Equipments and Tools of welders

1. Before welding, alignment of rail ends shall be measured by using [d]

   a) 10 cm straight edge b) 50 cm straight edge

   c) 75 cm straight edge d) 1 m straight edge

2. Finished weld tolerances are measured by using [d]

   a) 10 cm straight edge b) 50 cm straight edge

   c) 1 m straight edge d) Both 10 cm and 1m straight edge

3. For thermal plugging _____ tool is used [d]

   a) 1 m straight edge b) 2 m straight edge

   c) Tapping rod d) Aluminium/steel rod

4. For tapping of weld metal in to the weld gap _____ tool is used [a]

   a) Tapping rod b) Cleaning rod c) 1 m straight edge d) None

5. For crucible cleaning _____ tool is used [b]

   a) Tapping rod b) Cleaning rod round c) 1 m straight edge d) None

6. In CAP system, life of tapping rod, in terms of no. of joints [c]

   a) 250 b) 500 c) 1000 d) 1250

7. Gap between rail ends shall be checked by _____ [c]

   a) Metric scale b) Filler gauge c) Gap gauge d) Tapered gauge

8. For measuring wear of CMS crossing _____ tool is used [a]

   a) Filler gauge b) Gap gauge c) Tapered gauge d) Metric scale

9. _____ tool is used for during hole marking in the rail [d]

   a) L square b) Steel Marker c) Tool for punching d) All the above

10. _____ tool is used during welding [b]

    a) Gauge cum level b) Stop watch c) Measuring tape d) Metric scale

11. Instrument used to check preheating temperature of Rail ends during AT welding [b]

    a) Contact type pyrometer b) Optical pyrometer

    c) Temperature indicating crayons d) All the above

12. In AT welding technique, wooden wedges are used for [a]

    a) Rail alignment b) measuring weld gap c) Cleaning of crucible d) None

13. Magnifying glass is used for [d]

a) To indentify cracks in bottom flange of rail b) To indentify bolt hole cracks in rail

c) To detect the cracks at rail ends d) all the above

14. For trimming of excess weld metal, what tool is used for when weld trimmer is not working [c]

a) Hot sets (chisels) b) Sledge Hammer double panel 5 kg

c) Both a & b d) none of the above

15. _____ is used For loosen and removing of fish bolts and fish plates [a]

a) Spanner b) Crow bar c) Wire claw d) Tommy bar

16. _____ is used for rail ends cleaning during welding [c]

a) Steel wire brush b) kerosene oil c) Both a & b d) Wire claw

17. _____ tools should be available with welder [d]

a) Funnel tin (for pouring petrol) b) Adjustable spanner

c) Hose clips d) All the above

18. For personnel safety _____ tools should be available with welder [d]

a) First aid box b) Blue goggles c) Asbestos gloves d) All the above

19. In CAP system, life of asbestos gloves, in terms of no. of joints [b]

a) 250 b) 500 c) 1000 d) Not specified

20. _____ tools should be available with welder [d]

a) Pliers b) Rail file 350 × 40 × 6 mm c) Slag container d) All the above

21. _____ Is used for collecting over flowing slag during welding [a]

a) Slag container (bowl) b) Mortar pan c) Mould shoes d) None

22. In CAP system, life of slag container (bowl), in terms of no. of joints [b]

a) 250 b) 500 c) 1000 d) Not specified

23. For rail preparation, Best quality cutting can be obtained by_____. [c]

a) Hand cutting machine b) Hacksaw blade

c) Abrasive disc cutter d) Any RDSO approved blade

24. Minimum time required for performing single cut with abrasive rail cutter is____ minutes [a]

a) 5 b) 10 c) 15 d) 20

25. Minimum time required for performing two cuts with abrasive rail cutter is____ minutes [c]

a) 20 b) 15 c) 10 d) 25

26. Minimum time required for performing single cut with hacksaw blade is ____ minutes

a) 20 b) 15 c) 10 d) 25 [a]

27. Minimum time required for performing two cuts with hacksaw blade is ____ minutes

a) 20 b) 30 c) 40 d) 50 [c]

28. Bends in rail, shall be rectified by using _____. [a]

a) Jim crow b) Rail tensor c) mechanical jack d) Hydraulic jack

29. In AT welding short preheating is done by [d]

a) Compressed air petrol b) Air - Petrol c) OXY – LPG d) All the above

30. CAP stands for [a]

a) Compressed Air Petrol b) Compressed Atmosphere pressure

c) Composite Air Petrol d) None of the above

31. In CAP system, life of compressor system with pressure gauges complete, in terms of no. of joints [d]

a) 200 b) 300 c) 400 d) 500

32. In CAP system, life of torch (burner) complete, in terms of no. of joints [b]

a) 200 b) 300 c) 400 d) 500

33. In CAP system, life of torch (burner) keys, in terms of no. of joints [d]

a) 200 b) 300 c) 400 d) 500

34. In CAP system, life of torch (burner) stand, in terms of no. of joints [d]

a) 200 b) 500 c) 800 d) 1000

35. In CAP system, life of goose neck attachment to vaporizer, in terms of no. of joints

a) 50 b) 100 c) 150 d) 200 [a]

36. In AT welding _____equipment is used for pouring of portion in to the weld gap [b]

a) Mortar pan b) Crucible c) Slag container (bowl) d) None of the above

37.

n CAP system, life of crucible complete - crucible shell and crucible lining, in terms of no. of joints [c]

a) 100 & 10 b) 250 & 25 c) 500 & 50 d) 600 & 60

38. The latest development in crucible used for reaction of portion for AT welding of rails is [a]

a) Single shot crucible b) double shot crucible

c) Multi shot crucible d) none of these

39. In AT welding _____ is used for safe fixing of three piece pre fabricated moulds [b]

a) Plastic mould shoes b) Iron mould shoes

c) Aluminum mould shoes d) None of these

40. In CAP system, life of mould shoes, in terms of no. of joints [a]

a) 100 b) 150 c) 200 d) 250

41. In CAP system, life of weld trimmer (cutter), in terms of no. of joints [b]

a) 50 b) 100 c) 150 d) 200

42. In CAP system, life of rail profile guided grinding trolley (grinding wheel), in terms of no. of joints [a]

a) 50 b) 100 c) 150 d) 200

43. Fuel tank capacity of abrasive rail cutter shall be at least [a]

a) 1 Litre b) 1.5 Litre c) 2 Litre d) 0.5 Litre

44. While cutting rails with abrasive rail cutting wheel the vertical/lateral tolerance for squareness on face of rail heads of cut shall not be more than [b]

a) ± 0.5 mm b) ± 1.0 mm c) ± 1.5 mm d) ± 1.75 mm

45. Minimum number of cuts to be given by each abrasive rail cutting disc for 60kg 90 UTS rail section are [c]

a) 4 b) 5 c) 6 d) 7

46. Minimum number of cuts to be given by each abrasive rail cutting disc for 52kg 90 UTS rail section are [a]

a) 7 b) 6 c) 5 d) 4

47. Cutting time of cut using abrasive rail cutting wheel for 52 kg 90 UTS rail section is _____ minutes [c]

a) 4 b) 4.5 c) 3 d) 5

48. Cutting time of cut using abrasive rail cutting wheel for 60 kg 90 UTS rail section is _____ minutes [a]

a) 4 b) 4.5 c) 5 d) 6

49. Cutting time of cut using abrasive rail cutting wheel for 60 kg 110 UTS rail section is _____ minutes [c]

a) 4 b) 4.5 c) 5 d) 6

50. Nominal size of diameter of abrasive rail cutting wheel is [a]

a) 400 x 4 x 22.23 mm b) 400 x 3 x 22.24 mm

c) 400 x 3.5 x 2.23 mm d) 400 x 3.5x 22.23 mm

51. Maximum overall weight of abrasive rail cutter shall be [d]

a) 30 Kgs b) 40 Kgs c) 25 Kgs d) 35 Kgs

52. Fixing time of rail clamp and the abrasive rail cutter is [a]

a) within 01 minute b) within 1.5 minute c)within 2.0 minute d) within 2.5 minute

