

Question Bank BEE

1. Define electric current
2. Define electric resistance
3. Define electric conductance
4. Define specific resistance
5. Differentiate electric power and energy
6. Define electromotive force
7. State ohms law
8. State kirchoff's law
9. What is an alternating quantity?
10. Define cycle
11. Define time period
12. Define frequency
13. Define amplitude
14. Define RMS value
15. Define average value
16. Define the expression for form factor and peak factor
17. Define power factor
18. What do you understand by balanced system?
19. What is back emf?
20. Why a dc series motor cannot be started on no load?
21. What are the various types of dc motors?
22. What is the necessity of a starter for a dc motor?
23. What is torque?
24. What is speed regulation?
25. What is called armature torque?
26. What is called shaft torque?
27. Draw the characteristics curve of a dc shunt motor?
28. What is the difference between three point and four point starters?
29. What is the method available for testing dc series motor?
30. Name the protective devices used in a 3point starter?
31. Mention the methods of speed control for a dc motor?
32. What are the losses that occur in a dc motor?
33. What are the various types of dc generators?
34. Draw the internal and external characteristic curves of dc shunt generator?
35. Draw the internal and external characteristic curves of dc series generator?
36. Draw the characteristics curves of dc compound generator?
37. DC series generators are suitable for ?
38. What is the function of commutator in DC generator?
39. What is the function of carbon brushes in DC generator?
40. What is called voltage regulation?
41. Write short notes on efficiency of a DC motor?
42. How the voltage builds up in Dc generator?
43. Why the armature core is made by laminated sheets?
44. Explain the construction and working principle of D.C. generator with neat diagram.

45. Explain the different types of D.C. generators.
46. Draw and explain the characteristics of different types of d.c.generators.
Also ,derive the emf equation of D.C. Generator.
47. Sketch and explain the speed-current, speed-torque and torque-current characteristics of a shunt motor, series motor and compound motor.
48. Draw the characteristic curves of D.C. shunt, series and compound motors. Use these curves to explain the applications for which these motors are used.
49. a) List all the important parts of a D.C. Motor and explain the importance of each..a)Calculate the emf generated by 4 pole wave wound generator having 65 slots with 12 conductors per slot when driven at 1200 rpm. The flux per pole is 0.02 wb.
50. A 4 pole lap wound dc shunt generator has a useful flux per pole of 0.07wb. The armature winding consists of 220 turns, each of 0.004 ohm resistance. Calculate the terminal voltage when running at 900 rpm if the armature current is 50A.
51. Explain the principle of working a 1f transformer?
52. Discuss the difference between core type and shell type construction?
53. What is KVA rating of a transformer?
54. Draw the no load phasor diagram of a transformer?
55. Draw the phasor diagram of a transformer under load condition?
56. Explain voltage regulation?
57. Derive the emf equation of a transformer?
58. What is meant transformation ratio?
59. How the transformers are classified?
60. Write short notes on autotransformer.
61. Derive the condition for maximum efficiency?
62. What are the various losses that must be present in a transformer?
63. Explain the construction and working principle of single-phase transformer.
64. Enumerate the various types of transformer.
65. Derive an expression for the emf of an ideal transformer winding.
66. Draw and explain the no load phasor diagram for a single-phase transformer.
67. What is KVA rating of a transformer?
68. Explain various features of an ideal transformer.
69. b)The no load current of a transformer is 10A at a power factor of 0.25 lagging, when connected to 400v,50Hz supply, calculate(i)magnetizing component of no load current(ii) iron loss and(iii) maximum value of the flux in the core. Assume primary winding turns as 500.
70. What is the frequency of induced emf of an induction motor?
71. Why squirrel cage induction motors are common in the domestic pump sets?
72. Distinguish between squirrel cage & slip ring induction motor?
73. What are the applications of induction motors?
74. Name the speed control methods of a 3 induction motors?
75. Define a slip of an induction motor?
76. What is called synchronous speed?
77. Define electron volt?
78. State the relationship between electric field intensity, and potential?