

Dallard Railway Intervention Society Catalogue No 51/

**QUESTIONS TO BE VERBALLY ANSWERED BY ALL TRAINEE MOTORMEN
BEFORE COMMENCING DUTY IN THAT CAPACITY**

1. Trace the course of the current through the tram from the trolley wire to rails.
2. What is the use of an automatic circuit breaker?
3. What is the use of a fuse?
4. What is the use of a lightning arrester?
5. What is the use of the choke coil?
6. What is the use of the tram resistance units?
7. What is meant by an overload of current?
8. What are the principal causes of such overload of current?
9. What is meant by the term "short circuit"?
10. What is meant by the term "open circuit"?
11. What is meant by "power in series"?
12. What is meant by "power in parallel"?
13. Which are the running notches on the controllers?
14. Which are the resistance notches on the controllers?
15. How long should the controller be held on a resistance notch?
16. How long should the controller be held on running notches?
17. What happens if the controller is held on a resistance notch too long?
18. What difference should be made in the time on resistance notches when climbing an up grade compared with on level track or on a down grade?
19. Why is it injurious to apply the power too quickly?
20. What are the causes of the automatic circuit breaker opening?
21. How many bearings are there on a tram. Name them.
22. How are the lights in a tram wired?
23. How many circuits of lamps are there in a tram?
24. How are the lamps protected from short circuit?
25. What would you do if a lamp circuit failed?
26. How would you know if a motor was defective?
27. Name in their correct order of procedure the actions you would take to locate the fault if your tram will not start.
28. What precaution must you adopt before examining a controller, motor, or before replacing a fuse?
29. What precaution would you take if an armature bearing became overheated?
30. What do you do before taking a tram into traffic?
31. How are the motors cut out of circuit on a Westinghouse T.I.F. controller?
32. On which power notch does the tram start when a motor is cut out on the above?
33. How are the motors cut out of circuit on a G.E.36J. controller?
34. On which power notch does the tram start when a motor is cut out on the G.E. controller?
35. Why is it necessary to give more time on each resistance notch if a motor is cut out?
36. Should the power and the brakes be on at the same time?
37. Why must power be cut off when passing under section insulators?
38. Why must power be cut off when passing under frogs and crossings?
39. What is meant by a tram being earthed?
40. How would you overcome this condition?
41. What is the purpose of the reversing lever on a controller?
42. What must be done with the reversing lever when leaving tram at the depot, and also if leaving a tram on the road?
43. Give a brief outline of the air compressor circuit (electrical).
44. What is the purpose of the governor?
45. What protects the air compressor motor?
46. What is the purpose of the compressor?
47. What is the purpose of the brake cylinder?
48. Describe the motorman's brake valve operation.
49. What should be the position of the brake valve handle when tram is travelling?
50. What is the purpose of the air gauge?
51. What is the operating pressure range?
52. If you saw the air pressure falling below 60 lbs., what would you do?

53. What must be done before moving a tram in the depot?
54. How would you operate the tram if the air pressure failed?
55. Should you watch the pressure gauge frequently?
56. How does the hand brake operate?
to the wheels. the air brake application made
58. How is sand applied to the tram rails?
59. What is the purpose of using sand?
60. How do you prevent a jerk when stopping a tram?
61. How do you prevent a jerk when starting a tram?
62. What is the most common cause of power going off the system?
63. What should be the speed of tram entering points and over track crossings?
64. What distance apart should trams be parked in the depot?
65. What distance apart should trams be stopped when in service?
66. What would you do if the controller jammed when travelling in full parallel?
67. If the controller handle could not be brought to the off position after examination, what would you do?
68. Under what condition would your motors act as a brake if in the above case your tram had to be towed?
69. How would this be prevented?
70. What would you do if the wheels of your tram commenced to slip on a greasy rail when going up hill?
71. How many lighting circuits are there on the bogie trams?
72. What is the difference between the G.E. Controller on the bogie trams compared with those on the smaller trams?
73. How does the ratchet switch on these controllers operate?
74. How does the automatic switch on these cars operate?
75. What is the purpose of the line breaker switch on these trams?
76. What protection is used in the line breaker switch circuit?
77. Name in the correct order of procedure the action you would take to locate the fault if a bogie tram will not start.