53. Abrasive rail cutter, prime mover is petrol engine of _____ [a]

a) 7HP at 7000 rpm b) 7HP at 5000 rpm

c) 5HP at 7000 rpm d) 5HP at 5000 rpm

54. Approximately operating speed of the abrasive rail cutting disc [b]

a) 4700 rpm b) 4800 rpm c) 4900 rpm d) 5000 rpm

55. Minimum Man power required to operate abrasive rail cutter is [c]

a) 2 – Both skilled b) 2 – Both unskilled

c) 2 – One skilled and one unskilled d) All the above

56. Approximate weight of rail drilling machine is [d]

a) 50 kgs b) 55 kgs c) 60 kgs d) 65 kgs

57. Approximate drilling time to drill hole with rail drilling machine in 60 kg 90 UTS rail is

a) 3.5 to 5 minutes b) 4 to 5 minutes c) 3 to 4 minutes d) 3.5 to 4.5 minutes [c]

58. Fixing time of rail clamp and the hole drilling machine is [c]

a)within 01 minute b)within 1.5 minute c)within 2.0 minute d)within 2.5 minute

59. Rail drilling machine drill spindle rotation shall be between [b]

a) 50 to 80 rpm b) 60 to 90 rpm c) 60 to 80 rpm d) 50 to 90 rpm

60. Fuel tank capacity of rail drilling machine shall be at least [c]

a) 1 Litre b) 1.5 Litre c) 2 Litre d) 0.5 Litre

61. Minimum Fuel consumption of rail drilling machine shall be_____ number of holes in 01 litre on 60 kg 90 UTS rail section [d]

a) 12 b) 14 c) 08 d) 10

62. No. of holes that can be drilled by a rail drilling machine in a day is___approximately.

a) 30 b) 45 c) 60 d) 90 [c]

63. The tolerance for the diameter and position of the hole drilled with rail drilling machine shall be [a]

a) ± 0.7 mm b) ± 0.65 mm c) ± 0.6 mm d) ± 0.5 mm

64. Drill bit shall last for _____ number of fish bolt holes in 60 kg 90 UTS rail section [b]

a) 80 b) 100 c) 90 d) 110

65. Minimum Man power required to operate rail hole drilling machine is [a]

a) 2 – One skilled and one unskilled b) 2 – Both unskilled

c) 2 – Both skilled d) All the above

66. The standard diameter of fish bolt on BG is [c]

a) 24 mm b) 30 mm c) 25 mm d) 22 mm

67. Size of drill bit used for normal fish bolt holes is [b]

a) 31.50 mm b) 31.75 mm c) 32 mm d) all the above

68. Size of drill bit used for traction bond bolt holes in 60 kg rail section [d]

a) 16 mm b) 16.50 mm c) 17 mm d) 17.50 mm

69. Chamfering of bolt holes is done to [d]

a) delay formation of star cracks b) Hardens the periphery of holes

c) Increase fatigue life of rail at the hole d) all the above

70. The torque wrench in champhering kit shall be able to provide a minimum torque of

a) 52 kg-m b) 54 kg-m c) 56 kg-m d) 58 kg-m [a]

71. Minimum Man power required to operate champhering kit is [a]

a) 2 – One skilled and one unskilled b) 2 – Both unskilled

c) 2 – Both skilled d) All the above

72. For welding In LWR/CWR territory, _____ should be used for maintaining correct rail gap during cold weather condition. [a]

a) Rail tensor b) Tirfor c) mechanical jack d) None of the above

73. Maximum pulling force for hydraulic rail tensor is [a]

a) 70 T b) 85 T c) 65 T d) 80 T

74. Maximum pushing force for hydraulic rail tensor is [d]

a) 25 T b) 20 T c) 35 T d) 30 T

75. Hydraulic rail tensor shall provide a extension of _____ for 52 and 60 kg rail section

a) 200 mm b) 150 mm c) 250 mm d) 300 mm [b]

76. Total weight of hydraulic rail tensor including hand pump is [a]

a) 375 kgs b) 350 kgs c) 380 kgs d) 385 kgs

77. Minimum Man power required to operate hydraulic rail tensor is [b]

a) 4 – Two skilled and Two unskilled b) 4 – One skilled and Three unskilled

c) 4 – Three skilled and one unskilled d) All the above

78. Grinding stone of rail profile grinder is _____ shape [b]

a) Oblique b) Conical c) Cylindrical d) All the above

79. In double action weld trimmer the two shear blades of trimming unit travel towards each other by [c]

a) Mechanical force b) Pneumatic force c) Hydraulic force d) All the above

80. Maximum weight of double action weld trimmer is [a]

a) 175 kgs b) 180 kgs c) 185 kgs d) 190 kgs

81. Double action weld trimmer is also provided with emergency _____ device which can be used in case of failure for trimming. [a]

a) Hand pump b) Hydraulic pump c) Mechanical pump d) Pneumatic pump

82. In double action weld trimmer prime mover is. [c]

a) Petrol start, petrol run only b) Petrol start, kerosene run only

c) Petrol start, petrol/kerosene run d) Hydraulic

83. Tolerance achieved on top of rail head with weld trimmer before grinding [d] a) + 1.5 mm to + 2.0 mm b) + 1.0 mm to + 1.5 mm

c) + 0.5 mm to + 1.0 mm d) + 0.5 mm to + 1.5 mm

84. Tolerance achieved on side width of rail head with weld trimmer before grinding a) + 1.5 mm to + 2.0 mm b) + 1.0 mm to + 2.0 mm [b]

c) + 1.0 mm to + 1.5 mm d) + 0.5 mm to + 1.5 mm

85. In double action weld trimmer ensure the gap between cutting heads in fully Extended position as [c]

a) + 1.5 mm to + 2.0 mm b) + 1.0 mm to + 1.5 mm

c) + 0.5 mm to + 1.0 mm d) + 0.5 mm to + 1.5 mm

86. In double action weld trimmer, trimming time is approximately _____ for Different rail sections [b]

a) 1 to 2 minutes b) ½ to 1 minutes c) 1 to 1.5 minutes d) 1.5 to 2 minutes

87. In double action weld trimmer clean the cutting tool edge of shear blades after [a]

a) Every cut b) Every two cuts c) Every Four cuts d) once in a day

88. In double action weld trimmer remove the cutting heads when the [a]

a) Ram is fully contracted b) Ram is fully extended c) Both a & b d) None

89. Double action weld trimmer to be used on [b]

a) Cold weld b) Hot weld c) Both a & b d) Not specified

90. Double action weld trimmer is provided with nylon wheels without flanges to enable the machine to move on [d]

a) Cess b) Plain surface c) Rail surface d) Both a & b

91. Daily schedule check for maintenance of weld trimmer is [d]

a) Cutting head edge is fitted with correct edge to suit rail section

b) Cutting edge is sharp and clean

c) Check cutting edge is free from any defect d) All the above

92. Weekly schedule check for maintenance of weld trimmer is [d]

a) Cutting head edge is fitted with correct edge to suit rail section

b) Check condition of hydraulic hoses and pipes for any sign of damage.

c) Check hydraulic oil level in tank. d) Both b & c

93. Quarterly schedule check for maintenance of weld trimmer is [b]

a) At every 200 hrs running or 3 months whichever earlier

b) At every 250 hrs running or 3 months whichever earlier

c) At every 275 hrs running or 3 months whichever earlier

d) At every 300 hrs running or 3 months whichever earlier

94. Slow movement of ram in weld trimmer is due to [d]

a) Less delivery from pump. b) Direction control valve not shifting fully

c) Low setting or any defect in relief valve. d) All the above

95. Insufficient trimming force in weld trimmer is due to [c]

a) Internal oil leakage due to wear in pump b) Leakage through cylinder.

