Online Examinations (Even Sem/Part-I/Part-II Examinations 2020 - 2021

Course Name -ELECTRICAL MACHINE-II
Course Code - DEE 401
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Answer all the questions. Each question carry one mark.

9. 1.What happens if the relative speed between the rotating flux of stator and rotor of the induction motor is zero?

Mark only one oval.

- [ ] The rotor will not run
- [ ] The slip of the motor will be 5%
- [ ] The torque produced will be very large
- [ ] The rotor will run at very high speed

10. 2.Two alternators are running in parallel. If the feild of one of the alternators is adjusted it will

Mark only one oval.

- Change its power factor
- Change its frequency
- Reduce its speed
- Change its load

11. 3.When load on a synchronous motor is increased, its armature currents in increased provided it is

Mark only one oval.

- Normally-excited
- Over-excited
- Under-excited
- All of the above

12. 4.A capacitor start single phase induction motor when capacitor is replaced by inductance

Mark only one oval.

- Motor will not start
- Start and run
- Small hp motor can start but large hp motor will not start
- None of the above

13. 5.The power factor of an alternator under short circuit condition will be almost near _____

Mark only one oval.

- zero lagging
- zero leading
- unity
- depends on the type of the alternator

14. 6.Crawling is a phenomena mainly associated with

Mark only one oval.

- 2nd Harmonic
- 3rd Harmonic
- 5th Harmonic
- 7th Harmonic

15. 7.The slip rings employed in a 3-phase alternator in hydro station are insulated for

Mark only one oval.

- Low voltage
- Very low voltage
- Full armature voltage
- Extra high tension voltage

16. 8.The maximum value of torque angle a in a synchronous motor is ..... degrees electrical

Mark only one oval.

- 5
- 90
- Between 45 and 90
- Below 60

17. 9.If a particular application needs high-speed and high starting torque, then which of the following motor will be preferred?

Mark only one oval.

- Shaded pole motor
- Capacitor start motor
- Capacitor run motor
- Universal Motor

18. 10.These days alternators are designed to have larger air gaps for

Mark only one oval.

- stable parallel operation
- higher stability limit
- sinusoidal mmf distribution
- all of the mentioned

19. 11.What will happen if we increase the air gap in the induction motor?

Mark only one oval.

- Power factor will reduce
- Power factor will increase
- reduction in harmonics
- speed will increase

20. 12.The frequency of voltage generated in large alternators is

Mark only one oval.

- 50 Hz
- 60 Hz
- In kilo cycles
- Option 4

21. 13.An induction motor with 1000 rpm speed will have

Mark only one oval.

- 2 poles
- 6 poles
- 4 poles
- 8 poles

22. 14.In a split phase motor, the running winding should have

Mark only one oval.

- High resistance and low inductance
- High resistance and High inductance
- Low resistance and high inductance
- Low resistance and Low inductance

23. 15.Two three phase induction motors A and B are identical in all respects except that motor A has a larger air-gap than motor B. Which motor will have better full-load power factor?

Mark only one oval.

- A
- B
- both A and B
- neither A and B

24. 16.Three phase slip ring induction motor is also known as

Mark only one oval.

- controlled motor
- wound rotor motor
- synchronous motor
- series motor

25. 17.Which of the following statements is correct?

Mark only one oval.

- A single phase induction motor has zero starting torque
- A single phase induction motor has very high starting torque
- A single phase starting torque is as good as that of 3 phase induction motor.
- A single phase motor has very small torque but greater than zero

26. 18.An alternator with 1000 rpm speed will have

Mark only one oval.

- 2 poles
- 6 poles
- 4 poles
- 8 poles

27. 19.In a synchronous motor, the rotor Cu losses are met by

Mark only one oval.

- Motor input
- Armature input
- Supply lines
- D.C. source

28. 20.The no load current of the induction motor is high due to _____

Mark only one oval.

