



# OBJECTIVE QUESTION BANK

For

JUNIOR ENGINEER (P.WAY)

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NAGPUR DIVISION  
CENTRAL RAILWAY

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## **OBJECTIVE**

Principal, Divisional Training Center (Engineering) AJNI, NAGPUR DIVISION has prepared Objective Question Bank for Junior Engineer (P.Way).

This question bank is prepared in English & Hindi both Language for utilizing maximum number of engineers.

This Objective Question Bank is only for guideline.

**S.S. JOSHI**

**PRINCIPAL**

**DIVISIONAL TRAINING CENTER**

**(ENGINEERING) AJNI**

**NAGPUR DIVISION, CENTER RAILWAY**

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## **1. RAILWAY TRACK STRUCTURE AND BRIDGE**

**1. Height of 52kg rail is**

- a) 151mm    b) 153 mm    c) 156mm    d) 157mm

**2. Height of 60 kg rail is**

- a) 170 mm                      b) 172 mm    c) 173 mm    d) 175 mm

**3. Flange width of 60 kg rail is**

- a) 150 mm                      b) 149 mm    c) 152mm    d) 154 mm

**4. Web thickness of 60 kg rail is**

- a) 13.5 mm                      b) 14.0 mm    c) 15.5 mm    d) 16.5 mm

**5. Permanent rail closure on bridge approach should not be less than**

- a) 9 m.                              b) 10 m                      c) 11m                      d) 12 m

**6. Allowable shear stress of 90 UTS rail is  $\text{kg/mm}^2$**

- a) 20                      b) 21                      c) 22                      d) 22.5

**7. Allowable shear stress of 72 UTS rail is  $\text{kg/mm}^2$**

- a) 17                      b) 18                      c) 19                      d) 20

**8. Stipulated service life of 60kg 90 UTS rail is**

- a) 550 GMT            b) 600 GMT    c) 725 GMT    d) 800 GMT
9.    Stipulated service like of 60 kg 72 UTS rail is  
a)450 GMT    b) 500 GMT    c) 550 GMT    d) 700GMT
10.   Stipulated service like of 52 kg 90 UTS rail is  
a) 450 GMT            b) 525 GMT    c) 550 GMT    d) 700 GMT
11.   Stipulated service like of 52 kg 72 UTS rail is  
a) 325 GMT            b) 350 GMT    c) 450 GMT    d) 525 GMT
12.   Test free period for the rails rolled in April 99 and onward  
a) 15%                b) 20%                c) 25 %                d) 30 %
13.   Unit of Hardness of rail is.  
a) AHN                b) BHN                c) CHN                d) DHN
14.   Hardness of 72 UTS rail is BHN  
a) 200                b) 220                c) 240                d) 250
15.   Hardness of 90 UTS rail is BHN  
a) 260                b) 265                c) 270                d) 280
16.   Fastenings are need on girder bridges.  
a) Elastic            b) Metal            c) Rail Free    d) None of the

17. Minimum depth of ballast cushion in LWR is  
a) 150 m                      b) 200m                      c) 300 m                      d) 350 m
18. Minimum depth of ballast orison in TWR is  
a) 200 m                      b) 300m                      c) 250m                      d) 350 m
19. Minimum clean ballast cushion required for machine temping is  
a) 150 mm                      b) 200 mm                      c) 250mm                      d) 250 mm
20. Retention ofballast on 40 mm square mesh sieve should be  
a) 20 % to 30 %                      b) 30% to 40%                      c) 40% to 50 %                      d) 40% to 60 %
21. Retention at ballast on 65 mm squares mesh service should be  
a)     2 %                      b) 4 %                      c) 5 % d) 6 %
22. Retention of machine crashed ballast on 20 mm squares mesh sieve  
Should not be less  
a) 95 %                      b) 96 %                      c) 97 %                      d) 98 %
23. Retention of hand broken ballast on 20 mm squares mesh sieve  
Shouldnot be less than  
a) 92 %                      b) 95 %                      c) 97 %                      d) 98%
24. Size of screen for ballast measurement is  
a) 100 X 70X10 cm                      b) 110X70X10cm  
c) 100X70X20cm                      d) 100X75X10cm
25. Height of ballast stack in plain area should not be less than  
a)     0.50 m                      b) 1.0m                      c) 1.5m                      d) 2.0 m
26. Height of ballast stack in hilly area should not be less than