c) Pump not delivering hydraulic oil. d) All the above

96. Minimum Man power required to operate weld trimmer is [a]

a) 2 - One skilled and one unskilled b) 2 – Both unskilled

c) 2 – Both skilled d) All the above

97. Pump making unstable pressure in weld trimmer is due to [d]

a) Pump not delivering oil b) Relief valve not working properly

c) Air leak in suction line d) Both a & b

98. Maximum weight of rail profile grinder including generator is [a]

a) 80 Kgs b) 75 Kgs c) 65 Kgs d) 50 Kgs

99. Maximum grinding time for grinding of AT weld with rail profile grinder [b]

a) 20 minutes b) 15 minutes c) 10 Minutes d) 12 minutes

100. Minimum Man power required to operate rail profile weld grinder is [c]

a) 2 – Both skilled b) 2 – Both unskilled

c) 2 – One skilled and one unskilled d) All the above

101. One metre straight edge is used for [d]

a) Check the vertical and lateral tolerances

b) Aligning the rail ends both laterally and vertically

c) Check the straightness of rail ends d) All the above

Electrodes and Reconditioning of Points and Crossings

102. ____ series of electrodes, duly approved by RDSO are to be used for reconditioning of points and crossings [d]

a) A2 b) E2 c) MS d) HS

103. Points and Crossings containing cracks on the worn-out portion having depth more than _____ beyond the condemning size shall not be selected for further reconditioning [b]

a) 2 mm b) 3 mm c) 3.5 mm d) 4 mm

104. CMS crossing should be planned for reconditioning before reaching maximum vertical wear limit on Rajdhani/shatabdi routes [c]

a) 10 mm b) 9 mm c) 8 mm d) 6 mm

105. CMS crossing should be planned for reconditioning before reaching maximum vertical wear limit on other than Rajdhani/shatabdi routes [a]

a) 10 mm b) 9 mm c) 8 mm d) 6 mm

106. Minimum service life achieved after carrying out reconditioning of points and crossings with H3 series electrodes is [a]

a) 15 GMT b) 20 GMT c) 25 GMT d) 30 GMT

107. Minimum service life achieved after carrying out reconditioning of points and crossings with H3A series electrodes is [c]

a) 15 GMT b) 20 GMT c) 25 GMT d) 30 GMT

108. Minimum service life achieved after carrying out reconditioning of points and crossings with H3B series electrodes is [b]

a) 30GMT b) 35 GMT c) 40 GMT d) 50 GMT

109. Minimum service life achieved after carrying out reconditioning of points and crossings with H3C series electrodes is [c]

a) 40 GMT b) 45 GMT c) 50 GMT d) 55 GMT

110. Minimum service life achieved after carrying out CMS crossing reconditioning with Translamatic robotic welding technique is [d]

a) 50 GMT b) 60 GMT c) 70 GMT d) 80 GMT

111. Preferably _____ grinders are used during reconditioning of points and crossings

a) Angle grinder b) Straight grinder c) Both a and b d) None [c]

112. All electrodes shall be consumed within _____ after opening of packing [b]

a) 4 Hrs b) 6 Hrs c) 8 Hrs d) 10 Hrs

113. After opening of packing if the electrodes are not consumed they should be dried in the electrical oven at 130-170°C for at-least _____ immediately before use [c]

a) 30 minutes b) 45 minutes c) 60 minutes d) 75 minutes

114. Diameter of electrode in depot/cess reconditioning is [d]

a) 3 mm b) 3.15 mm c) 3.75 mm d) 4 mm

115. The tongue rail should be pre-heated by oxy-acetylene flame to a temperature between _____ before reconditioning [a]

a) 250 to 300°C b) 200 to 300°C c) 275 to 300°C d) 225 to 300°C

116. In case of CMS crossing before carrying reconditioning pre heating is _____ [b]

a) Required b) Not required c) Both a & b d) None of the above

117. Competency for departmental welder for carrying out welding with electrode technique is issued by [d]

a) Chemist and metallurgist of the railway b) Officer nominated by PCE of railway

c) RDSO d) Both a& b

118. Competency for private welder for carrying out welding with electrode technique is issued by [c]

a) Chemist and metallurgist of the railway b) Officer nominated by PCE of railway

c) RDSO d) Both a& b

119. Validity of competency certificate issued to welder for carrying welding with single electrode technique is [a]

a) 5 years b) 4 years c) 3 years d) 2 years

120. Weld metal deposited during reconditioning with single electrode technique, shall be _____ excess than parent rail top table [b]

a) 2 mm b) 3 mm c) 3.5 mm d) 4 mm

121. CMS crossing reconditioning with single electrode technique welding cycle should not be more than _____ minutes at a time [d]

a) 3.5 b) 3 c) 2.5 d) 2

122. CMS crossing reconditioning with single electrode technique temperature in adjoining areas should be less than [c]

a) 100° C b) 130° C c) 150° C d) 170° C

123. During reconditioning of CMS crossing with single electrode technique to control the temperature in adjoining areas it shall be kept submerged in water in such a way that only top ____ remains above water [b]

a) 05 mm b) 10 mm c) 15 mm d) 20 mm

124. CMS crossing reconditioning with single electrode technique length of metal deposit shall not be more than _____ at a time [a]

a) 7-8 cm b) 8-9 cm c) 9-10 cm d) 10-12 cm

125. The electrode to be kept at ____ angle to the direction of welding with single electrode technique [c]

a) 30° b) 40° c) 45° d) 50°

126. Width of welding in case of CMS crossing reconditioning with single electrode technique should be _____ of diameter of electrode. [b]

a) same b) Double c) Three times d) Four times

127. In translamatic robotic welding technique for reconditioning of CMS crossing special core fluxed filler wire electrodes of _____ diameter are used [d]

a) 1.3 mm b) 1.4 mm c) 1.5 mm d) 1.6 mm

128. In translamatic robotic welding technique temperature shall not be more than ____ before laying every bead [b]

a) 90° C b) 100° C c) 110° C d) 120° C

129. Wear should be measured at ___ locations before and after reconditioning of crossing [d]

a) 03 b) 4 c) 6 d) 10

130. Wear should be measured at ___ locations on each wing rail before and after reconditioning of crossing [b]

a) 03 b) 4 c) 6 d) 10

131. Wear should be measured at ___ locations on V rail before and after reconditioning of crossing [a]

a) 02 b) 03 c) 04 d) 01

132. Wear should be measured at two locations at a distance of from ANC on V rail before and after reconditioning of crossing [b]

a) 9 & 180 mm b) 100 & 200 mm c) 0 & 90 mm d) 0 & 100 mm

133. Tongue rail wear is to be measured at _____ locations starting from one of the toe to the places at every _____ towards heel before and after reconditioning [c]

a) 6, 75 mm b) 6, 100 mm c) 7, 100 mm d) 7, 75 mm

134. In the interest of safety and enhancement of life of reconditioned CMS crossing SR of [a]

a) 30 kmph for 2 days b) 30 kmph for 3 days

c) 30 kmph for 4 days d) 30 kmph for 5 days

135. In the interest of safety and enhancement of life of reconditioned CMS crossing SR of 30 kmph for 2 days and _____ [b]

a) 50 kmph for 2 days b) 50 kmph for 3 days

c) 50 kmph for 4 days d) 50 kmph for 5 days

136. During reconditioning CMS crossing grinding wheel to be moved back and forth and not stop at one point to avoid high _____ [a]

a) Localised heating b) Central heating c) Both a & b d) None of the above

137. In case of CMS crossing, number of reconditioning cycles to be restricted to a maximum of _____ [c]

a) 1 no. b) 2 no.s c) 3 no.s d) 4 no.s

138. In case of CMS crossing 52 kg following to be deducted from observed vertical wear to find out actual wear due to 1 in 20 cant slope given in wing rail. [d]

a) 3.5 mm b) 3 mm c) 2.5 mm d) 2.0 mm

139. In case of CMS crossing 60 kg following to be deducted from observed vertical wear to find out actual wear due to 1 in 20 cant slope given in wing rail. [c]

a) 3.5 mm b) 3 mm c) 2.5 mm d) 2.0 mm

140. As approved by RDSO, technology for in situ reconditioning of CMS crossing, has to give minimum service life of _____ [d]

a) 25 GMT b) 35 GMT c) 50 GMT d) 80 GMT

Arc welding and Gas welding

141. What is the engine capacity portable D.C. welding generator? [a]

a) 15 HP b) 20 HP c) 25 HP d) 30 HP

142. In portable D.C. welding generator prime mover is [d]

a) Petrol start, petrol run only b) Petrol start, kerosene run only

c) Petrol start, petrol/kerosene run d) Petrol start, petrol/diesel/kerosene run

143. In portable D.C. welding generator range of welding current [c]

a) 20 to 80 amp b) 30 to 60 amp c) 60 to 200 amp d) 200 to 350 amp

144. In portable D.C. welding generator maximum welding current shall not be less than

a) 60 amp at 60% duty cycle b) 100 amp at 60% duty cycle [d]

c) 150 amp at 60% duty cycle d) 200 amp at 60% duty cycle

145. In portable D.C. welding generator one duty cycle consist of _____ [a]

a) 5 minutes b) 10 minutes c) 15 minutes d) 20 minutes

146. In portable D.C. welding generator one duty cycle 5 minutes consist of _____ [c]

a) 1 minutes welding load and 4 minutes no welding load

b) 2 minutes welding load and 3 minutes no welding load

c) 3 minutes welding load and 2 minutes no welding load

d) 4 minutes welding load and 1 minutes no welding load

147. Weight of portable D.C. welding generator is [c]

a) 50 kgs b) 100 kgs c) 150 kgs d) 200 kgs

148. In reconditioning of points and crossing by arc welding, porosity is due to [d]

a) Welding speed too high and too low or too high welding current.

b) Dirty surface and damp or caked electrode coating.

c) Higher sulphur content in parent metal and arc length too short or long

d) All the above.