- long and high reluctance path between stator and rotor
- mutual flux having moderate reluctance path between stator and rotor
- leakage flux having low reluctance iron core
- leakage flux having high reluctance iron core

29. 21.The starting torque of a squirrel-cage induction motor is

Mark only one oval.

- Low
- negligible
- same as the full-load torque
- slightly more than full-load torque

30. 22.The frequency of voltage generated in an alternator depends on

Mark only one oval.

- number of poles
- rotative speed
- number of poles and rotative speed
- number of poles, rotative speed and type of winding

31. 23.The armature winding of an alternator is

Mark only one oval.

- Star-delta connected
- Delta star connected
- Generally delta-connected
- Always star-connected

32. 24.A synchronous motor can be started by

Mark only one oval.

- Pony Motor
- D.C. compound winding
- Providing damper winding
- None of the above

33. 25.The rotor slots, in an induction motor, are usually not quite parallel to the shaft because

Mark only one oval.

- Improve power factor
- Improve efficiency
- Reducing the tendency of the rotor teeth to remain under the stator teeth
- None of the above

34. 26.Slip of an induction motor increases with

Mark only one oval.

- Increase in current and decrease in torque
- Increase in current and torque
- Decrease in current and torque
- One by slip times the frequency of supply

35. 27.The 'cogging' of an induction motor can be avoided by

Mark only one oval.

- Proper ventilation
- Autotransformer starter
- Using DOL starter
- having number of rotor slots more or less than the number of stator slots

36. 28.In an alternator, voltage drops occurs in

Mark only one oval.

- armature resistance only
- armature resistance and leakage reactance
- armature resistance, leakage reactance and armature reaction
- armature resistance, leakage reactance, reaction and earth connections

37. 29.When load on a normally-excited synchronous motor is increased, its power factor tends to

Mark only one oval.

- Approach unity
- Becomes increasingly lagging
- Becomes increasingly leading
- Remain unchanged

38. 30.Choose the induction motor with peak speed.

Mark only one oval.

- 10 pole
- 12 pole
- 14 pole
- 16 pole

39. 31.The maximum current that can be supplied by an alternator depends on

Mark only one oval.

- Exciter current
- Strength of the magnetic field
- Number of poles
- Speed of the exciter

40. 32.The effect of increasing load on a synchronous motor running with normal excitation is to

Mark only one oval.

- Increase both its Ia and p.f
- Decrease Ia but increase p.f.
- Increase Ia but decrease p.f.
- Decrease both its Ia and p.f.

41. 33.The direction of rotation of an hysteresis motor is determined by

Mark only one oval.

- Retentivity of the rotor material
- Position of shaded Pole with respect to the main pole
- Interchanging the supply leads
- None of the above

42. 34.Speed control is possible for _____ and not possible for _____

Mark only one oval.

- induction motor, synchronous motor
- induction motor, differential motor
- synchronous motor, synchronous-induction motor
- dc motor, induction motor

43. 35.Starters are used in induction motor because

Mark only one oval.

- starting torque is high
- It can not run in reverse direction
- It is run against heavy load
- Its starting current is five times or more than its rated current

44. 36.At leading power factor, the armature flux in an alternator

Mark only one oval.

- Distorts the rotor flux
- Aids the rotor flux
- Opposes the rotor flux
- Does not affect the rotor flux

45. 37.Which of the following generations will be preferred if they are required to be run in parallel?

Mark only one oval.

- Series generators
- Shunt generators
- Compound generators
- Shunt and series generators

46. 38.The torque developed by a single-phase motor at starting is

Mark only one oval.

- less than the rated torque
- More than the rated torque
- Zero
- None of the above

47. 39.Starters are required in the induction motor because

Mark only one oval.

- of high starting current
- they are not self starting
- torque produced is very low at starting to overcome inertia
- all of the mentioned

48. 40.When the rotor of three phase induction motor is blocked, its rotor induced emf is

Mark only one oval.

- zero
- Minimum
- unity
- maximum

49. 41.The difference between the synchronous speed and the actual speed of an induction motor is known as

Mark only one oval.