- a) 0.50 m                      b) 1.0 m                      c) 1.5 m                      d) 2.0 m
27. Height of ballast stack should not be more than
- a) 1.5 m                      b) 2.0 m                      c) 2.5 m                      d) 3.0 m
28. Where concrete sleeper turn out are laid, what shall be provided between SEJ and SRJ
- a) 1 rail panel                      b) 2 rail Panel                      c) 3 Rail Panel                      d) None
29. Number of butter rails used in LWR in zone III and IV is
- a) 4                                      b) 3                                      c) 2                                      d) 1
30. How much distance is provided from abutment ant of a girder bridge in LWR for SEJ
- a) 10m                                      b) 15 m                                      c) 16 m                                      d) 18 m
31. What is the total water way equal to or more than in m<sup>2</sup> which called OnImportantbridge .
- a) 100                                      b) 200                                      c) 500                                      d) 1000
32. In which time inspection of bridge done by SSE/P. way once in a year
- a) Before Monson                      b) During monsoon                      c) Post Monson                      d) All
33. Railway Bridge having total water way of less than 18m or clear span of less Than 12 min single span is called
- a) Minor                                      b) majar                                      c) Important                      d) None
34. A railway bridge having total linear water any of 18 m or more is called
- a) Minor                                      b) majar                                      c) Important                      d) None

35. When the railway cross a deep valley without perennial water it is Called.
- a) Bridge                      b) Tunnel      c) viaduct      d) None

## **2. TRACK MAINTENANCE**

36. Permanent rail closure on bridge approach should not be less than
- a) 9 m.                      b) 10 m      c) 11m                      d) 12 m
37. Allowable shear stress of 90 UTS rail is  $\text{kg/mm}^2$
- a) 20                      b) 21                      c) 22                      d) 22.5
38. Allowable shear stress of 72 UTS rail is  $\text{kg/mm}^2$
- a) 17                      b) 18                      c) 19                      d) 20
39. Sleeper spacing is 65 cm in LWR the number SWR of sleeper in each km will be
- a) 1500                      b) 1540                      c) 1600                      d) 1660
40. With 1660 nose sleeper in a km the sleeper spacing shall be
- a) 50                      b) 55                      c) 60      d) 65
41. Fastenings are need on girder bridges.
- a) Elastic                      b) Metal                      c) Rail Free                      d) None of the
42. In normal areas initial toe load testing of E.R.C shall be done after Passage of 4 year or GMT which we is earlier
- a) 100                      b) 150                      c) 200                      d) 250
43. In corrosion prone areas initial toe load testing of ERC shall be done after what years on 100 GMT which is earlier







- a) 1                      b) 2                      c) 3                      d) 4
44. Frequency of lubrication of ERC in corrosion prone area is
- a) Once in 1 year                      b) once in 2 year  
c) Once in 3 year                      d) once in a 4 year
45. Frequency of lubrication of ERC in non- correction prone area is
- a) Once in 1 year                      b) once in 2 year  
c) Once in 3 year                      d) once in a 4 year
46. In lin 12 famed shaped turnout total no of approach and emit sleeper is
- a) 11                      b) 13                      c) 15                      d) 17
47. Total number of concrete sleeper in lin 12 fan shaped turnout is
- a) 84                      b) 91                      c) 93                      d) 96
48. Total number of concrete sleeper in lin 8 ½ fan shaped turnout is
- a) 61                      b) 65                      c) 67                      d) 70
49. The total length of sanl hump from ANC is
- a) 60m                      b) 66 m                      c) 72 m                      d) 78 m
50. The clearance between guard rail and running rail on B-G- track is
- a) (250 # 25 ) mm                      b) (250 # 50 ) mm  
c) (250 # 25 ) mm                      d) (250 # 55 ) mm
51. Catch water drain are constructed where height of cutting is more than
- a) 3m                      b) 4m                      c) 5 m                      d) 5.5m
52. In track circuit areas liner used
- a) non insulated                      b) iron                      c) metallic                      d) insulated
53. W/L board is provided at a distance from levelcrossing
- a) 500m                      b) 600 m                      c) 800m                      d) none of this