149. In reconditioning of points and crossing by arc welding, cracks is due to [d]

a) Welding speed too high poor, ductility and high S% and C% in base metal.

b) Rapid cooling or high restraint and improper joint design/preparation.

c) Electrodes with high hydrogen and base metal have oil, grease, rust or moisture.

d) All the above.

150. For AT welding with Oxy- LPG technique for pre heating of rails, oxygen pressure should be maintained in the range of [c]

a) 2.0 to 4.0 kg/cm² b) 4.0 to 7.0 kg/cm² c) 7.0 to 8.0 kg/cm² d) 8.0 to 9.0 kg/cm²

151. For AT welding with Oxy- LPG technique for pre heating of rails, LPG pressure should be maintained in the range of [a]

a) 2.0 to 2.5 kg/cm² b) 2.5 to 3.0 kg/cm² c) 3.0 to 4.0 kg/cm² d) 4.0 to 5.0 kg/cm²

152. Preheating time would be about _____ minutes for 52/60kg rail with Oxy – LPG preheating technique. [a]

a) 2.0 to 2.5 b) 2.5 to 3.0 c) 3.0 to 4.0 d) 4.0 to 4.5

153. After fixing and luting of moulds for AT welding the rail ends are heated to a desirable temperature of [a]

a) 600 ± 20°C b) 700 ± 20°C c) 800 ± 20°C d) 1000 ± 20°C

Building up of Rail Ends and AT Welding

154. The height of 60kg rail is _____mm [c]

a) 142.9 b) 156 c) 172 d) none of these

155. The height of 52kg rail is _____mm [b]

a) 142.9 b) 156 c) 172 d) none of these

156. The flange width of 52kg rail is? [c]

a) 150 mm b) 136.5mm c) 136 mm d) 172 mm

157. The flange width of 60kg rail is _____mm [b]

a) 136 b) 150 c) 172 d) none of these

158. The head width of 52kg rail is _____mm [b]

a) 61 b) 67 c) 72 d) 74

159. The head width of 60kg rail is _____mm [c]

a) 61 b) 67 c) 72 d) 76

160. The web thickness of 52kg rail is _____mm [c]

a) 16.9 b) 16.5 c) 15.5 d) 15.0

161. The web thickness of 60kg rail is _____mm [b]

a) 16.9 b) 16.5 c) 15.5 d) 15.0

162. What is the cross sectional area in sq.mm of 52 kg IRS rail? [c]

a) 5250 b) 5895 c) 6615 d) 7686

163. What is cross sectional area in sq.mm of 60 kg UIC rail? [d]

a) 5250 b) 5895 c) 6615 d) 7686

164. The total GMT which 52kg 90UTS can carry is? [c]

a) 350 b) 450 c) 525 d) 800

165. The total GMT which 60kg 90uts can carry route not covered by rail grinding is? [d]

a) 350 b) 450 c) 525 d) 800

166. The total GMT which 60kg 90uts can carry routes covered by rail grinding is? [d]

a) 525 b) 550 c) 800 d) 1000

167. Actual weight of 60kg(UIC) rail per metre is [c]

a) 60 kg b) 60.89 kg c) 60.34 kg d) 60.14

168. Actual weight of 52kg rail per metre is [b]

a) 52kg b) 51.80 kg c) 52.80 kg d) 52.14 kg

169. Latest RDSO rail specification for class I rails is [c]

a) IRS T-12-98 b) IRS T-12-2006 c) IRS T-12-2009 d) IRS T-12-2012

170. Grade 90UTS is equivalent to [b]

a) 710MPa b) 880MPa c) 900MPa d) 1080MPa

171. Rolling mark of a rail is [d]

a) Branded on one side of web b) gives name of manufacturer

c) Repeated within 4 meters d) all the above

172. Selection of new rails for welding, 52/60kg head width tolerance is_____ [b]

a) ±0.4mm b) ±0.5mm c) ±0.6mm d) ±0.3mm

173. Selection of new rails for welding, 52/60kg height tolerance is_____ [c]

a) +0.6mm, 0.2mm b) +0.7mm, 0.3mm c) +0.8mm, 0.4mm d) +0.9mm, 0.5mm

174. Selection of new rails for welding, 52kg flange width tolerance is_____ [d]

a) ±0.4mm b) ±0.5mm c) ±0.8mm d) ±1.0mm

175. Selection of new rails for welding, 52/60kg web thickness tolerance is_____ [d]

a) +0.4mm, -0.2mm b) +0.6mm, -0.3mm c) +0.8mm, -0.4mm d) +1.0mm, -0.5mm

176. Obsolete rail sections and rails older than _____ years shall not, normally, be welded.

a) 20 b) 30 c) 40 d) 50 [d]

177. Rails shall be free from excessive wear; the minimum height of 52kg old rail shall not be less than_____mm. [a]

a) 150 b) 156 c) 163 d) 172

178. Rails shall be free from excessive wear; the minimum height of 60kg old rail shall not be less than_____mm. [c]

a) 150 b) 156 c) 163 d) 172

179. Rails shall be free from excessive wear; the minimum head width of 52kg old rail shall not be less than_____mm. [a]

a) 61 b) 66 c) 67 d) 72

180. Rails shall be free from excessive wear; the minimum head width of 60kg old rail shall not be less than_____mm. [b]

a) 61 b) 66 c) 67 d) 72

181. Before welding, the ends of second hand rails should be suitably cropped so as to eliminate_____. [d]

a) Fish bolt holes b) Heat affected zone

c) Battered & Hoggered ends d) All the above

182. Where Rails of different grades, i.e. 72UTS and 90UTS are to be welded together, the portion of _____ grade shall be utilised for welding. [b]

a) 72UTS b) 90UTS c) 110UTS d) None

183. Where Rails of different grades, i.e. 90UTS and 110UTS are to be welded together, the portion of _____ grade shall be utilised for welding. [c]

a) 72UTS b) 90UTS c) 110UTS d) None

184. Cropping of rail ends to eliminate Heat Affected Zone during repairing of AT weld fracture _____. [c]

a) 85 mm from centre of weld b) 100 mm from centre of weld

c) 150 mm from centre of weld d) 175 mm from centre of weld

185. To do AT welding, Rail ends having old welds and not having bolt holes, the ends to be cropped up to a distance ____from centre of old weld. [d]

a) 75 mm b) 100 mm c) 175 mm d) 150 mm

186. To do FB welding, Rail ends having old welds and not having bolt holes, the ends to be cropped up to a distance ____ from centre of old weld. [b]

a) 75 mm b) 85 mm c) 90 mm d) 100 mm

187. In case of repair of fractured rail/defective weld, the existing bolt holes should not fall within_____mm from cut faces. [a]

a) 40 b) 50 c) 83 d) 166

188. Training and certification of labour contracting firms welders and supervisors shall be done by_____ [c]

a) TPP/LKO b) TWTC/BZA c) RDSO/LKO d) IRICEN/PUNE

189. Training and certification of departmental welders and supervisors shall be done by_____ [a]

a) TPP/LKO or TWTC/BZA b) ZCETI'S c) RDSO/LKO d) IRICEN/PUNE

190. AT welding is a process that can be used for carrying out welding of rails [b]

a) In workshops only b) At site c) In factories only d) None of the above

191. Alumino thermit welding of rail ends is a process of [a]

a) Casting b) Forging c) Lapping d) None of the above

192. Advantages of welding of rail ends? [d]

a) Increases the rail life, decreases the maintenance expenditure

b) The noise id reduced, Provides greater comport to the passengers

c) Amount of expansion due to temperature variations is reduced

d) All the above

193. What is the fatigue strength of AT welding comparative to stipulated fatigue strength of the Parent Rail? [b]

a) 35% b) 56% c) 75% d) 100%

194. What is the fatigue strength of Flash butt welding comparative to stipulated fatigue strength of the Parent Rail? [c]

