELECTRIC POWER SYSTEM

COURSE DURATION: 9/8/19 to 14/8/19

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