सत्यमेव जयते

(Govt. of India)
(Ministry of Railways)

QUESTION BANK
On
LHB Design Coaches

(For official use only)

IRCAMTECH/2012-13/M/LHB/QB/1.0

October – 2012

अआमा संRDSO
रेल अग्रदूत Transforming Railways

An ISO 9001-2008 Certified Organisation
उच्च अनुरक्षण प्रौद्योगिकी केन्द्र
EXCELLENCE IN MAINTENANCE

Indian Railways
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EXIT

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FOREWARD

Indian Railway has started inception and mass production of LHB type Coaches in 2002 and now population of these coaches is growing up day by day. These coaches are quite different from previously used ICF design coaches. The maintenance practices for these coaches are also different. Hence training in different areas is necessary to maintenance staff.

CAMTECH has prepared this question bank to fulfill above training requirement. The main objective of this hand book is to provide proper knowledge of LHB coaches.

This question bank contains objective type questions regarding LHB coaches including maintenance parameters.

I am sure that the handbook will be useful to the concerned maintenance and operating staff to ensure trouble free service of the train operation.

Technological up-gradation and learning is a continuous process. Hence feel free to write us for any addition / modifications or in case you have any suggestion to improve the Hand Book. Your contribution in this direction shall be highly appreciated.

Place: CAMTECH/GWL
Date: 31/10/2012

(A R Tupe)
Exe. Director
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PREFACE

LHB Coaches are quite different from previously used ICF design coaches. The maintenance practices for these coaches are also different. Therefore, it has become imperative to give a separate training material to staff who is engaged in maintenance as well as in operation. The artisan and supervisors involved in these safety works are supposed to be upto-date in respect of the technical knowledge of this coaching stock.

With a view to help the staff through training, CAMTECH has compiled a question bank on LHB coaching stock, having more than 400 questions. The question bank is also provided with answers and the sources from where the answers have been taken from.

This hand book is aimed at assisting concerned staff and does not supersede any existing instructions from Railway Board, R.D.S.O. or IRCA etc. Most of the data and information mentioned here in are available in some form or the other in various books and manuals or other printed matters. If any changes are made, these will be issued in the form of correction slips.

Place: CAMTECH/GWL
Date: 31.10.2012

(K.P.Yadav)
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CORRECTION SLIPS

The correction slips to be issued in future for this handbook will be numbered as follows:

IRCAMTECH/2012-13/M/LHB/Q.B./1.0/C.S.# XX date----------

Where "XX" is the serial number of the concerned correction slip (starting from 01 onwards).

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GENERAL QUESTIONS

1. What is the full form of LHB?

   a) Lower heavy Bogie b) Linke Hofmann-Busch

   c) low height Bogie d) None of these

2. What is the length over body of LHB coaches?

   a) 23570 mm b) 23545 mm

   c) 23540 mm d) 23565 mm

3. What is the maximum width over body of LHB coaches?

   a) 3260 mm b) 3240 mm

   c) 3456 mm d) 2356 mm

4. Height of compartment floor from rail level under tare condition of LHB coaches?

   a) 1320 mm b) 1389 mm

   c) 1305 mm d) 1345 mm

5. What is Maximum height of centre line of side CBC above rail for empty vehicle?

   a) 1108 mm b) 1107 mm

   c) 1105 mm d) 1103 mm

6. What is minimum height of centre line of CBC above rail level for loaded vehicle?

a) 1030 mm b) 1039 mm

c) 1025 mm d) 1015 mm

7. What is the higher speed potential of LHB coaches?

a) 160 Kmph upgradeable to 180 Kmph

b) 180 Kmph upgradeable to 200 Kmph

c) 160 Kmph upgradeable to 200 Kmph

d) 200 Kmph upgradeable to 220 Kmph

8. What is the wheel gauge of LHB wheel?

a) 1676 mm b) 1600±1 mm

c) 1610 mm d) 1676 ±1 mm

9. What is the new wheel diameter of LHB wheel?

a) 910 mm b) 915 mm

c) 912 mm d) 725 mm

10. What is the condemning limit of LHB wheel diameter?

a) 813 mm b) 839 mm

c) 845 mm d) 854 mm

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11. How many brake disc on one wheel?

a) One b) Two

c) Three d) Four

12. Which type of Roller bearing is used in LHB coaches?

a) Spherical Roller bearing. b) Plain Roller bearing.

c) Cartridge Tapered Roller bearing.

d) None of these.

13. What is the thickness of wheel flange in LHB coaches?

a) 24 mm b) 26.5mm

c) 26 mm d) 25 mm

14. What is the thickness of brake disc.?

a) 100 mm b) 110 mm

c) 105 mm d) 108 mm

15. What is the diameter of brake disc?

a) 650 mm b) 630 mm

c) 640 mm d) 645 mm

16. What is diameter of wheel axle of LHB Coach?

a) 172 MM b) 170 MM

c) 153 MM d) 165 MM

17. How many make CTBUs are used on LHB Coaches?

a) 1 b) 2

c) 3 d) 4

18. What is the maximum temperature limit for TIMKEM CTBU?

a) 90 ^{o}C b) 80 ^{o}C

c) 85 ^{o}C d) 87 ^{o}C

19. How many types of shock absorbers are used in LHB Coaches?

a) 6 b) 5

c) 4 d) 3

20. How many shock absorbers are used in LHB Coaches?

a) 10 nos. b) 8nos.

c) 18nos. d) 12 nos.

21. What is the name of shock absorber connected between bogie and car body?

a) Primary b) Secondary

c) Yaw. d) None of these.

22 Most important condition for coupling of two coaches is -

a) Both couplers should be in alignment.

b) Both couplers should be within gathering range.

c) Both a & b d) None of above

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23. What is the length over CBC of LHB Coaches?

a) 23590 mm b) 24000 mm

c) 24095 mm d) 24225 mm

24. What is the height over roof of LHB Coaches?

a) 4200 mm b) 4390 mm

c) 4039 mm d) 4190 mm

25 Approx. “Riding Index” of LHB Coach -

a) 3.5 b) 3.8

c) 2.5 d) 3.0

26. Distance between inner wheels of LHB -

a) 12340 mm b) 10390 mm

c) 11545 mm d) 12010 mm

27 Distance between centre pivots -

a) 13780 mm b) 14030 mm

c) 14900 mm d) 14350 mm

28. Maximum permissible buffer drop under gross load and worn condition is -

a) 65 mm b) 70 mm

c) 75 mm d) 80 mm

29. Trip Maintenance Schedule i.e. D1 of LHB Coach is done -

a) 7±1 days b) 15 days

c) Every Trip d) 30 days

30. D2 Maintenance Schedule of LHB Coach is done -

a) 30 days ± 1days b) 30 days ± 3days

c) 30 days ± 5days d) 30 days ± 7days

31. D3 Maintenance Schedule i.e. of LHB Coach is done -

a) 150 days ± 1days b) 120 days ± 3days

c) 180 days ± 15 days d) 90 days ± 7days

32. 'SS-I' (Shop Schedule-1) of LHB coach is done -

a) 1 year b) 2 years

c) 1.5 year/ 6 lakes Kms earned whichever is earlier

d) 3 years/ 6 lakes Kms earned whichever is earlier

33. 'SS-II' of LHB coach is done -

a) 1 year b) 2 years

c) 1.5 year/ 6 lakes Kms earned whichever is earlier

d) 3 years/ 12 lakes Kms earned whichever is earlier

34. On KM basis 'SS- I' of LHB coach is done -

a) 5 lakh b) 6 lakh

c) 9 lakh d) 12 lakh

35. On KM basis 'SS -II' of LHB coach is done -

a) 5 lakh b) 6 lakh

c) 12 lakh d) 24 lakh

36. 'SS -III' of LHB coaches is done -

a) 5 years b) 4 years

c) 3 years/ 12 lakes Kms earned whichever is earlier

d) 6 years/ 24 lakes Kms earned whichever is earlier

37. 'IOH' of LHB coaches is done -

a) 18 months b) 12 months

c) 9 months d) 14 months

38. Codal life of LHB coaches is -

a) 30 years b) 25 years

c) None of the above d) 35 years

39. Brake power of air brake for Rajdhani coaches from out station is -

a) 90% b) 100%

c) 85% d) 95%

40. Length of car body of LHB coach is -

a) 24000 mm b) 23540 mm

c) 2400 mm d) 24430 mm

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41. To protect vertical sliding between engine and power car, the device is known as -

a) Vertical slide protector b) Restrictor

c) Protecting device. d) None of these

42 What is the wheel base of LHB bogie?

a) 2440 mm b) 2696 mm

c) 2560 mm d) 2570 mm

Coach/Shell

1. Side wall of LHB Coaches are manufactured from -
   a) Austenitic steel (SS 304M) b) IRSM-41
   c) Ferritic steel (SS-409M) d) IRSM-44