a) 56% b) 75% c) 90% d) 100%

195. The two rail ends to be welded shall be held in position with a uniform gap of [b]

a) 20 ± 1 mm b) 25 ± 1 mm c) 28 ± 1 mm d) 30 ± 1 mm

196. The gap to be maintained for wide gap repair welding is [d]

a) 25 b) 50 c) 75 d) both 50 & 75

197. Certification of departmental and contracting firms Welders/Supervisors of Approved portion manufacturing firms shall be done by RDSO Specification as per_____ for Fusion Welding of Rails by Alumino Thermic Process. [b]

a) IRST 19 2009 b) IRST 19 2012 c) IRST 19 2015 d) IRST 19 2018

198. The portion used for welding shall conform to the technical requirements as per RDSO specification is _____ [c]

a) IRST-19-2006 b) IRST-19-2009 c) IRST-19-2012 d) IRST-19-2015

199. Initial course for welder is_____.

[a] a) TW1 b) TW2 c) TW3 d) None

200. Training duration for initial course for welder (TW1) is_____

[b] a) One week b) Two weeks c) Three weeks d) four weeks

201. Provisional competency certificate for TW1 course shall be valid for executing _____ or _____ whichever is earlier. [b]

a) 50 joints, 3 months b) 100 joints, 6 months

c) 150 joints, 6 months d) 100 joints, 3 months

202. For evaluating working performance of welder should have executed at least _____ no. of welds

[d] a) 100 b) 75 c) 65 d) 50

203. Welders issued with provisional certificate fail to execute minimum number of 50 welds within six months is [b]

a) Competent b) Incompetent c) can attend TW-2 d) None of the above

204. Welders after executing 50 welds within six months are directed to attend TW- 2 course along with ____ mts test piece with weld at centre [d]

a) 1 b) 1.5 c) 1.75 d) 2

205. Criteria for issuing regular competency certificate defective weld percentage should be less than ___ of the welds executed by welder under provisional certificate [a]

a) 1% b) 1.5% c) 1.75% d) 2%

206. Refresher course for welder is _____ [b]

a) TW1 b) TW2 c) TW3 d) None

207. Training duration for refresher course for welders (TW2) is _____

[a] a) One week b) Two weeks c) Three weeks d) four weeks

208. Regular competency certificate for welders after completion of TW2 course is valid for _____ years. [c]

a) 6 months b) 1 year c) 2 years d) 3years

209. After expiry of the validity of competency certificate, the welder is permitted to attend Refresher course TW2 for revalidation within _____ of issue of competency certificate [d]

a) 6 months b) 1 year c) 2 years d) 3years

210. Welders not undergone Refresher course TW2 within 3 years from issue of competency certificate shall have to attend [b]

a) Initial course and refresher course again b) Initial course again

c) Refresher course only again d) None of these

211. Training course for supervisors on welding is_____ [c]

a) TW1 b) TW2 c) TW3 d) None

212. Training duration for supervisors on welding (TW3) is _____

[a] a) 1 week b) 2 weeks c) 3 weeks d) 4 weeks

213. After successful completion of training course for Supervisors (TW3), the validity period is _____ [d]

a) 1 year b) 2 years c) 3 years d) Life time

214. Life of AT welding portion?

[d] a) 1 year b) 2 years c) 3 years d) No specific life

215. Before using of portion for AT welding, it should be ensured [d]

a) Free from moisture b) Batch number & portion number

c) Type (rail section) and chemistry (UTS) of rail d) All the above

216. Colour of 72 UTS rail welding portion bag is _____ [b]

a) Green colour b) Red colour c) Black colour d) yellow colour

217. Colour of 90 UTS rail welding portion bag is _____ [a]

a) Green colour b) Red colour c) Black colour d) yellow colour

218. Colour of 110UTS (chrome manganese & chrome - vanadium) rail welding portion bag is _____ [c]

a) Green colour b) Red colour c) Black colour d) yellow colour

219. Colour of 110UTS (Head Hardened) rail welding portion bag is _____ [d]

a) Green colour b) Red colour c) Black colour d) yellow colour

220. Colour of R-260 grade rail welding portion bag is _____ [a]

a) Violet colour b) Red colour c) Black colour d) yellow colour

221. If date of manufacturing welding portion is more than 2 years, reaction test to be done by taking one portion from batch of ____ no.s [b]

a) 200 b) 300 c) 350 d) 400

222. The minimum traffic block required for one AT welding _____ [c]

a) 45 minutes b) 60 minutes c) 70 minutes d) 75 minutes

223. Minimum traffic block required for performing two continuous welds is____ [a]

a) 90 minutes b) 80 minutes c) 95 minutes d) 100 minutes

224. Before AT welding, the rail ends shall be cleaned with wire brush and Kerosene for at least a length of _____ [d]

a) 200 mm b) 150 mm c) 100 mm d) 50 mm

225. The traffic block requirement involving two cuts and two welds shall be _____where the cutting is done by abrasive disc cutters. [c]

a) 70 minutes b) 90 minutes c) 100 minutes d) 120 minutes

226. The traffic block requirement involving two cuts and two welds shall be _____where the cutting is done by hacksaw blades. [d]

a) 70 minutes b) 90 minutes c) 100 minutes d) 120 minutes

227. Normally, no AT welded joint shall be located closer than_____ m from any other welded or fish plated joint. [b]

a) 3 b) 4 c) 5 d) 6

228. In case of in situ welding the rail fastenings for at least _____ sleepers on either side shall be loosened. [d]

a) 2 b) 3 c) 4 d) 5

229. The sleepers adjacent to the joint to be welded shall be shifted to obtain a clear working space of _____ mm on either side. [c]

a) 150 b) 200 c) 250 d) 300

230. During AT welding of rails on cess the full rail length should be supported on at least [d]

a) 5 sleepers b) 7 sleepers c) 8 sleepers d) 10 sleepers

231. Lateral alignment of rail ends before AT welding when checked with one meter straight edge at centre shall be _____ [a]

a) ± 0.5 mm b) ± 0.6 mm c) ± 0.7 mm d) ± 0.8 mm

232. Lateral tolerance of rail end bend in horizontal plane with straight edge is checked at _____ mm below rail top [c]

a) 12 b) 13 c) 14 d) 15

233. The joint shall be kept higher after vertical alignment for AT welding when checked with one meter straight edge for 90 UTS rail [a]

a) 2 to 2.4 mm b) 3 to 4 mm c) 4 to 5 mm d) 1 to 2 mm

234. Tolerance for vertical alignment on before AT welding is checked with 1M straight edge measured at [c]

a) Middle of the straight edge b) Above the straight edge

c) At the end of the straight edge d) None of these

235. Tolerance for lateral alignment on before AT welding is checked with 1M straight edge measured at [a]

a) Middle of the straight edge b) Above the straight edge

c) At the end of the straight edge d) None of these

236. PFM stands for _____ [b]

a) Post Fabricated moulds b) Pre Fabricated moulds

c) Pre folded moulds d) none of the above

237. Alumino thermit welding with short pre-heating process is carried out by using [b]

a) Green moulds b) Dry moulds c) Wet moulds d) Red moulds

238. The latest development in pre fabricated moulds used for AT welding of rails is [c]

a) Green moulds b) Two piece moulds c) Three piece moulds d) None of the above

239. Before using of pre fabricated moulds for AT welding the following shall be ensured

a) Free from moisture b) Cracks and blocked vents [d]

c) Date of manufacturing d) All the above

240. In AT welding shelf life of prefabricated moulds [a]

a) ≤ 9 months b) ≤ 12 months c) ≤ 15 months d) ≤ 18 months

241. Ingredients of AT welding portion is [d]

a) Aluminium powder & Mill scale b) Ferro manganese & Ferro vanadium

c) Steel chips, Flour spar & Silicon carbide d) All the above

242. Ingredients of pre fabricated mould is [d]

a) High silica sand b) Sodium silicate c) Red oxide & Zircon wash d) All the above