54. The length of check rail at level crossing is how much more than the width of road  
a) 1.0 m                      b) 1.5 m                      c) 2.0 m                      d) 3.03 m
55. Maximum length of LWR is  
a) 1000m                      b) 2000 m                      c) one block section                      d) none
56. Maximum gradient of on which LWR can be laid is  
a) 1 in 50                      b) 1 in 100                      c) 1 in 136                      d) 1 in 150
57. During repaired of buckled track minimum length of closer required is  
a) 4.5 m                      b) 5.0 m                      c) 6.0 m                      d) 6.5 m
58. Deep screening can be done in LWR/ CWR without cutting when temperature fall within  
a)  $t_d+10^{\circ}\text{c}$  to  $t_d-20^{\circ}\text{c}$                       b)  $t_d+10^{\circ}\text{c}$  to  $t_d-10^{\circ}\text{c}$   
c)  $t_d+20^{\circ}\text{c}$  to  $t_d-20^{\circ}\text{c}$                       d)  $t_d+20^{\circ}\text{c}$  to  $t_d-10^{\circ}\text{c}$
59. For allowing expansion / construction at ends of LWR/CWR The devices Provided is  
a) Buffer rail                      b) SEJ c) Point Of crossing                      d) G/ued joint
60. Regular maintenance in LWR/CWR can is done within temperature  
a)  $t_d-20^{\circ}\text{c}$  to  $t_d+ 20^{\circ}\text{c}$                       b)  $t_d-30^{\circ}\text{c}$  to  $t_d+10^{\circ}\text{c}$   
c)  $t_d-30^{\circ}\text{c}$  to  $t_d + 20^{\circ}\text{c}$                       d)  $t_d 20^{\circ}\text{c}$  to  $t+ 10^{\circ}\text{c}$
61. Between two unopened spaces of sleeper no. of sleeper may be opened in LWR/CWR during maintenance  
a) 15                      b) 20                      c) 25                      d) 30
62. Lowest authority for casual renewal of fastening in LWR when lifting is involved is  
a) JE                      b) Keyman                      c) Mate                      d) Trackman
63. Gap at SEJ at  $t_d$  in 52 kg rail shall be  
a) 35mm                      b) 40mm                      c) 50mm                      d) 60mm

64. Oiling and greasing of SEJ is done once in how many days by key man  
a) 7                      b) 10                      c) 12                      d) 15
65. In LWR Mate can replace one sleeper out of how many sleeper  
a) 20                      b) 25                      c) 30                      d) 40
66. Lifting of track in one stage in LWR with concrete sleeper should not be more than  
a) 50mm                      b) 35mm                      c) 40mm                      d) 25mm
67. Which type of glued joint should be used in LWR track  
a) G3                      b) G4M                      c) G3L                      d) G3M
68. The LWR which would continue through station yard including point and Crossing is known as  
a) SEJ                      b) SWR                      c) CWR                      d) NONE
69. Repairs to rail breakage in LWR track is done in how many stages  
a) 4                      b) 3                      c) 2                      d) 1
70. Repairs to buckled track in LWR track is done in how many stages  
a) 1                      b) 2                      c) 3                      d) 4
71. Temporary distressing shall be carried out how much below the Maximum Rail temperature likely to be attained during deep screening work  
a) 5<sup>0</sup>c                      b) 10<sup>0</sup>c                      c) 15<sup>0</sup>c                      d) 20<sup>0</sup>c
72. During distressing the rail should be lifted and placed on roller at every Which Sleeper  
a) 10<sup>th</sup>                      b) 12<sup>th</sup>                      c) 14<sup>th</sup>                      d) 15<sup>th</sup>
73. Hot weather patrolling is to be introduced in LWR with concrete Sleepers with sleeper density 1540 and above when railed temperature goes beyond  
a)  $td+10^0c$                       b)  $td+20^0c$                       c)  $td+25^0c$                       d) All

74. For distressing of LWR by rail tensor tp should be less than  
a) tm            b)td            c) to            d) None
75. After maintenance during consolidation period if rail temperature rises above  $t_d + 20^{\circ}\text{C}$  hot weather patrolling can be started by  
a) Key man    b) MATE            c) JE            d) None
76. Temporary distressing is valid for how many days  
a) 10 days    b) 15 days            c) 30 days    d) 40 days
77. The Gap survey is conducted the which month  
a) April            b) July            c) Nov            d) Feb
78. Frequency of Gap survey is  
a) Once in 4 month            b) once in 6 month  
c) Once in 1year            d) once in 2 year
79. Work which are completed by sunset of the day of commencement are Called  
a) Short Duration            b) Long Duration  
c) Works of routing maintenance    d) all
80. Work which are required continues speed restriction for more than 24 hours are called  
a) Short Duration            b) Long Duration  
c) Works of routing maintenance    d) all
81. Work which are not required any speed restriction or inhibition of hand Signal are called  
a) Short Duration    b) Long Duration    c) routing maintenance    d) All
82. At the end of gang beat length of sample of standard section of track Maintained is  
a) 100m            b) one rail length    c) two rail length    d) threerail length