2. Roof sheet of LHB Coaches are manufactured from -
   a) Austenitic steel (SS 304) b) IRSM-41
   c) Ferritic steel (SS-409) d) IRSM-44

3. End wall of LHB Coaches are manufactured from -
   a) Austenitic steel (SS 304M) b) IRSM-41
   c) Ferritic steel (SS-409M) c) IRSM-44

4. Trough floor of LHB Coaches are manufactured from -
   a) Austenitic steel (SS 304) b) IRSM-41
   c) Ferritic steel (SS-409) d) IRSM-44

5. Cross members of under frame of LHB Coaches are manufactured from -
   a) Austenitic steel (SS 304) b) IRSM-41
   c) Ferritic steel (SS-409) d) IRSM-44

6. Thickness of Roof sheets of LHB coaches are -
   a) 2mm & 2.75 b) 1.25 mm & 1.7 mm
   c) 3mm & 3.25 mm d) 2.75 mm & 2.5 mm

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7. Thickness of Corrugated sheets of LHB coaches are -

a) 2 mm b) 3 mm

c) 1.25 mm d) 2.5 mm

8. Thickness of side wall sheets of LHB coaches are -

a) 2 mm b) 3 mm

c) 1.25 mm d) 2.5 mm

9. Sole bar of LHB Coaches are manufactured from -

a) Austenitic steel (SS 304) b) IRSM-41

c) Ferritic steel (SS-409) d) IRSM-44

10. Thickness of sole bar of LHB coaches is -

a) 2 mm b) 5 mm

c) 4 mm d) 6 mm

11. Thickness of Roof flange of LHB coaches is -

a) 2 mm b) 5 mm

c) 4mm d) 6 mm

12. Material of yaw damper bracket of LHB Coaches is -

a) Cast steel b) IRSM-41

c) Ferritic steel (SS-409) d) IRSM-44

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13. Yaw damper is fitted on -

a) Sole bar b) Bogie

c) Under frame d) Between under frame and bogie frame

14. The Fire Extinguisher used in AC LHB coaches is -

a) Foam type b) DCP Type

d) CO_2 type d) None of these

15. Fire Extinguisher should be refilled -

a) Every month b) Every 3 months

c) After 1 year d) On every trip

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BRAKE SYSTEM

1. Torque value of brake caliper mounting bolt is -

   a) 200 NM b) 170 NM

   c) 150 NM d) 190 NM

2. What is the principle of brake system used on LHB coaches?

   a) Single pipe air brake system

   b) Twin pipe air brake system

   c) Twin pipe with disc brake air brake system.

   d) None of these

3. What is the capacity of AR tank?

   a) 200 ltrs b) 75 ltrs

   c) 125 ltrs d) 300 ltrs

4. 125 Ltr AR tank used for -

   a) Toilet purpose b) Braking purpose

   c) Standby d) None of these.

5. 75 Ltr AR tank used for -

   a) Toilet purpose b) Braking purpose

   c) Standby d) None of these.

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6. What is the capacity of CR TANK?

a) 5.0 Liters b) 6.0 Liters

c) 9.0 Liters d) 8.0 Liters

7. Bore size of main BP and FP pipe is -

a) 45 mm bore b) 25 mm bore

c) 20 mm bore d) 18 mm bore

8. Diameter of BC line branch pipe is -

a) 25 mm b) 20 mm

c) 18 mm d) 16 mm

9. Diameter of brake indicator pipe is -

a) 18 mm b) 10 mm

c) 15 mm d) 20 mm

10. When brake indicator shows 'Red', the brake will be -

a) Released b) Applied

c) Indicator defective d) none

11. When brake indicator shows 'Green' the brake will be -

a) Released b) Applied

c) Indicator defective d) none

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12. Brake accelerator is a -

a) Brake actuating device

b) Emergency brake application device.

c) Both a & b

d) None of these

13. Principle application of brake accelerator is -

a) Emergency braking in each coach of rake

b) Partial braking in each coach of rake.

c) Similar braking in each coach of rake

d) None of these.

14. Brake accelerator actuates during -

a) Every service application

b) Emergency brake application

c) Both a & b

d) None of these.

15. Minimum rate of pressure required to actuate the brake accelerator -

a) 1.2 kg/cm^2 per minute

b) 1.6 kg/cm^2 per minute

c) 5 to 3.2 kg/ cm^2 in 3 Sec)

d) More than 1.6 kg/cm^2 per minute

16. Brake accelerator stops venting when BP pressure reached to -

a) 1.0 kg/cm^2 b) 3.5 - 3.0 kg/cm^2

c) 2.5 - 1.5 kg/cm^2 d) 1.5 - 1.0 kg/cm^2

17. Brake accelerator is connected to -

a) FP pipe b) BP pipe

c) BC pipe d) both a & b

18. How many pressure tanks provided on generator car.

a) 3 b) 2

c) 4 d) 5

19. What is the capacity of pressure tank provided for parking brake?

a) 9 Ltr b) 5 Ltr.

c) 6 Ltr. d) 8 Ltr.

20. What is the name of cable provided for hand brake?

a) Hand brake cable b) Flex ball cable

c) Both a & b d) None of these

21 How many flex ball cables provided on generator car.

a) One b) Two

c) Four d) Three

22. Flex ball cable directly connected to -

a) Brake caliper b) Brake cylinder

c) Both d) None of these

23. 'ASD' stands for -

a) Anti Sleep device b) Anti slip device

c) Both a & b d) None of these

24. What is the purpose of Anti Skid system?

a) To protect wheels against skidding.

b) To maintain same speed of all axle

c) Both a & b.

d) None of these

25. What is the purpose of Dump Valve?

a) To maintain approximate same speed of all axles.

b) To protect wheels against skidding

c) A & b both.

d) None of these

26. The applications of Dump valve is -

a) Only braking. b) Only De-braking

c) Both braking and de-braking. d) None of these

27. Electricity required for Dump valve operative -

a) 110 volt AC b) 110 volt DC

c) 24 Volt DC d) 230 Volt AC

28. Anti skid system is a -

a) Electronic system b) Pneumatic system

c) Electro Pneumatic systemd) both a & c

29. What is the purpose of speed sensor?

a) To compute the revolutions of each axle

b) To maintain same speed of each axle

c) Either a or b

d) None of these

30. What is the limit of air gap between sensor and phonic wheel?

a) 1.0 - 5.0 mm b) 1.0 - 10.0 mm

c) 0.9 – 1.4 mm d) 1.0 – 2.5 mm

31. What is the purpose of pressure switch?

a) To actuate antiskid system

b) To provide electric supply to brake accelerator

c) To provide electric supply to dump valve.

d) None of these

32. Pressure switch actuate at the train pressure reaches -

a) 0.5 bar b) 1 bar

c) 1.3-1.8 bars. d) 1.5 – 3.0 bars

33. In KNORR BREMSE system pressure switch connected to -

a) FP line b) BP line

c) BC line d) both a & b

34. In SAB WABCO system pressure switch connected to -

a) BP line b) FP line

c) BC line d) none of these

35. How many brake cylinders are used in LHB coaches?

a) 6 b) 4

c) 8 d) 16

36. If anti skid system not actuate, the reason may be -

a) Fuse no. 63, 65 may blown.

b) Setting of pressure switch may disturb.

c) Both a & b

d) None of these.