243. Ingredients of luting sand is [d]

a) High silica sand b) 6% moisture content

c) Red oxide & Bentonite d) All the above

244. Minimum moisture content of the luting sand is _____ [c]

a) 3% b) 5% c) 6% d) 10%

245. During fixing the moulds, it shall be ensured that the center line of the rail gap coincides with the _____ of the mould to avoid cross joint. [a]

a) Centre line b) Inner edge c) Outer edge d) None of the above

246. After fixing the moulds, the gap between mould and the rail shall be packed firmly with _____ to prevent leakage of liquid weld metal. [c]

a) Dry sand b) Wet sand c) Luting sand d) Ordinary sand

247. To protect the rail top table from metal splashes during reaction, the adjacent rail surface on either side of the moulds shall be covered with metal cover or smeared with luting sand up to ____ cm on either side [b]

a) 10 b) 15 c) 20 d) 25

248. After fixing and luting of moulds, the rail ends pre heated to a desirable temperature up to [a]

a) 600 ± 20°C b) 700 ± 20°C c) 800 ± 20°C d) 1000 ± 20°C

249. In alumino thermit welding short pre-heating is done by compressed [b]

a) Air diesel fuel mixture b) Air petrol fuel mixture

c) Air kerosene oil mixture d) None of the above

250. During AT welding, preheating of rail ends with Compressed Air petrol technique, air pressure should be maintained in the range of [b]

a) 0.1 to 0.2 kg/cm^2 b) 0.2 to 0.3 kg/cm^2 c) 0.3 to 0.4 kg/cm^2 d) 0.4 to 0.5 kg/cm^2

251. Preheating time would be about _____ minutes for 52/60kg rail section with compressed air petrol preheating technique. [c]

a) 3.0 to 4.0 b) 3.5 to 4.5 c) 4.0 to 4.5 d) 4.5 to 5.0

252. In AT welding, compressor tank shall be kept at a safe distance of _____m away from burner [a]

a) 2 to 3 b) 1 to 3 c) 3 to 4 d) < 1M

253. The distance between top of mould to crucible bottom should be kept at ____ mm

a) 50 b) 25 c) 75 d) 100 [a]

254. The Reaction time for AT welding portion is [b]

a) 15 ± 3 seconds b) 20 ± 3 seconds c) 25 ± 3 seconds d) 30 ± 3 seconds

255. After the exothermic reaction lasting a few seconds, approximately equal volumes of molten steel liquid Al_2O_3 are separated at a temperature of about _____ [c]

a) 1500°C b) 2000°C c) 2400°C d) 2960°C

256. After pouring of the molten metal into the mould of 25 mm gap weld, trimming should be done after waiting for [c]

a) 2 to 3 minutes b) 3 to 4 minutes c) 4 to 6 minutes d) 6 to 8 minutes

257. _____ should be used for trimming of extra weld metal from rail top and sides at AT welding rail joint after the welding process [c]

a) Hammer b) Chisel c) Hydraulic weld trimmer d) Rail profile grinder

258. The wedges used for alignment of rails for AT welding shall not be removed after trimming for at least [a]

a) 20 minutes b) 30 minutes c) 40 minutes d) None of these

259. The first train should be allowed to pass on the newly insitu AT welded joint after pouring of the weld metal shall be only after a lapse of [c]

a) 20 minutes b) 25 minutes c) 30 minutes d) none of these

260. The riser must not be removed until the weld cooled down and by knocking towards the _____ only [a]

a) Rail b) Ballast c) along the track d) All the above

261. After In-situ AT welding necessary speed restriction shall be observed until the [a]

a) Grinding operation is over B) 2 days are over

c) one week is over d) none of these

262. _____ should be used for grinding of AT welded joints after trimming operation is complete [d]

a) Hammer b) Chisel c) Hydraulic weld trimmer d) Rail profile grinder

263. Rail profile grinder is fitted with [d]

a) Stand b) Frame c) Grinding wheel d) Rail profile guided grinding tolley

264. Tolerance of vertical alignment on finished AT weld is checked with 1m & 10cm straight edge measured at [c]

a) Middle of the straight edge b) Above the straight edge

c) At the end of the straight edge d) None of these

265. Tolerance of lateral alignment on Finished AT weld is checked with 1M & 10CM straight edge measured at [a]

a) Middle of the straight edge b) Above the straight edge

c) At the end of the straight edge d) None of these

266. Finished AT weld joints when checked with 1 meter straight edge the tolerance for vertical alignment shall not vary [b]

a) ±0.5 mm b) ±1 mm c) ±2 mm d) ±3 mm

267. Finished AT weld joints when checked with 1 meter straight edge the tolerance for lateral alignment shall not vary [a]

a) $\pm$0.5 mm b) $\pm$0.6 mm c) $\pm$0.7 mm d) $\pm$1 mm

268. Finished AT weld joints when checked with 10 cm straight edge the tolerance for Top surface shall not vary [a]

a) +0.4 mm b) +0.5 mm c) +0.6 mm d) +0.7 mm

269. Finished AT weld joints when checked with 10 cm straight edge the tolerance for head finishing on sides shall not vary [a]

a) ± 0.3 mm b) ± 0.4 mm c) ± 0.5 mm d) none of these

270. In specific cases, for joint geometry, in case of old rails, dispensations may be permitted by [d]

a) ADEN b) DEN/Sr.DEN c) Dy. Chief Engineer d) Chief Engineer

271. Welds are executed by the Firms, if Any joint found not conforming to the finished weld tolerances shall be _____ by the firm. [b]

a) Accept b) Cut and rewelded, free of cost

c) Cut and rewelded, 50% of cost d) Cut and rewelded, 100% of cost

272. welding identification code, letter AA denotes [a]

a) Agency to which the welder belongs b) Specific welder number

c) Welder belongs which railway d) None of the above

273. In AT welding identification code, letter BBB denotes [b]

a) Agency to which the welder belongs b) Specific welder number

c) Welder belongs which railway d) None of the above

274. In AT welding identification code, letter CCC denotes [c]

a) Agency to which the welder belongs b) Specific welder number

c) Welder belongs which railway d) None of the above

275. In single line, the welded joints shall be serially numbered in the direction of [c]

a) Train traffic b) opposite to the train traffic

c) Increasing kilometer d) Decreasing kilometer

276. In double line, the welded joints shall be serially numbered in the direction of [c]

a) Train traffic b) opposite to the train traffic

c) Increasing kilometer d) Decreasing kilometer

277. Painting of weld collar should be done on all welds to protect them against corrosion is [a]

a) Immediately after the welding b) After 5 days

c) After 6 months d) After 12 months

278. Frequency of weld collar anticorrosive painting of AT welds should be carried out once in _____ in non corrosive prone areas. [a]

a) 4 years b) 3 years c) 2 years d) 1year

279. Frequency of weld collar anticorrosive painting of AT welds should be carried out once in _____ in corrosion prone areas. [d]

a) 4 years b) 3 years c) 2 years d) 1year

280. During visual inspection of AT welding, what are the defects are to be identified

a) Cracks, blow holes b) Shrinkage, mismatch [d]

c) Fins, surface mismatch d) All the above

281. Joggling of AT welding done [a]

a) Immediately after grinding operation over b) After 6 months

c) After 12 months d) After 18 months

282. Acceptance test by JE/SSE/USFD for AT welding is [a]

a) Immediately after welding b) After 6 months

c) After 12 months d) After 18 months

283. In the initial acceptance test of the AT welds, if weld is marked_____, the weld should not be allowed to continue in service [b]

a) Good b) DFWO/DFWR c) OBS/IMR d) None of the above

284. All new welded joints should be ultrasonically tested as early as possible but in any case not later than [b]

a) 45 days b) 30 days c) 15 days d) 10 days

285. First periodic USFD test for AT welds shall be done after _____ by JE/SSE/USFD [b]

a) 6 months b) 1 year c) 2 years d) 3 years

286. A thermit welding done insitu shall be joggled fish plated with two clamps and supported on wooden blocks of 300 – 450 mm length until tested as [d]

a) Good by JE/P.Way b) Good by SSE/P.Way

c) Good by ADEN d) Good by JE/SSE/USFD

287. One out of every _____ joints welded shall be selected at randomly for sample test joint [b]

a) 50 b) 100 c) 150 d) 200

288. Joggled fishplates with far end bolts shall be provided on AT welds, which have undertaken traffic equal to or more than _____ of stipulated fatigue life (GMT) of the rail. [b]

