GOVERNMENT POLYTECHNIC, NAYAGARH
DEPARTMENT OF ELECTRICAL ENGINEERING

SAMPLE QUESTIONS

Utilization of Electrical Energy & Traction

FACULTY: DAMAYANTI BHATT

2MARKS QUESTION

1. What is skin effect?
2. What is current efficiency?
3. Define M.H.C.P.
4. What is luminous intensity?
5. What are polar curves?
6. Define utilization factor.
7. Define intensity of illumination.
8. Define maintenance factor of illumination.
9. Define solid angle.
10. Write the name of various traction systems.
11. State cosine law of illumination.
12. What are the different applications of electrolysis?
13. What is luminous efficiency?
14. State two applications of a series motor.
15. What is faraday's law of electrolysis?
16. State application of dielectric heating.
17. What is depreciation factor?
18. What is brightness?
19. What is traction?
20. What is magnetic braking?
21. What is polarization?
22. Give the name of one high frequency heating method.
23. What is arc blow?
24. Define MSCP.
25. Show the connection diagram of a fluorescent tube.
26. Define current efficiency related to electrolysis.
27. State radiation, a mode of transfer of heat.
28. Why A.C. welding is better suited for structural work?
29. Define candle power.
30. Which type of A.C. and D.C. motors will be used for lift?
31. Write the name of solution used for gold plating.
32. Which type of A.C. motor is used for constant speed operation?
33. What are the uses of synchronous motor?

5 marks questions:-

1. Describe the extraction of aluminium is fused electrolyte process briefly.
2. Describe about the working principle of gas-filled lamp with the help of a neat diagram.
3. Explain the speed control of DC tranction motors by Series-Parallel control method.
4. Write a short note on Individual Drives.
5. Explain the single phase AC system of track electrification briefly.
6. Describe about the polar curves in illumination, and their uses with a neat diagram.
7. Explain the working principle of Indirect Arc Furnace with a neat sketch.
8. Describe about the magnetic braking in electric traction briefly.
9. Describe about the working principle of fluorescent tube with a neat diagram.
10. Explain the DC system of track electrification in electric traction briefly.
11. Explain the operating principle of Indirect Arc Furnace with a neat sketch.
12. Write a short note on metal arc welding.
13. Differentiate between DC and AC arc welding.
14. Explain the choice of electric drives.
15. Explain briefly the factors affecting the amount of Electro-deposition.
16. Explain briefly the principle of resistance furnace.
17. Explain about laws of illumination.
18. Give principle of microwave heating with application.
19. Explain about Regenerative Braking.
20. What are the factors affecting and governing electro-deposition?
21. Series-parallel method of speed control of motor.
22. Write advantages of electrical heating.
23. State advantages of choice of electric drive.
24. Explain working of direct core type induction furnace.
25. What the advantages of resistance heating?
26. Explain the inverse square law.
27. Explain fundamental principal of ionic dissociation.
28. State group drive and its disadvantages.
29. State the essential electrical and mechanical characteristics of traction motors.
30. Explain tapped field control of traction motor.
31. Explain with connection diagram the opertion of fluorescent lamp with glow type starter.
32. State and explain the principle of di-electric heating.
33. What are the different types of ARC welding? Explain.
34. Explain the factor governing the better electro Deposition.
35. Explain DC and AC traction motor.
36. Discuss the Faraday's law of electrolysis in brief?
37. Discuss the polar curves in brief.
38. What are the applications of Electrolysis.
39. Explain with suitable circuit diagram the phenomena of Regenerative Braking with D-C motors.
40. With neat sketch, discuss the construction, working of a H.P. mercury Vapour lamp.
41. Neon Sign Lamps.