37. The '99' code shown on micro processor means -

a) Whole system working perfectly. b) Either a or b

c) Some defect in speed sensor. d) None of these.

38 If micro processor shows '72' code means -

a) Temporary fault at one axle.

b) Permanent fault at several axles.

c) Volatile fault

d) Permanent fault at one axle

39. If micro processor shows '73' code means -

a) Temporary fault at one axle

b) Permanent fault at several axles

c) Permanent fault at one axle.

d) Both a & b

40. If micro processor shows '95' code means -

a) Temporary fault b) Permanent fault

c) No fault d) none of these

41. How much pressure dropped when emergency brake pull box pulled?

a) 0.4 kg/cm^2 b) 1.0 kg/cm^2

c) Almost 3 kg/cm^2 d) none of these

42. Size of choke provided in emergency brake valve is -

a) 0.4 mm b) 2.0 mm

c) 3.0 mm d) No choke

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43 What is size of air tube run through coach length?

a) 8.0 mm b) 6.0 mm

c) 10.0 mm d) 9.0 mm

44 'PEASD' stands for -

a) Passenger emergency alarm signaling device.

b) Passenger emergency alert safety device.

c) Passenger emergency alarm short device.

d) None of these

45 "PEASD' provided in LHB can be reset -

a) From under gear of coach only

b) From any where of inside coach

c) From the point where chain pulled.

d) Both a & b

46. How can identified the actual position of chain pulled.

a) Pull box will in up position & hissing sound heard.

b) Pull box will in down position & hissing sound not heard.

c) Pull box will in down position and hissing sound can hear.

d) None of these

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47. Location of isolating cock provided in 'PEASD' in LHB coaches.

a) On under gear

b) Near emergency brake valve

c) No isolating cock provided

d) None of these

48. When emergency pull box pulled from inside the coach.

a) The air pressure slightly dropped.

b) The air pressure dropped.

c) No pressure dropped

d) None of these.

49. When emergency chain pulled, brake accelerator will -

a) Not respond

b) Respond

c) May be respond

d) None of these.

50. Thickness of new brake pad is -

a) 28 mm b) 30 mm

c) 35 mm d) 32 mm

51. Condemning limit of brake pad is -

a) 10 mm b) 7 mm

c) 8 mm d) 9 mm

52. Maximum brake cylinder pressure in kg/cm^2 is -

a) $3.0 \pm 0.1\ kg/cm^2$ b) $3.8 \pm 0.1\ kg/cm^2$

c) $2.8\ kg/cm^2$ d) $4.0 \pm 0.1\ kg/cm^2$

53. Maximum gap between brake disc and brake pad is -

a) 3mm b) 1mm

c) 2mm d) 1.5 mm

54. In built slack adjuster in brake cylinder is -

a) Single acting mechanism

b) Double acting mechanism

c) No slack adjuster

d) None of these.

55. The brake cylinder is comprises

a) Power portion

b) Slack adjuster mechanism

c) Spindle reset mechanism

d) All above

56. How can brake be replaced?

a) By opening slack adjuster nut of cylinder

b) By opening brake caliper

c) Both a & b.

d) None of these.

57. Actual size of tool required to open slack adjuster nut of KB brake cylinder is -

a) 42 mm b) 27 mm

c) 36 mm d) 40 mm

58. Correct direction to open slack adjuster nut of 'KB' make brake cylinder is -

a) Anti clock wise

b) Clock wise

c) Any direction

d) None of the above

59. Actual size of tool required to open slack adjuster nut of 'SAB' brake cylinder is -

a) 46 mm b) 42 mm

c) 47 mm d) 45 mm

60. Dia of 'SAB' make brake cylinder is -

a) 250 mm b) 256 mm

c) 245 mm d) 255 mm

61. Max. length of brake pad is -

a) 330 mm b) 400 mm

c) 350 mm d) 375 mm

62. Friction area of brake pad is -

a) 400 cm^2 b) 300 cm^2

c) 350mm d) 375 cm^2

63. If brake cylinder pipe pressure is below 0.6 bars, the brake indicator shows -

a) Red b) Green

c) Half R, Half Green d) Yellow

64. If brake cylinder pipe pressure is equal or more than 0.6 bar, the brake indicator shows-

a) Green b) Red

c) Half Red, Half Green d) Yellow

65. What is the diameter meter of brake disc?

a) 110 mm b) 640 mm

c) 70 mm d) 125 mm

66. Brake disc made up of -

a) Gray Cast iron b) Cast steel

c) Special cast steel d) none

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67. Fins provided between the brake discs -

a) For strengthening to the disc

b) For cooling of disc

c) None of these.

d) Both a & b

68. The brake disc fitted on a same axle at the distance is -

a) 1030 mm b) 1070 mm

c) 1100 mm d) 1125 mm

69. Distance of brake disc from inner face of wheel is -

a) 195 mm b) 175 mm

c) 250 mm d) 210 mm

70. How many types of brake system being used on IR -

a) One b) two

c) Three d) four

71. Which type of air brake system being used on LHB coaching stock?

a) Single pipe air brake system

b) Twin pipe disc brake system

c) Twin pipe air brake system

d) Vacuum brake system.

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72. How many type brakes system provided on LHB power car.

a) One b) Two

c) Three d) Four

73. Hand brake are provided on LHB power cars know as

a) Parking brakes

b) Emergency brakes

c) Flex ball remote control brakes

d) Any of above

74. Hand brakes provided on no. of wheels is -

a) Only one b) Any two

c) Any three of all d) Any of above

75. What are main advantages to adopt disc brake system on LHB coaches?

a) Wear and tear on wheels in minimized

b) Over all life of wheels is increased

c) Effective braking than old system

d) All above

76. How many brake discs are provided on one axle?

a) One b) Two

c) Three d) Four

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77. The Fins provided in between the brake discs for -

a) To provided effective cooling during braking

b) To minimized weight of brake disc.

c) To provided strength to break disc.