a) 30% b) 50% c) 75% d) 100%

289. Joggled fishplates with clamps or two far end bolts on good AT welds shall be provided on banks having height _____ m or more. [d]

a) 2 b) 3 c) 4 d) 5

290. Joggled fishplates with clamps or two far end bolts on good AT welds shall be provided on bridges (having length of waterways as 100 m or more) and on its approaches upto _____ m length. [b]

a) 50 b) 100 c) 150 d) 200

291. Joggled fishplates with clamps or two far end bolts on good AT welds shall be provided on curves of _____ and sharper. [c]

a) 1° b) 2° c) 3° d) 4°

292. All AT welds more than _____ years old are to be provided with joggled fishplates with two far end bolts/clamps of routes having less than 15GMT traffic [b]

a) 5 b) 10 c) 15 d) 20

293. Rail joints welded by a firm shall be guaranteed against failure which includes failures in execution, acceptance & regular ultrasonic testing and during service up to _____ years from the date of welding. [a]

a) 2 b) 3 c) 4 d) 5

294. Cumulative number of failed A.T. welds including rewelded joints in 2 years, shall not exceed _____ of the total quantity of joints in a particular contract. [b]

a) 1% b) 2% c) 3% d) 4%

295. If Any AT weld executed by firm fails within the guarantee period shall be _____ using their portions, equipments, labour and consumables [b]

a) Re welded by Departmental b) Re welded by firm free of cost

c) Re welded by firm with 50% of cost d) None of the above

296. A welding supervisor shall supervise not more than two welding teams at a time when [c]

a) Within 1 km distance b) Within 500 m distance

c) Within 50 m distance d) None of the above

297. No hole should be made within heat affected zone of AT weld i.e. _____ mm from centre of AT weld in the new SKV welds of 25mm gap. [c]

a) 40 b) 50 c) 75 d) 83

298. Composition of thermit welding team, number of welder grade I/ grade II are required in one thermit welding team [a]

a) 1 b) 2 c) 3 d) 4

299. Composition of thermit welding team, number of welder grade III/ skilled artisan are required in one thermit welding team [b]

a) 1 b) 2 c) 3 d) 4

300. Composition of thermit welding team, number of helper khalasi/ khalasi are required in one thermit welding team [d]

a) 1 b) 2 c) 4 d) 5

301. Composition of thermit welding team, number of gangman are required in one thermit welding team [d]

a) 3 b) 5 c) 8 d) as per work load

302. The interval between two coats of anti corrosion painting of new welds shall be minimum of [c]

a) 3hrs b) 5hrs c) 8hrs d) 10hrs

303. Anti corrosion Painting of welds should be done in _____ no. of coats. [b]

a) 1 b) 2 c) 3 d) 4

304. Panting of new welds as well as old welds, to a distance of _____ cm on either side of weld. [b]

a) 5 b) 10 c) 15 d) 20

305. BHN value of hardness test on weld metal for 90 UTS rails [d]

a) 329 + 20, -0 b) 365 + 20, -0 c) 229 + 20, -0 d) 265 + 20, -0

306. BHN value of hardness test on weld metal for 60kg Head hardened rails [a]

a) 321(min) b) 365(min) c) 229(min) d) 265(min)

307. BHN value of hardness test on weld metal for 60kg/110 UTS rails [a]

a) 320 + 20, -0 b) 365 + 20, -0 c) 229 + 20, -0 d) 265 + 20, -0

308. The test weld shall withstand minimum transverse breaking load for 52kg, 90UTS rails in tones _____ [c]

a) 60 b) 80 c) 90 d) 115

309. The test weld shall withstand minimum transverse breaking load for 60kg, 90UTS rails in tones _____ [d]

a) 60 b) 80 c) 90 d) 115

310. The test weld shall withstand minimum transverse breaking load for 60kg, 110UTS rails in tones _____ [c]

a) 95 b) 115 c) 120 d) 125

311. The test weld shall withstand minimum transverse breaking load for 60kg, Head Hardened rails in tones _____ [b]

a) 95 b) 115 c) 120 d) 125

312. Longitudinal crack in rail web (at AT weld) is caused by [a]

a) Cutting of wear resistant grade rails by flame cutting

b) Luting sand too wet c) Dropping of luting sand in to the mould

d) Gap between rail ends is too wide – rail ends outside the collar formation

313. Lack of fushion in rail foot of AT weld is caused by [a]

a) Flame cutting of rail ends b) Luting sand too wet

c) Dropping of luting sand in to the mould

d) Gap between rail ends is too wide – rail ends outside the collar formation

314. Cold spots - Lack of fushion of AT weld is caused by [d]

a) Flame cutting of rail ends b) Luting sand too wet

c) Dropping of luting sand in to the mould

d) Gap between rail ends is too wide – rail ends outside the collar formation

315. Lack of fushion on foot of one rail end of AT weld is caused by [c]

a) Flame cutting of rail ends b) Dropping of luting sand in to the mould

c) Mould fitted centre to the gap but inclined to the vertical d) Luting sand too wet

316. Gross Lack of fushion on rail end of AT weld is caused by [b]

a) Flame cutting of rail ends b) standard moulds fitted to rails of dissimilar depth

c) Luting sand too wet d) Dropping of luting sand in to the mould

317. Porosity in the thermit steel of AT weld is caused by [d]

a) Flame cutting of rail ends b) Dropping of luting sand in to the mould

c) Mould fitted centre to the gap but inclined to the vertical d) Luting sand too wet

318. Sand inclusion in the rail foot and sand burn marks transversely across the rail head of AT weld is caused by [b]

a) Flame cutting of rail ends b) Dropping of luting sand in to the mould

c) Mould fitted centre to the gap but inclined to the vertical d) Luting sand too wet

319. Gross Porosity throughout the whole weld section of AT weld is caused by [c]

a) Use of damp portion b) Use of damp crucible

c) Both a & b d) None of the above

320. Gross inclusion of slag in the rail head of AT weld is caused by [c]

a) Flame cutting of rail ends b) Dropping of luting sand in to the mould

c) Pouring without the plug in the position d) Pouring off centre to the plug

321. Gross inclusion of slag in the rail head on one side of AT weld is caused by [d]

a) Flame cutting of rail ends b) Dropping of luting sand in to the mould

c) Pouring without the plug in the position d) Pouring off centre to the plug

322. Presence of Fin bottom part of line of AT weld is caused by [b]

a) Flame cutting of rail ends b) Improper mould fixing and improper luting

c) Luting sand too wet d) Dropping of luting sand in to the mould

323. Fracture through weld centre is due to [b]

a) weld subjected to compressive forces b) weld subjected to tensile forces

c) Both a & b d) None of the above

324. Cracking of weld after cooling at rail ends is due to [c]

a) Incorrect thermit portion

b) Incorrect welding parameters at time of welding

c) Both a & b d) None of the above

325. While fixing three piece mould proper care should be taken for proper fixing of bottom plate to avoid formation of ___ at the edges of bottom flanges of weld [b]

a) Lack of fusion b) Fins c) Porosity d) All the above

Safety Precaution at work spot

326. Engineering works can be broadly divided into [b]

a) 4 categories b) 3 categories c) 2 categories d) none of these

327. Works of short duration are those works which are completed [a]

a) on the same day of commencement b) on the next day of commencement

c) on the third day of commencement d) none of these

328. Works of long duration are those works which are completed [c]

a) Within three hours b) within 6 hours

339. During works of long duration the temporary engineering fixed signal (Speed indicator) should be fixed at a distance from work spot when the trains required to proceed at restricted speed are as per G&SR [a]

a) 30 mts b) 600 mts c) 800 mts d) 1200 mts

340. During works of long duration one termination indicator bearing letters **T/G** should be located a distance equal to the length of longest [c]

a) Express train b) passenger train c) goods train d) none of these

341. During works of long duration one termination indicator bearing letters **T/P** should be located a distance equal to the length of longest [b]

a) Coal train b) passenger train c) goods train d) none of these

342. During long duration works when the train required to stop and proceed, the flagman posted at stop indicator should take the signature of the train driver in a book called [b]

a) Train dairy b) Restriction book c) flagman dairy d) None of these

343. shape of caution indicator is _____ [d]

a) round b) rectangle c) triangle d) fish tailed

344. Shape of a Stop indicator board [b]

a) Square b) Rectangle c) Triangle d) Round

345. Shape of a Speed restriction board [c]

a) Square b) Rectangle c) Triangle d) Round

346. Shape of a Termination board [d]

a) Square b) Rectangle c) Triangle d) Round

347. T/P on termination Board indicates [d]

a. Termination for passenger
b. Driver of passenger train can pickup normal speed from this point
c. Should be fixed at a distance of longest passenger train in that section
d. All the above