83. The entire track must be deep screened at least in how many year  
a) one in 5 year b) one in 7 year c) one in 10 year d) one in 15 year
84. For the purpose of track maintenance, what number of turnouts  
Equivalent to one track km is  
a) 8 b) 10 c) 15 d) 18
85. The gauge of concrete sleeper turnout is  
a) 1670mm b) 1673mm c) 1670mm d) 1168mm
86. Track is considered for renewal after it has carried what limit of GMT  
for BG having rail section of 60 kg / 90 VTS  
a) 525 b) 550 c) 800 d) 880
87. What is the maximum distance between two boundary stone?  
a) 50m b) 100m c) 125m d) 150m
88. Which equipment is not required with hot whether petroleum  
a) Detonator b) red flag c) green flag d) staff
89. What is the symbol of defect of cross level?  
a) C-2 b) Hor P c) OI +- d) 
90. What is the symbol of defect of loose packing?  
a) C-2 b) Hor P c) O+- d) 
91. What is the symbol of defect of gauge?  
a) C-2 b) Hor P c) O+-d) 
92. What is the symbol of defect of alignment?  
a) C-2 b) Hor P c) O+-d) 

### 3. CURVE

93. Minimum radius of vertical curve of A route should be  
a) 1500 M b) 2000M c) 3000M d) 4000M
94. Minimum radius of vertical curve on B route should be  
a) 2000 M b) 2500M c) 3000M d) 4000M
95. During packing which rail shall be treated as base rail on curve  
a) Inner b) Outer c) Both d) None
96. Which rail on curve shall be taken as sighting rail?  
a) Inner b) Outer c) Both d) None
97. The maximum degree of curve for BG curved track is  
a)  $4^{\circ}$  b)  $6^{\circ}$  c)  $8^{\circ}$  d)  $10^{\circ}$
98. Maximum cant permitted on A category BG route is  
a) 75mm b) 100mm c) 165mm d) 185mm
99. Maximum cant deficiency on A category BG route is  
a) 60mm b) 75mm c) 90mm d) 100mm
100. Maximum cant excess on A category BG route is  
a) 60mm b) 75mm c) 85mm d) 100mm

101. Versine of a curve are measured on a cord of
- a) 6m      b) 9m      c) 10m      d) 20m
102. When a train travels around around a curve at the speed higher Than Equilibrium speed then what occurs?
- a) Can't      b) Cant deficiency      c) Cant excess      d) none
103. When a train travels around a curve at a speed lower than equilibrium speed than what occurs
- a) cant      b) cant deficiency      c) cant excess      d) none
104. Extra clearance for inside of a curved track on platform lines Should be reduced by what amount for the calculated value
- a) 25MM      b) 50MM      c) 51MM      d) 60MM
105. Extra Clearance for outside of a curved track on platform lines Should be reduced by what amount for the calculated value
- a) 25MM      b) 50MM      c) 51MM      d) 60MM
106. Where super elevation remains constant in curve
- a) Circular      b) Transition      c) complete      d) All
107. The super elevation at the beginning of transition curve is
- a) Zero      b) 20      c) 10      d) None
108. What is the limit of variation of versing in MM for realignment BG Curve for speed of 120 kmph and above of average circular versines
- a) 10mm      b) 15m      c) 20m      d) 25m
109. What is the limit of variation of versing in mm for realignment and curve of BG for speed range of 80 to 120 kmph of average circular versines
- a) 10mm      b) 15mm      c) 20mm      d) 25mm

110. What is the limit of variation of versine in MM for realignment BG curve for speed range 50 to 80 kmph of average circular?  
a) 10mm    b) 15mm    c) 20mm    d) 40mm

#### **4. ON TRACK MACHINE**

111. The squeezing pressure for PSC sleeper is how much kg/cm<sup>2</sup>  
a) 50-60    b) 80-100    c) 110-120    d) 120-130
112. No. of insertion up to what lift in PSC sleeper is one  
a) 20mm    b) 30mm    c) 40mm    d) 50mm
113. Which lining system is being used in case of latest machine?  
a) Single cord    b) double cord    c) Three cord    d) None
114. Technical name of the machine used for consolidation of track is  
a) DGS    b) DTS    c) TTM    d) CSM
115. At the close of machine tamping work, ramp should be  
a) lin 500    b) lin 600    c) lin 1000    d) None
116. What is tamping tool depth below the bottom edge of sleeper in Case of flat bottom sleeper  
a) 6-8mm    b) 8-10mm    c) 9-10mm    d) 10-12mm
117. What number of sleeper can be placed by tamping express at a Time  
a) 4    b) 3    c) 2    d) 1
118. Number of insertions are required on PRC sleeper road when lift is more than 30 mm



a) 2      b) 1      c) 3      d) nill

119. What is the frequency of tamping of PRC sleeper is

a) 50GMTor 1 year   b) 100 GMT or 1 year

c) 100 GMT or 2 year      d) 200 GMT or 2 year.