d) To increase friction property of brake disc

78. How many brake discs are provided on one power car?

a) One b) Eight

c) Three d) Four

79. How many brake discs provided on LHB coaches are -

a) Four b) Eight

c) Twelve d) Sixteen

80. How many brake cylinders are provided in an "A" type coach?

a) 2 b) 1

c) 4 d) 8

81. How many brake cylinders are provided on an "AB" Type coach?

a) 1 b) 2

c) 4 d) 8

82. How many brake cylinders are provided on air brake freight stock?

a) 3 b) 2

c) 1 d) 4

83. How many brake cylinders are uses in a LHB type coaches.

a) 1 b) 6

c) 12 d) 8

84. Outer diameter of main BP pipe line is -

a) 20mm b) 32 mm

c) 28 mm d) 40 mm

85. Outer diameter of main FP pipe line is -

a) 20 mm b) 40 mm

c) 32 mm d) 28 mm

86. Outer diameter of main BC pipe line is -

a) 20 mm b) 18 mm

c) 22 mm d) 10 mm

87. Brake caliper unit mounted on -

a) Bogie cross beam b) Bogie side frame

c) Wheel axles d) Any of above

88. By pass system is used in brake system when -

a) F.P pipe broken

b) B.P Pipe broken

c) Hose pipe broken

d) Any of these

89. Single pipe system is used in brake system when -

a) F.P pipe broken

b) B.P Pipe broken

c) Hose pipe broken

d) Any of these

90. What will you do when one end BP angle cock leakage enroute -

a) By pass the coach

b) Single pipe the train

c) Isolate the line from T- joint

d) Any of above

91. Brake caliper unit should be checked for -

a) Corroded part b) Worn out pins

c) Free leverage d) All above

92. Brake caliper unit mounted with the help of -

a) M16x60 bolt b) M 12x 60 mm bolt

c) M 24X60 mm bolt d) M 20 x60 mm bolt

93. Torque required for brake caliper mounting bolt is -

a) 170 nm b) 60 nm

c) 200nm d) 190 nm

94. Brake caliper jammed when -

a) Middle pin corroded b) Brake pad pin worn out

c) Brake cylinder lose d) Any of above

95. What can do to prevent brake caliper unit jamming -

a) Regular clean & lubricate middle pin

b) Regular clean & lubricate mounting bolt

c) Clean & lubricate brake pad pin

d) Any of above

96. Brake cylinder bellow of brake caliper unit should not be allowed it -

a) Torn below

b) Cracked bellowed

c) Bent bellow

d) All above

97. Brake indicator shows `Green' when brakes are applied, what reason Should be -

a) CR of the coach not charged

b) Hand release valve stuck up in release position

c) Heavy leaking in BC line

d) Any of above

98. One brake indicator shows `Green' even brakes are in applied condition is -

a) CR of the coach not charged

b) Hand release valve stuck up in release position

c) Brake indicator stuck up in release position

d) Any of above

99. During drop test of the rake the maximum drop permitted in BP is -

a) 0.2 kg/cm^2 b) 0.3 kg/ cm^2

c) 2.0 kg/ cm^2 d) 0.6 kg/ cm^2

100. During drop test of the rake the maximum drop permitted in FP is -

a) 0.2 kg/ cm^2 b) 0.6kg/ cm^2

c). 2.0 kg/ cm^2 d) 1.0 kg/ cm^2

101. During the Air brake test of the rake which hose pipe should be connect first -

a) FP hose pipe b) BP hose pipe

c) Any hose pipe d) Both hose pipe

102. During Air brake testing after connecting BP hose pipe what should be checked.

a) Only BP gauge shows pressure

b) Only FP gauge shows pressure

c) Both BP & FP gauge shows pressure

d) Any of above

103. The parking brake pressure tank is charge through -

a) FP line b) Directly from BP line

c) Through DV d) Any of above

104. During service application the brakes should apply in -

a) 20 Sec. b) 30 Sec

c) 3-5 Sec. d) 15-20 Sec.

105. During service application the brake accelerator will be-

a) Definitely respond b) Does not respond

c) May be respond d) any of above

106. During full brake application the max. Pressure in brake cylinder is -

a) 1.6 Kg/Cm^2 b) 3.0 Kg/Cm^2

c) 3.8 Kg/Cm^2 d) 4.8 Kg/Cm^2

107. Charging time of CR is -

a) 150 Sec. b) 160 Sec.

c) 140 Sec. d) 120 Sec.

108. After full brake application the brake should release with in.

a) 10-20 Sec. b) 20-25 Sec.

c) 15-20 Sec. d) 25- 30 Sec.

109. In case of brake binding what should be checked first -

a) Brake binding on one trolley

b) Brake binding on both trolley

c) Brake binding on one wheel set

d) All the above

110. In case of brake binding on both trolley what you do first -

a) Isolate both trolley

b) Isolate the DV

c) Pull the quick release valve wire

d) Any of above

GO TO CONTENT ANSWERS

111. In case of brake binding on one trolley what you do first -

a) Isolate both trolley

b) Isolate the DV

c) Pull the quick release valve wire

d) Isolate the affected trolley

112. In case of brake binding on one wheel set what you do first-

a) Check both brake calipers are jammed

b) Check dump valve of affected wheel

c) Check both brake cylinder in operative condition

d) Any of the above

113. In case of brake binding on one brake disc of one wheel set it means -

a) The brake cylinder may defective

b) The brake caliper may jam

c) The dump valve may defective

d) Either a or b or both

114. In case of brake binding on one brake disc of one wheel set what you do first -

a) Check dump valve

b) Check WSP fault

c) Remove brake caliper pin

d) Loosen slack adjuster nut of brake cylinder

115. In case of brake caliper jammed, what action should be taken to Release the brakes is -

a) Isolate the trolley

b) Remove brake caliper pivot pin

c) Remove brake cylinder hose pipe

d) Any of above

116. To protect the brake cylinder piston assembly the cover is known as -

a) Piston covers b) Brake cylinder cover

c) Bellow d) All of above

117. In case of brake binding on both brake disc of one wheel set what you do first -

a) Isolate affected trolley

b) Remove flexible pipe of BC line of affected wheel set.

c) Loosen slack adjuster nut of both brake cylinder

d) Any of above

118. What will happen when brake cylinder bellow got cracked or torn?

a) Nothing will happen

b) Dust can enter into brake cylinder

c) Pressure may leak through bellow

d) None of these

119. What is the reason of twisting of bellows?

a) Dust accumulation between bellow and piston

b) Hilting of unknown objects during run

c) Excess application of brake cylinder piston

d) Any of above

120. How can save the bellows from twisting -

a) Regular cleaning of bellows

b) Regular cleaning and lubricating of bellows

c) Regular Over handing of bellows

d) All of above

121. If the hand brake indicators shows green even the hand brake is applied the reason will be -

a) Both indicators are defective

b) Parking brake continues having leakage

c) Roller valve of hand brake in operative

d) Above b and c both

122. The roller valve will not operate, if -

a) Parking brake container is leaky

b) Parking brake container is not charged

c) Setting of flex ball cable is not proper

d) Any of above

123. What will you do if hand brakes are applied but brake indicators shows green?

a) Check the pressure in pressure tank

b) Check the leakage of parking brake line

c) Check the setting of cables

d) All of above

124. What will you do if hand brake indicators shows 'red' but the hand brakes are in release condition?

a) Check the setting of flex ball cables

b) Brakeage of flex ball cables

c) Check the brake cylinder levers are bent or jammed

d) All of above

125. How can you know if the NRV is defective?

a) By check FP pressure shown in gauge even only BP hose is connected -

b) By check no pressure in reservoir after cut the FP pressure

c) Above a & b

d) Can not be checked

126. What will happened if no secondary suspension provided -

a) Riding quality will affect

b) Vertical socks will increase

c) Wear and tear of parts increased

d) All above

COUPLER/CBC

1. Which type of CBC is fitted in LHB Coaches?
   a) E b) H
   c) EH d) None of these

2. The CBC fitted on LHB coaches' has_____ feature.
   a) Anti slipping b) Anti rotation
   c) Anti climbing d) Anti Creeping

3. The tensile stroke of CBC is -
   a) 53-58 mm b) 45-50 mm
   c) 60-65 mm d) 35-40 mm

4. The maximum buffing stroke of CBC is -
   a) 58 mm b) 75 mm
   c) 80 mm d) 85 mm

5. Horizontal gathering range of CBC is -
   a) 100 mm b) 110 mm
   c) 95 mm d) 119 mm

GO TO CONTENT ANSWERS

6. What is the means of Anti climbing?

   a) Protection against climbing of one coach to another in case of accident.

   b) Protection against telescopic of one coach to another in case of accident.

   c) Both a & b

   d) None of these.

7. Oil is strictly prohibited on -

   a) Uncoupling device of CBC

   b) Supporting device of CBC

   c) Coupler head knuckle and locks of CBC.

   d) None of these.

8. Vertical gathering range of CBC is -

   a) 90 mm b) 95 mm

   c) 85 mm d) 100 mm

9. What is the purpose of supporting device?

   a) To support CBC weight.

   b) To equalize vertical forces of CBC

   c) Both a & b.

   d) None of these

10. During coupling operation the speed of vehicle should be -
    a) 3-5 kmph
    b) 2-3 kmph
    c) 5 kmph.
    d) 6-7 kmph

11. During coupling operation the coaches should be -
    a) On a curved track
    b) On a straight track
    c) Either a or b.
    d) None of these

12. Two coaches will definitely coupled if -
    a) The rotary lock completely down.
    b) Inverted 'U' should be clear
    c) Both a & b.
    d) Uncoupling handle in down position.