348. When works at times of poor visibility are to be undertaken and site is protected by temporary engineering fixed signals .....Nos of detonators 10 mts apart be fixed at not less than .....mts in rear of Caution Indicator and a caution hand signal exhibited to approaching trains [c]

a) 3 & 600 b) 2 & 600 c) 2 & 270 d) 3 & 1200

349. Life of detonators is [d]

a) 2 years b) 3 years c) 4 years d) 5 years

350. Life of a detonator manufactured after 2010 can be extended to ..... years on a Yearly basis after testing ..... detonator from each lot of over ..... years [a]

a) 8, one & 5 b) 10, one & 7 c) 8, one & 6 d) none of these

Question Bank on Official Language Policy of the union for Departmental Examination

1. What is the official language of the India?
a) Telugu b) Hindi c) Marathi d) Hindi in Devnagari Script [Answer: d]

2. In which article of the constitution of India Hindi has been declared as Official Language?
a) Article 120 b) Article 210 c) Article 343 d) 3Article 351 [Answer: c]

3. As per the provisions of the Constitution of India Official Language Hindi shall be written in which script?
a) Brahmi Script b) Sanskrit Script c) Roman Script d) Devnagari Script [Answer: d]

4. Which forms of the numerals should be used in official purposes of the Union of India?
a) International form of Indian Numerals b) Devnagari numerals
c) Roman numerals d) None of the above [Answer: a]

5. Hindi Day is celebrated in India on ..... every year.
a) 10th January b) 26th January c) 15th August d) 14th September
[Answer: d]

6. Why Hindi Day is celebrated in India on 14th September?
a) Constituent Assembly of India had adopted Hindi as Official Language of India on that day.
b) Ministry of Home Affairs, Department of Official Language had ordered to do so.
c) Railway Board had ordered to do so d) None of the above
[Answer: a]

7. In which article of the Constitution of India envisages setting up of Official Language Commissions?
a) Article 343 b) Article 344 c) Article 345 d) Article 346 [Answer: b]

8. Which article of the Constitution of India empowers the Indian states to choose their own Official Language?
a) Article 343 b)Article 351 c) Article 210 d) Article 345 [Answer: d]

9. If a state does not choose Official Language for itself from the languages spoken in the state what language will be its Official Language?
a) All the languages spoken in the state b) Hindi Language
c) English Language d) None of the above
[Answer: c]

10. he authoritative texts of all Bills to be introduced or amendments thereto to be moved in either House of Parliament or in the House or either House of the Legislature of a State shall be in which language?
a) In Hindi b) In English
c) In any of the Languages mentioned in 8th Schedule of the Constitution of India
d) None of the above [Answer: b]

राजभाषा

विभागीय परीक्षा के लिए संघ की राजभाषा निति पर प्रश्न बैंक.

1. भारत की राजभाषा क्या है ?
a) तेलुगु b) हिंदी c) मराठी d) देवनगरी लिपि में हिंदी [उत्तर: d]

2. भारतीय संविधान में किस अधिनियम के अंतर्गत हिंदी को राजभाषा के रूप में घोषित किया गया?
a) अनुच्छेद 120 b) अनुच्छेद 210 c) अनुच्छेद 343 d) 3 अनुच्छेद 351 [उत्तर: c]

3. भारतीय संविधान के प्रावधोनों के अनुसार राजभाषा हिंदी किस लिपि में लिखी जाती है?
a) ब्राह्मी लिपि b) संस्कृत लिपि c) रोमन लिपि d) देवनगरी लिपि [उत्तर: d]

4. भारत संघ के अधिकारिक प्रयोजन के लिए अंकों के किस रूप का उपयोग किया जाता है?
a) भारतीय अंकों का अंतर्जातीय रूप b) देवनगरी अंकों का c) रोमन अंकों का d) उपर्युक्त कुछ नहीं [उत्तर: a]

5. प्रति वर्ष भारत में हिंदी दिवस पर मनाया जाता है.....
a) 10वीं जनवरी b) 26वां जनवरी c) 15वां अगस्त d) 14वां सितंबर [उत्तर: d]

6. भारत में सितंबर को हिंदी दिवस क्यों मनाया जाता है 14?
d) जिस दिन भारत की संविधान सभा ने भारत की राजभाषा के रूप में हिंदी को अपनाया था.
e) राजभाषा विभाग ,गृह मत्रालय ने आदेश पारित किया ,
f) रेलवे बोर्ड ने आदेश पारित किया.
g) उपर्युक्त में कुछ नहीं [उत्तर: a]

7. भारत के संविधान में किस अनुच्छेद के अनुसार राजभाषा आयोग की परिकल्पना की गई है?
a) अनुच्छेद 343 b) अनुच्छेद 344 c) अनुच्छेद 345 d) अनुच्छेद 346 [उत्तर: b]

8. भारत के संविधान में किस अनुच्छेद के द्वारा भारतीय राज्यों को अपनी राजभाषा चुनने का अधिकार प्राप्त है?
a) अनुच्छेद 343 b)अनुच्छेद 351 c) अनुच्छेद 210 d) अनुच्छेद345 [उत्तर: d]

9. राज्य में बोली जानेवाली भाषाओं से राजभाषा का चयन खुद राज्य न कर पाने पर तब उस राज्य का राजभाषा क्या हो सकता है?
a) राज्य में बोली जानेवाली सभी भाषाएं b) हिंदी भाषा c) अंग्रेजी भाषा d) उपर्युक्त में कुछ नहीं.
(उत्तर : सी)

10. संसद के किसी सदन में या राज्य के किसी विधान सभा में भेजे जानेवाले सभी विधेयक की प्रधिकृत विषयवस्तु किस भाषा में प्रस्तुत होगी ?
a) हिंदी में b) अंग्रेजी में c. भारत के संविधान में 8वीं अनुसूची में उल्लिखित कोई भी भाषा d. उपर्युक्त में कुछ नहीं
[उत्तर: b]

DEN/North/HYB

c) Taking more than a day d) none of these

329. While doing short duration works the track is protected with [b]

a) fixed signals b) hand signals c) operating signals d) none of these

330. While doing Long duration works the track is protected with [c]

a) operating fixed indicators b) hand signals

c) Temporary engineering fixed indicators d) none of these

331. During works of short duration when the train is required to stop and proceed, the flagmen should exhibit HS Red flag at a distance from work spot [a]

a) 30 mts b) 600 mts c) 800 mts d) 1200 mts

332. During works of short duration when the train is required to stop and proceed, the flagmen should exhibit Banner flag at a distance from work spot [b]

a) 30 mts b) 600 mts c) 800 mts d) 1200 mts

333. During works of short duration when the train is required to stop and proceed, the flagmen should exhibit three detonators with red hand signal at a distance from work spot [d]

a) 30 mts b) 600 mts c) 800 mts d) 1200 mts

334. During works of short duration when the train is required to proceed at restricted speed,the flagmen should exhibit caution hand signal at a distance from work spot

a) 30 mts b) 600 mts c) 1200 mts d) Both a & c [d]

335. During works of short duration when the train is required to proceed at restricted Speed, the flagmen should exhibit banner flag at a distance from work spot [b]

a) 30 mts b) 600 mts c) 1200 mts d) Both a & c

336. During welding work, for protection of work spot red hand signal should exhibit at a distance from work spot [d]

a) 30 mts b) 600 mts c) 1200 mts d) Both a & c

337. During welding work, for protection of work spot banner flag should exhibit at a distance from work spot [b]

a) 30 mts b) 600 mts c) 800 mts d) 1200 mts

338. During works of long duration the temporary engineering fixed signal (Caution indicator) should be fixed at a distance from work spot when the trains required to proceed at restricted speed are as per G&SR [d]

a) 30 mts b) 600 mts c) 800 mts d) 1200 mts