120. What is the permissible wear on tamping tool of standard size

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

121. Name the machine used in ballast cleaning of points and crossing

a) FRM – 80      b) T28      c) RM-76      d) CSM

122. The machine used for shoulder ballast cleaning is

a) FRM - 80      b) T28      c) RM 76      d) CSM

123. After one round of tamping along with DTS after deep screening  
The traffic can be resumed with speed restriction of

a) 20kmph      b) 30kmph      c) 40kmph      d) CSM

124. Which machine is used for turnout renewal?

a)      PQRS      b) BCM-28      c) T-28      d) RM-76

125. In which mode machine tamping should always be done.

a) Design mode      b) normal      c) both      d) none

126. The auxiliary track for PQRS working canbe allmost higher than  
The existing track by

a) more than 50 mm      b) more than 40 mm

- c) more than 30 mm      d) None

## **5. TURNOUT AND USFD**

127. Permissible limit of wear on nose of CMS crossing is
- a) 6mm      b) 7mm      c) 8 mm      d) 10mm
128. How much mm is deducted from measured value of wear in case of 60 kg CMS crossing
- a) 1.5    b) 2.0      c) 2.5      d) 3.0
129. How much mm is deducted from measured value of wear in case of 52 kg CMS crossing
- a) 1.5      b) 2.0      c) 2.5      d) 3.0
130. To ensure gapless joint in CMS crossing the dia of rail hole should be kept strictly as
- a) 26 mm    b) 26.5 mm    c) 27mm    d) 31mm
131. Which type of electrodes are used for reconditioning of CMS Crossing
- a) H1      b) H2      c) H3      d) H4
132. In lin 12 fan shaped layout total no of approach and exit sleepers is
- a) 11      b) 13      c) 15      d) 17
133. Total no of concrete sleeper in lin 12 fan shaped turnout is
- a) 84      b) 91      c) 93      d) 96
134. Total no of concrete sleeper in lin 8<sup>1/2</sup> fan shaped turnout is

- a) 61            b)65            c) 67            d) 70

135. Switch length of lin 12 fan shaped layout is

- a) 8800 mm    b)9500 mm    c)10125 mm    d) 11000 mm

136. Switch length of lin 8 1/2 fan shaped layout is

- a) 6000 mm            b) 6400 mm            c) 6800 mm            d) 7100 mm

137. Overall length of lin 12 fan shaped turnout is

- a) 37850 mm            b)38700 mm    c)39900 mm            d) 39975mm

138. Overall length of lin 8 1/2 fan shaped turnout is

- a) 28789 mm            b)28710 mm            c)27980 mm            d) 27800 mm

139. Maximum permissible speed in lin 8 1/2 fan shaped turnout is

- a) 8 kmph            b) 10 kmph    c)15 kmph    d) 20 kmph

140 Maximum permissible speed on 1 in 8.5 symmetrical split is

- a) 10kmph            b) 15kmph    c) 20kmph    d) 30kmph

141) Maximum permissible speed on 1 in 12 fan shaped turnout is

- a) 10kmph            b) 15kmph            c) 20kmph    d) 30kmph

142) Length of 1 in 12 CMS crossing is

- a) 3600 mm    b) 4100mm            c) 4350mm            d) 4600mm

143) Length of 1 in 8.5 CMS crossing is

- a) 3330 mm    b) 3400mm    c) 3850mm    d) 3900mm

144) Versing in lead portion are measured on a chord of length

- a) 3m    b) 4.5 m    c) 6 m    d) 9m

145. Defective well shall be marked with following cross

- a) One red cross    b) two red cross  
c) One yellow cross    d) two yellow cross