13. The coupler should be checked by help of gauge at -
    a) Every 4 months
    b) Every 6 months
    c) Every 3 months
    d) Every 5 months

14. 'Jaw gap gauge test' is performed when knuckle in -
    a) Closed position
    b) Open position
    c) a & b
    d) None of above

GO TO CONTENT

ANSWERS

15. During check of Jaw gap the gauge should be -

a) Pass through the gap.

b) Must not pass through the gap

c) None of above.

d) Can not say

16. If the Jaw gap gauge passes through the gap -

a) Knuckle is needs to replace.

b) Lock assembly is need to replace

c) Either a or b

d) None of above

17. Gauging of CBC is done when -

a) Knuckle in closed position.

b) Knuckle in open position.

c) Either a or b

d) None of above

18. During check of contour of knuckle the contour gauge must -

a) Not pass through knuckle.

b) Pass through knuckle

c) Either a or b

d) None of above

19. The max height of supporting device should be

a) 190 mm b) 187 mm

c) 187.5 mm d) 189.5 mm

20. To keep the coupler in level, the maximum distance between centre of coupler and lower edge of socket should be

a) 250mm b) 260mm

c) 240mm d) 255 mm

21. Maximum torque is required for supporting device bolts.

a) 400 NM b) 200 NM

c) 500 NM d) 550 NM

22. Maximum torque is required for base plate bolts.

a) 45 NM b) 180-200NM

c) 500 ±25 NM d) 55±50 NM

23. Max. thickness of shim required for increase of buffer height -

a) 3 mm b) 5 mm

c) 10 mm d) 15 mm

GO TO CONTENT

ANSWERS

WRA & CDTS

1. What is the full form of CDTS?
   a) Compact disk toilet system
   b) Compress Disc tuning system
   c) Control discharge toilet system
   d) None of these

2. What is the full form of WRA?
   a) wire relay appliances
   b) water raising apparatus
   c) Worker relief arrangement
   d) None of these.

3. What is the function of Solenoid valve/Magnetic Valve?
   a) To create air pressure
   b) This is part of PLC
   c) To control the entry of Air pressure
   d) None of these.

4 How many openings 'Retention Tank' have -
   a) One b) two
   c) Three d) four

GO TO CONTENT ANSWERS

5. Full form of P.L.C.
   a) Programmable Logic Controller
   b) Private Limited Company
   c) Perforated Loco Component
   d) None of these.

5. CDTS works on -
   a) Automatically
   b) Electrically & pneumatic pressure arrangement
   c) Manually
   d) None of these.

6. Opening of Retention tank activate by -
   a) Double acting pneumatic cylinder
   b) Automatically
   c) Manually
   d) None of these

7. Upper opening of retention tank -
   a) Partial open manually
   b) Always open
   c) Mostly closed
   d) None

GO TO CONTENT ANSWERS

8. Lower opening of retention tank opens -

a) When retention tank full of waste

b) Predetermined speed and predetermine no. of cycle of flush.

c) It used to be always open.

d) None of these.

9. Function of pressurizer in CDTS -

a) Delivers Pressurised water to flush the waste

b) To deliver the waste

c) To create maximum pressure for system

d) None of these

10. Function of P.L.C in CDTS -

a) To control the CDTS system

b) To record nos. of flush cycle as well as speed of vehicle

c) To record speed of vehicle

d) None of these.

11. CDTS system is based on RDSO specification -

a) MDTS : 090 b) MDTS : 089

c) NO. C 9906 d) None

GO TO CONTENT ANSWERS

12. Full form of W.S.P -
    a) Whole System Process
    b) Whole system procedure
    c) Wheel sliding protection
    d) None of these.

13. Retention tank outlet liding discharge valve remains open -It always open
    a) It open when train is in running position
    b) Small period of time its open (1 minute or less)
    c) None of these.

14. Toilet bowl made up of -
    a) Cast Iron steel
    b) IRSM 41
    c) Stainless steel AISI 304
    d) None

15. PLC works on -
    a) 240 V AC
    b) 120 V AC
    c) 24 V DC
    d) 24 V AC

GO TO CONTENT ANSWERS

16. CDTS P.L.C. having -

a) 8 input & 4 output

b) 4 input & 4 output

c) 4 input & 8 output

d) None of these

17. Solenoid valve works

a) In running condition of train

b) In stationary condition of train

c) Based on signal from P.L.C.

d) None of these

18. Upper Flapper valve usually open when

a) Train is in stationary condition

b) Train is in running condition

c) Operation of flush button

d) None of these.

19. The slides of upper flapper valve & lower slide valve connected with -

a) By means of link to two pneumatic cylinder

b) By means of wire

c) By some mechanical arrangement

d) None of these.

GO TO CONTENT ANSWERS

20. "Fail Safe Mode" of CDTS works -

a) In case of failure of Braking system

b) In case of failure of slide valve

c) In case of failure of loss of air &/or electricity

d) None of these

21. In case of retention tank discharge cycle -

a) Train speed should be less than 10 Kmph

b) Train speed should be above 20 Kmph

c) Train speed should be above 30 Kmph

d) Train speed should be above 40 Kmph.

SUSPENSION & MISCELLANEOUS QUESTIONS

1. Length of bogie is -

   a) 3535 mm b) 3534 mm

   c) 3600 mm d) 3530 mm

2. Weight of bogie is -

   a) 6t b) 6.92t

   c) 7.0 t d) 8.0 t

3. Width of FIAT Bogie is -

   a) 3030 mm b) 3240 mm

   c) 3040 mm d) 3010 mm

4. Distance between centre of two bogies is -

   a) 15000 mm b) 14900 mm

   c) 19500 mm d) 15090 mm

5. Capacity of luggage room of WLRRM is -

   a) 3.9 t b) 5.0 t

   c) 4.5 t d) 6.0 t

GO TO CONTENT ANSWERS

6. Cooling capacity of LHB coach is -

a) 3.9 t b) 22.5 KW

c) 22 KW d) 25.0 KW

7. 'T' type schedule indicates -

a) Weekly schedule b) Trip schedule

c) Monthly schedule d) six monthly

8. Max. limit of cracks permissible for roll link silent block in depth is -

a) 36.7 mm b) 35 mm

c) 39 mm d) 40 mm

9. New thickness of primary rubber pad is -

a) 36.7 mm b) 30.7 mm

c) 35.7 mm d) 38.2 mm

10. Max. permissible limit of crack in depth for primary rubber pad is -

a) Depth =10 mm b) Depth = 15 mm

c) Depth =18 mm d) Depth = 25 mm

11. If both side lateral dampers removed from bogies -

a) The coach may derail

b) The centre pivots may displace

c) Bolster top plank may twist

d) Lateral socks may increase

12. In case of grease oozing, can be seen from -

a) At front sealing ring of bearing

b) At bottom plug of bearing housing

c) At backing ring of bearing

d) All of above.