- Back lash
- Lag
- Slip
- Regulatio

50. 42.The starting torque of a 1-phase induction motor is

Mark only one oval.

- High
- Low
- Medium
- Zero

51. 43.The motor used for the compressors is

Mark only one oval.

- Reluctance motor
- Shaded pole motor
- DC series motor
- Capacitor start-capacitor run motor

52. 44.The great advantage of the double squirrel-cage induction motor over single cage rotor is that its _____

Mark only one oval.

- slip is larger
- starting current is lower
- power factor is higher
- efficiency is higher

53. 45.If Ns is the synchronous speed and s the slip, then actual running speed of an induction motor will be

Mark only one oval.

- Ns
- s.Ns
- (1-s)Ns
- (Ns-1)s

54. 46.Fleming's left hand rule may be applied to an electric generator to find out

Mark only one oval.

- irection of rotor rotation
- polarity of induced emf
- direction of induced emf
- direction of magnetic field.

55. 47.Drop-in alternator frequency is corrected by

Mark only one oval.

- Decreased Prime Mover Output
- Increased Prime Mover Output
- Damper Winding
- Automatic voltage regulator

56. 48.A synchronous machine is called a doubly excited machine because

Mark only one oval.

- It can be overexcited
- It has two sets of rotor poles
- It needs twice the normal exciting current
- Both its rotor and stator are excited

57. 49.An 8-pole, 3-phase, 50 Hz induction motor is operating at a speed of 720 rpm. The frequency of the rotor current of the motor in Hz is _____

Mark only one oval.

- 2
- 4
- 3
- 1

58. 50.A 3-phase 440 V, 50 Hz induction motor has a 4% slip. The frequency of the rotor current will be

Mark only one oval.

- 2Hz
- 5Hz
- 25Hz
- 50Hz

59. 51.The frequency of voltage generated by an alternator having 8 poles and rotating at 250 rpm is

Mark only one oval.

- 60 Hz
- 50 Hz
- 25 Hz
- 16 2/3 Hz

60. 52.In an alternator, at lagging power factor, the generated voltage perphase, as compared to that at unity power factor

Mark only one oval.

- must be same as terminal voltage
- must be less than the terminal voltage
- must be more than the terminal voltage
- must be 1.41 time the terminal voltage

61. 53.When the excitation of an unloaded salient pole synchronous motor suddenly gets disconnected

Mark only one oval.

- ◯ The motor stops
- ◯ It runs as a reluctance motor at the same speed
- ◯ It runs as a reluctance motor at a lower speed
- ◯ None of the above

62. 54.The speed of a universal motor is generally reduced by using

Mark only one oval.

- ◯ Gear train
- ◯ V- belt
- ◯ Brakes
- ◯ Chains

63. 55.Which type of induction motor is best for pole changing method?

Mark only one oval.

- ◯ SCIM
- ◯ WRIM
- ◯ Single-phase IM
- ◯ Linear IM

64. 56.The power factor of an alternator is determined by its

Mark only one oval.

- Primemover
- Excitation
- Speed
- Load

65. 57.The V-curves of a synchronous motor show relationship between

Mark only one oval.

- Excitation current and back e.m.f
- Field current and p.f
- D.C. field current and A.C. armature current
- Armature current and supply voltage

66. 58.In a capacitor start single-phase motor when capacitor is replaced by a resistance

Mark only one oval.

- Motor will consume less power
- Motor will continue to run in the same direction
- Motor will stop
- None of the above

67. 59._____ alternator is used in thermal stations and _____ alternator is used in hydel plants.

Mark only one oval.

- Cylindrical-rotor, salient pole
- Salinet pole, cylindrical-rotor
- Salient pole, Reluctance
- Cylindrical-rotor, cylindrical-rotor

68. 60.When rotor resistance starter is used with induction motor then

Mark only one oval.

- Only starter current is limited
- Only starting torque is limited
- Both starting current and starting torque are limited
- Neither starting current nor starting torque is limited