13. How much grease is required for Timken make bearing?

a) 300 gm b) 350 gm

c) 500 gm d) 400 gm

14. What is the advantage of dampers?

a) Suspension may be increased.

b) Ridding index may be improved.

c) Comfort may be increased.

d) All of above

GO TO CONTENT ANSWERS

15. Compressed length of Yaw damper is -

a) 800 mm b) 703 ±3 mm

c) 700 ±3 mm d) 800mm ±3 mm

16. Damper eye has 0.5 + 0 1.0mm deep crack on rubber surface, it should be

a) Not replaced b) Replaced

c) Either a or b d) None

17. Extended length of yaw damper is -

a) 703±3 mm b) 1083±3 mm

c) 700±3 mm d) 800±3 mm

18. Compressed length of primary vertical damper is -

a) 294±3 mm b) 434±3 mm

c) 298±3 mm d) 325±3 mm

19. Extended length of primary vertical damper is -

a) 294±3 mm b) 434±3 mm

c) 298±3 mm d) 325±3 mm

20. Stroke of primary vertical damper is -

a) 160 mm b) 140 mm

c) 60 mm d) 150 mm

GO TO CONTENT ANSWERS

21. Overall stroke of yaw damper is -

a) 260 mm b) 380 mm

c) 300 mm d) 280 mm

22. Compressed length of secondary vertical damper is -

a) 240 mm b) 395± 3 mm

c) 690 mm d) 325±3 mm

23. Extended length of secondary vertical damper is -

a) 240 mm b) 635 ± 3 mm

c) 240 mm d) 325±3 mm

24. Compressed length of lateral damper is -

a) 400 mm b) 360 ± 3 mm

c) 240 mm d) 325±3 mm

25. Extended length of secondary lateral damper is -

a) 395±3 mm b) 545 ±3 mm

c) 600 mm d) 325±3 mm

26. Overall stroke of secondary lateral damper is -

a) 240 mm b) 185± 3 mm

c) 690 mm d) 325±3 mm

GO TO CONTENT ANSWERS

27. Capacity of under frame water tank fitted in AC/3 tier.

a) 650 Ltr. b) 685 Ltr.

c) 400 Ltr. D) 500 Ltrs

28. Capacity of water tank provided in toilet for emergency -

a)30 Ltr b) 50 Ltr

c) 40Ltr d) 35 Ltr

29. The CBC fitted on LHB coaches has -

a) Only pulling action

b) Only buffing action

c) Both pull & Buffing action

d) Either a or b

30 What kind of maintenance is used for rolling stock is -

a) Break down maintenance

b) Preventive maintenance

c) Both a & b

d) Either a or b

31. Primary maintenance is a type of

a) Break down maintenance

b) Preventive maintenance

c) Safe to run examination

d) None of these

GO TO CONTENT ANSWERS

32. POH and IOH schedule of Rajdhani coaches is a type of -

a) Break down maintenance

b) Preventive maintenance

c) Both a & b

d) Either a or b

33. The maintenance done on pit line is -

a) Secondary maintenance only

b) Primary maintenance only

c) Safe to run only

d) a & b of above only

34. The capacity of axle of LHB coach is -

a) 13 t b) 16 t

c) 16.25 t d) 22 t

35. "Yellow point" is provided on axel boxes indicated for

a) The location where Roller bearing may crack

b) The location where actual temperature of bearing can be measure

c) The No of axel boxes

d) None of these.

GO TO CONTENT ANSWERS

36. The main function of anti roll bar is -

a) To allow rolling action of the coach

b) To prevent Rolling action of the coach

c) To provided strength for bogie

d) To negotiate the track curve

37. Free movement of Anti Roll bar is depends upon -

a) Condition of Grease in bracket

b) Condition of bearing at both ends

c) Condition of can of bearing

d) All of above

38. The anti toll bar must be checked for -

a) Any wear ness b) Any cracks

c) Free movement d) All the above

39. Condition of grease of anti roll bar should be checked during every -

a) D1 schedule b) D2 schedule

c) D3 schedule d) All the Above

GO TO CONTENT ANSWERS

40. Grease of anti roll bar should be replace during every

a) Trip schedule b) D1 schedule

c) D2 schedule d) D3 schedule

41. The torque required for axle end safety disc.

a) 170 Nm b) 180 Nm

c) 200 Nm d) 590 Nm

42. Wheel tapping is done to detect

a) Any hair crack b) Any material flow

c) Any wheel shelling d) All the above

43. Shelling on a wheel set the reason may be

a) WSP system hot function properly

b) Brake caliper may jammed

c) One or both brake cylinder may defective

d) All above

44. How much shelling on a wheel can be allowed -

a) 50 mm b) 30 mm

c) 20 mm multiple d) No shelling allowed

GO TO CONTENT ANSWERS

45. Control arm fitted with help of -

a) 2 bracket safety plated & 6 bolt

b) 6 bracket, 6- safety plated & 6 bolt

c) 2 bracket, 2 safety plate & 2 bolt

d) None of above

46. Torque required for centre pivot screw is -

a) 170 Nm b) 200 Nm

c) 120 Nm d) 70 Nm

47. Torque required for control arm bracket bolt is -

a) 200 Nm b) 170 Nm

c) 250 Nm d) 100 Nm

48. During Air brake testing if pressure rise in BP & FP gauge it means -

a) BP and FP gauge are defective

b) Non return value defective

c) D.V defective

d) None of these

49. What size spanner is used to loose slack adjuster nut in case of KB make -

a) AF 43 b) AF 24/27

c) AF 36 d) Any of above

50. The NRV is provided in

a) BC line b) BP line

c) FP line d) All above

51 f the silent block of roll link is shifted one side the roll link -

a) Not required to replace

b) Must be replaced

c) Can be allowed for one trip

d) None of these

52. If the silent block of traction link shifted to one side the traction link -

a) Must be replaced

b) Not required replacing

c) Can be allowed for one trip

d) None of these

53. What is the purpose to provide primary dampers -

a) To minimize primary damping

b) To support primary springs

c) To improve primary suspension

d) All of above

54. What is the purpose to provided yaw dampers?

a) To minimize rolling motion

b) To minimize scattering action of coach

c) To improve riding index

d) All the above

55. The gangway bridge mounting provided for -

a) To provide a bridge between two coaches

b) To protect vestibule doors

c) Both a & b

d) None of the these

56. The spring leaf is provided for -

a) To keep the fall plate in correct position

b) To hold the fall plate

c) To support the fall plate

d) Any of above

57. The supporting bracket of gangway bridge mounting should be checked for -

a) Corroded b) Broken or loose

c) Intact of all bolts d) All of above

58 The items of gangway bridge mounting should be checked during -

a) Trip schedule b) D1 schedule

c) D2 schedule d) D3 schedule

59. Why only one lateral damper is provided on each bogie -

a) To reduce the total cost of coach

b) To reduce total weight of coach

c) To improve lateral damping of one side

d) It can control both side lateral movements

60. The movement of sliding doors can be adjusted by -

a) Adjusting of cylinder b) Adjusting of belt

c) Adjusting of cylinder screw d) All of above

61. The toothed belt is provided on

a) Only on sliding doors

b) Only on flap doors

c) Only on vestibule doors

d) On both vestibule and sliding doors

GO TO CONTENT ANSWERS

62. For free movement of sliding and vestibule doors

a) Oil should be provided on shaft

b) Grease should be provided on shaft

c) Vaseline should be provided on shaft

d) Any of above

63. How many emergency windows are provided on a coach -

a) Two b) Three

c) Four d) Six

64. How can you identified the emergency windows

a) Provided with Red colors handles

b) Provided with stickers on each emergency window

c) Above a & b

d) None of these

65. The FRP panels are -

a) Fire retardant b) Fire proof

a) Fire friendly d) All of above

66. Curtains and Rexene seats provided on LHB coaches are

a) Fiber made b) Fire retardant

c) Fire proof d) All of above

GO TO CONTENT ANSWERS

67. How many under slung water tanks are provided on ACCN coaches -

a) 2 b) 3

c) 4 d) 5

68. How many under slung water tanks are provided on WLRRM coaches -

a) 2 b) 3

c) 4 d) 1

69. What is the capacity of under slung water tank provided on WLRRM -

a) 630 ltr. b) 640 ltr.

c) 400 ltr. d) 450 ltr.

70. What is the purpose to provide water level indicator on water tanks -

a) Availability of water

b) Capacity of water tank

c) Location of water tank

d) None of these

71. What is the purpose to provide sensor on water tank?

a) Availability of water

b) Capacity of water tank

c) Location of water tank

d) To provide signal to pump control

72. The sensor is provided on -

a) All water tanks b) Two water tanks

c) One water tank d) None of these

73. The pump control shows "EMPTY'' even the water tank is full of water it means.

a) Sensor may defective b) No water in the tank

c) Both A & B d) None of these

74. If the primary spring of an axle box is weak it can be identified by -

a) Measuring the distance between control arm top and bogie frame

b) Measuring the distance between control arm bottom and bogie frame

c) Measuring the deflection of primary damper

d) Measuring the distance between control arm lug and safety pin

75. If the luggage door top stopper is missing -

a) The luggage door will not close

b) The luggage door will not open

c) The luggage door lock will not operate

d) Either A or B

76. If the dump valve continuous venting the reason may be –

a) Dump valve is defective

b) Dump valve electrical supply disturbed

c) Dump valve stuck up in actuating position

d) WSP is defective

77. What is the corrective action if dump valve is venting continuously -

a) Reset the WSP system

b) Rearrange the WSP system

c) Pull out dump valve connector and reconnect

d) Replace the dump valve

78. The dump valve works only during -

a) Emergency braking

b) Service application

c) Deference in speed of wheel

d) Deference in diameter of wheel

79. If the speed of all axles is same and emergency braking is applied the dump valve will -

a) Does not respond

b) Definitely respond

c) Only one will respond

d) May be respond

80. If the speed of all axles is Different and emergency braking is applied the dump valve will -

a) Does not respond

b) Definitely respond

c) Only one will respond

d) May be respond

81. If the speed of all axles is Different in a coach during the emergency braking the dump valve will respond

a) Whole the rake

b) All dump valve of the coach

c) Particular dump valve of the coach

d) None of these

82. The correct action of axle box feeling by manually is

a) Hold the bare hand on the axle box for 5 minutes

b) Hold the bare hand on the axle box for some times

c) Instant touching of axle box by bare hand

d) All of above

83. If only one wheel set is required to change the correct action will be -

a) Roll out the both trolley

b) Roll out the affected trolley

c) Lift the coach with trolley

d) Dismantle the wheel connections and Lift the coach with trolley

84. What can you do to avoid jamming of brake caliper?

a) Clean and lubricate the middle pin

b) Clean and lubricate the brake shoe

c) Periodic checks by rotate slack adjuster nut

d) All of above

85. The brake pads should be of same thickness on

a) Both caliper of one wheel set

b) All caliper of a trolley

c) Each caliper

d) All caliper of both trolley

86. If difference in thickness of brake pads is appear, the reason could be -

a) The brake pads fitted with different thickness purposely

b) The calliper is running in jam condition

c) The slack adjustment of brake cylinder is not proper

d) Any of the above

87. If the brake pads are wearing out in taper condition, the reason could be -

a) The brake pads fitted with taper thickness purposely

b) The caliper is running in jam condition

c) The mounting bush of caliper unit is perished or cracked

d) Any of the above

88. If heavy scratch marks are appears on brake disc, the reason could be -

a) The brake pads are worn out beyond condemning limit

b) The brake pads are missing

c) The foreign particle present between brake pads

d) All of above

89. If the brake pads are wearing out in taper condition, the correct action will be -

a) Allow the brake pads in same condition

b) Replace the brake pads immediately

c) Replace the brake caliper unit immediately

d) None of these

99. If the drain cock of 125 ltr. Reservoir gets open or broken-

a) The brakes of whole rake will fail

b) The 75 ltr reservoir will also drain

c) The 75 ltr reservoir will not affect

d) All of above

91. If NRV of FP line is defective -

a) Both BP & FP will drain

b) Only 125 ltr reservoir will drain

c) Only 75 ltr reservoir will drain

d) Any of above

92. The NRV provided for -

a) To protect 125 ltr reservoir to drain

b) To protect 75 ltr reservoir to drain

c) To protect CR reservoir to drain

d) To protect 125,75 ltr reservoir & CR to drain

93. The yaw damper will be defective if -

a) Eyehole bush cracked badly

b) Any bolt is missing or broken

c) Damper badly leaky or physically damaged

d) All above

94. If one side yaw damper is Leakey -

a) It will affect the riding quality of coach

b) Coach may be tilted

c) Secondary spring may broken

d) All above

95. If Secondary vertical damper defective it will affect -

a) The quality of sec. suspension

b) The quality of riding index

c) The spring may breakage

d) Any of above

96. If secondary lateral damper got detective it will affect on-

a) The curve negotiation

b) The lateral movement of coach

c) The centre pivot suspension

d) Any of above

GO TO CONTENT

ANSWERS

MAINTENANCE SCHEDULE

1. How many Maintenance Schedule are generally done in primary Maintenance Depot.

   a) One b) Two

   c) Three d) None

2. Frequency of D1 Schedule is -

   a) On Every Trip b) 7 days

   c) 15 days d) 30 days

3. Frequency of D2 Schedule is -

   a) 7 days± 1 day b) 10 days± 1 day

   c) 15 days± 1 day d) 30 days± 3 day

4. Frequency of D3 Schedule is -

   a) 1 month± 1 day b) 3 month ± 3 day

   c) 6 month ± 15 day d) 9 month ± 3 day

5. Intensive cleaning of coaches should be done in -

   a) D1 Schedule b) D2 Schedule

   c) D3 Schedule d) D1, D2 & D3

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6. Inspection of vestibule and its rubber fitting for damage is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

7. Thoroughly cleaning and removing dust, rust accumulated at pillars is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

8. Examination of sole bar for corrosion is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

9. Touching up damaged paint inside and outside in -

a) D1 Schedule b) D2 Schedule

c) D2 & D3 Schedule d) D3 Schedule

10. Checking of bogie bolster assembly and bracket etc in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

11. Washing of bogie frame thoroughly with water jet in -

a) D1 Schedule b) D2 Schedule

c) D2 & D3 Schedule d) D3 Schedule

12. Checking of functionality of brake equipment and hand brake equipment in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

13. Carrying out of functional test on pneumatic brake system in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

14. Checking of air hoses is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

15. Verifying the clearance between each pad and disc surface in -

a) D1 Schedule b) D2 Schedule

c) D3 Schedule d) D2 & D3

16. Inspection of earthing equipment for wear of carbon bars -

a) D1 Schedule b) D2 Schedule

c) D3 Schedule d) D2 & D3

17. Checking of crack, damage of spring is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

18. Checking of dampers its rubber elements is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

19. Checking of bearing for hot and grease leakage is done in-

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

20. Checking of wheel profile gauge is done in

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

21. Inspection of Rotation Limiter is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

22. Checking of tread diameter and wear of wheel profile is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

23. Inspection of grease oozing out of anti roll bar bearing is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

24. Lubrication of all pins and bushes is done in -

a) D1 Schedule b) D2 & D3 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

25. Inspection of coupler head, knuckle for damage is checked in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

26. Checking of tell tale recess for ensuring proper coupling is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

27. Checking of corridor connection for external damage and entry of foreign bodies is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

28. Cleaning of Air Filter is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D2 & D3 Schedule

29. Draining of Air tank is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

30. Inspection of seats, Luggage rack etc. is done in -

a) D1 Schedule b) D2 & D3 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

31. Inspection of Leaf of sliding door is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

32. Lubrication of door seals with silicon paste is done in -

a) D1 Schedule b) D2 Schedule

c) D1, D2 & D3 Schedule d) D3 Schedule

33. What is SS-I?

a) Shop Superintendent-I b) Shop Schedule-I

c) None of these d) All

34. Where shop schedule is carried out -

a) In primary depot b) In sick line

c) In work shops d) none

35. Frequency of SS-I is -

a) 18 month ± 30 days b) 20 months± 7 day

c) 24 months± 15 day d) D3 Schedule

36. With respect to Kms, Frequency of SS-I is -

a) 5 Lakh Kms b) 6 Lakh Kms

c) 10 Lakh Kms d) 12 Lakh Kms

37. Frequency of SS-II is -

a) 1 year b) 2 years

c) 3 years d) 5 years

38. With respect to Kms, Frequency of SS-II is -

a) 5 Lakh Kms b) 6 Lakh Kms

c) 10 Lakh Kms d) 12 Lakh Kms

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39. Frequency of SS-III is -

a) 2 years b) 3 years

c) 6 years d) 5 years

40. With respect to Kms, Frequency of SS-III is -

a) 10 Lakh Kms b) 15 Lakh Kms

c) 24 Lakh Kms d) 20 Lakh Kms

Appendix A

Different Type of LHB Coaches, Transportation Code, Weight and Number of Berths

S. N	TYPE OF COACH	CODE	No. of seat /berth	Weight in tons	
				Tare	Gross
1	AC FIRST CLASS SLEEPER- (EOG)	LWFAC	24	40.87	43.34
2	AC FIRST CLASS SLEEPER- (SG)	LWGFAC	24	45.90	50.70
3	AC SECOND CLASS SLEEPER- (EOG)	LWACCW	54	41.60	46.72
4	AC SECOND CLASS SLEEPER- (SG)	LWGACCW	54	48.00	55.04
5	AC THREE TIER CLASS SLEEPER- (EOG)	LWACCN	72	43.00	48.80
6	AC THREE TIER CLASS SLEEPER- LACCN (SG)	LWGACCN	72	50.50	58.50
7	AC DOUBLE DECKER AC CHAIR CAR (EOG)	ACCC DOUBLE DECKER	128	48.5	65
8	AC HOT BUFFET CAR	LWCBAC	18	42.20	48.20
9	NON AC SECOND CLASS GS	LS	100	35.29	50.49
10	NON AC SECOND CLASS THREE TIER–(SG)	LWGSCN	78	36.28	42.91
11	NON AC- LUGGAGE CUM GUARD VAN(SG)	LGSLR	36	35.40	44.50
12	AC CHAIR CAR EXECUTIVE CLASS	LWFCZAC	56	42.27	48.51
13	AC CHAIR CAR	LWSCZ AC	78	42.27	50.27
14	GENERATOR CUM LUGGAGE& BRAKE VAN	LWLRRM	5(4CREWS+ 1GUARD)	52.12	56.78

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GO TO CONTENT

ANSWERS: -

GENERAL

1.- (b) 2.- (c) 3.- (b) 4.- (a) 5.- (c) 6.- (a) 7.- (c) 8.- (b) 9.- (b)
10.- (c)11.- (b)12.- (c)13.- (b)14.- (b)15.- (c)16.- (c)17.- (b)18.- (b)
19.- (c)20.- (c)21.- (c)22.- (c)23.- (b)24.- (c)25.- (c)26.- (a)27.-(c)
28.- (c)29.- (c) 30.- (b)31.- (c)32.- (c)33.- (d) 34.- (b)35.-(c)36.- (d)
37.- (a)38.- (c)39.- (a)40.-41.- (b) 42.- (c)

COACH/SHELL

1.- (c) 2.- (a) 3.- (c) 4.- (a) 5.- (b) 6.- (b) 7.- (c) 8.- (a) 9.- (b)
10.-(d) 11.- (c)12.- (a)13.- (d)14.- (b)15.- (c)

BRAKE SYSTEM

1.- (b) 2.- (c) 3.- (a) 4.- (b) 5.- (a) 6.- (b) 7.- (b) 8.- (c) 9.- (b)
10.- (b)11.- (a)12.- (b)13.- (a)14.- (b)15.- (c)16.- (c)17.- (b)18.- (c)
19.- (c)20.- (b)21.- (b)22.- (b)23.- (b)24.- (a)25.- (c)26.- (c)27.- (b)
28.- (d)29.- (a)30.- (c)31.- (a)32.- (c)33.- (a)34.- (b)35.- (c)36.- (c)
37.- (a)38.- (d)39.- (b)40.- (d)41.- (c)42.- (d)43.- (c)44.- (a)45.- (c)
46.- (c)47.- (c)48.- (b)49.- (b)50.- (c)51.- (b)52.- (a)53.- (b)54.- (a)
55.- (b)56.- (b)57.- (b)58.- (b)59.- (b)60.- (b)61.- (b)62.- (a)63.- (b)

GO TO CONTENT

64.- (b)65- (b) 66.- (a)67.- (b)68.- (a)69.- (b)70.- (d)71.- (b)72.- (b)
73.- (a)74.- (b)75.- (d)76.- (b)77.- (b)78.- (b)79.- (c)80.- (a)81.- (c)
82.- (c)83.- (d)84.- (b)85.- (c)86.- (b)87.- (a)88.- (d)89.- (d)90.- db)
91.- (d)92.- (a)93.- (a)94.- (d)95.- (a)96.- (c)97.- (d)98.- (c)99.- (a)
100.-(a) 101.- (b) 102.- (d) 103.-(a) 104.-(c). 105.- (b) 106.- (b) 107.-
(b) 108.- (c) 109.- (d) 110.- (a) 111.- (d) 112.- (d) 113.- (c) 114.- (a)
115.- (b) 116.- (a) 117.- (a) 118 - (b) 119.- (d) 120.- (a) 121.- (c)
122.- (c) 123.- (d) 124.- (d) 125.- (c) 126.- (d)

COUPLER/CBC

1.- (b) 2.- (c) 3.- (a) 4.- (c) 5.- (b) 6.- (a) 7.- (c) 8.- (a) 9.- (c)
10.- (b)11.- (b)12.- (c)13.- (c)14.- (a)15.- (b)16.- (c)17.- (a)18.- (b)
19.- (c)20.- (b)21.- (b)22.- (b)23.- (a)

WRA & CDTS

1.- (c) 2.- (b) 3.- (c) 4.- (b) 5.- (a) 6.- (b) 7.- (d) 8.- (b) 9.- (a)
10.- (b)11.- (c)12.- (c)13.- (c)14.- (c)15.- (c)16.- (a)17.- (c)18.- (c)
19.- (a)20.- (c)21.- (c)

SUSPENSION & MISCELLANEOUS QUESTIONS

1.- (b) 2.- (b) 3.- (a) 4.- (b) 5.- (b) 6.- (b) 7.- (b) 8.- (b) 9.- (a)

GO TO CONTENT

10.- (c)11.- (b)12.- (a)13.- (b)14.- (d)15.- (b)16.- (a)17.- (b)18.- (a)
19.- (a)20.- (b)21.- (b)22.- (b)23.- (b)24.- (a)25.- (b)26.- (b)27.- (b)
28.- (a)29.- (c)30.- (c)31.- (b)32.- (b)33.- (d)34.- (c)35.- (b)36.- (b)
37.- (d)38.- (d)39.- (d)40.- (c)41.- (a)42.- (a)43.- (d)44.- (b)45.- (b)
46.- (a)47.- (b)48.- (b)49.- (c)50.- (c)51.- (b)52.- (a)53.- (c)54.- (a)
55.- (a)56.- (a)57.- (d)58.- (c)59.- (d)60.- (c)61.- (c)62.- (a)63.- (c)
64.- (c)65- (a) 66.- (b)67.- (b)68.- (d)69.- (d)70.- (a)71.- (d)72.- (c)
73.- (a)74.- (c)75.- (c)76.- (d)77.- (c)78.- (b)79.- (b)80.- (b)81.- (b)
82.- (d)83.- (d)84.- (d)85.- (d)86.- (d)87.- (c)88.- (c)89.- (d)90.- (a)
91.- (c)92.- (d)93.- (d)94.- (b 95.- (d)96

MAINTENANCE SCHEDULE

1.- (c) 2.- (a) 3.- (a) 4.- (c) 5.- (d) 6.- (c) 7.- (d) 8.- (d) 9.- (a)
10.- (c)11.- (c)12.- (c)13.- (c)14.- (c)15.- (d)16.- (d)17.- (c)18.-(c)
19.- (c)20.- (c)21.- (c)22.- (d)23.- (c)24.- (b)25.- (c)26.- (c)27.-(c)
28.- (d)29.- (c)30.- (b)31.- (c)32.- (d)33.- (b)34.- (c)35.- (a)36.-(b)
37.- (c)38.- (d)39.- (c)40.- (c)

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OUR OBJECTIVE

To upgrade maintenance technologies and methodologies and achieve improvement in productivity and performance of all Railway assets and man power which inter-alia would cover reliability, availability, utilisation and efficiency.

If you have any suggestions and any specific comments, please write to us.

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