146. IMR rail should be replaced within days of detection.

- a) One    b) two    c) three    d) four

147. In USFD coding 421 “4” means

- a) Rail    b) Welding    c) Joint    d) Hole

148. First periodic test for AT welding should be done after

- a) 1 year    b) 1 ½ year    c) 2 year    d) 3 year

## **6. MISCELLANEOUS P. WAY ITEMS**

149. Indian railway is divided in how many zones based on rail temperature  
a) 4            b) 3            c) 2            d) 1
150. The medical standard of a gateman should be  
a) A I   b) A III    c) B II        d) C
151. Maximum vertical alignment tolerances on surface of head at end of the 1 m straight edge for new SKV welds is  
a) +1.00 mm/ -0.00mm    b) +0.5/-0.5 mm  
c) +1.0/-0.4 mm        d) +11.0/0.5 mm
152. Maximum vertical tolerance of finished welding on surface of head at 10 cm straight edge is  
a) +0.5mm/-0.0mm        b) 0.4 mm/-0.0mm  
c) 0.4mm/-0.1mm        d) +0.5mm/-0.1 mm
153. Maximum lateral alignment tolerances of finished welding on 1 m straight edge is  
a) 0.4 mm            b) 0.3 mm        c) 0.5 mm        d) 0.6 mm
154. Maximum lateral alignment tolerance of finished weld on 10 cm straight edge is  
a) 0.2 mm            b) 0.3 mm        c) 0.4 mm        d) 0.5 mm
155. Pre-heating time from AT welding by air petrol mix is  
a) 8-10 min            b) 10-12 min    c) 15-18 min        d) 18-20 min
156. Final grinding of weld should be completed within hours  
a) 12                b) 16            c) 18            d) 24
157. The vertical wear of rails should not be more than for welding Purpose  
a) 6 mm            b) 8 mm        c) 10 mm        d) 12mm

158. Competency certificate for working is LWR / CWR is valid for  
a) 1 year    b) 2 year    c) 2 1/5 year    d) 3 year
159. While working a push trolley, the distance of protection in case view is not clear on B.G  
a) 30 m    b) 600 m    c) 900 m    d) 1200m
160. What is duration of pre monsoon attention?  
a) 3 months    b) 2 months    c) 4 months    d) 1 months
161. Duration of monsoon attention period is  
a) 2 months    b) 3 months    c) 4 months    d) 1 months
162. Duration of post monsoon attention is  
a) 6 month    b) 4 month    c) 3 month    d) 2 month
163. Longitudinal movement of rail is called  
a) Expansion    b) Contraction    c) CREEP    d) SEJ
164. Usually adjustment of rail is needed whenever creep exceeds  
a) 150 mm    b) 200 mm    c) 100 mm    d) 50 mm
165. Unevenness is measured on base of  
a) 1.5 m    b) 3.0 m    c) 3.6 m    d) 7.2 m
166. When visibility is restricted the push trolley on BG shall be Protected by a flagman having hand signal with what number  
a) 1    b) 2    c) 3    d) NONE
167. The distance covered in a day by a patrol man should not Normally exceed  
a) 6 km    b) 10 km    c) 15 km    d) 20 km
168. Minimum distance between two motor trolleys running together on same line should be  
a) 500 m    b) 400 m    c) 200 m    d) 100 m

169. Rail dollies shall not be worked on gradients steeper's than  
a) lin 200                      b) lin 100      c) lin 60                      d) lin 50
170. Mold waiting time should be  
a) 2-3 min                      b) 3-4 min                      c) 4-5 min      d) 4-6 min
171. Validity period of competency certificate of welder is  
a) 6 months                      b) 1 year                      c) 2 year                      d) 2 ½ year
172. Maximum size of ballast on B.G routes is  
a) 75mm                      b) 65mm                      c) 40mm                      d) 20mm
173. Permissible loss of weight in 60 kg rail section is  
a) 2%    b) 6%                      c) 8%                      d) 10%
174. Gauge of auxillary track shall be  
a)1676mm                      b) 1680mm    c)1750mm    d)3400mm
175. In which condition, by push trolley the track is inspected  
a) Loaded    b) Floating                      c) Both                      d) None
176. In which condition by foot plate/rear van the track is inspected  
a) Loaded    b) Floating    c) both                      d) None
177. What parameter of oscillatons are recorded by OMS 2000  
a) Vertical    b) Lateral    c) Both    d) None
178. Frequency of track recording on route above 130kmph is  
a) 15 days    b) 1 month    c) 2months                      d) 3months
179. Frequency of OMS 2000onroute with speed 110 kmph is  
a) once in month    b) 2 month    c) 3 months    d)m months
180. Minimum no of member in Sr. subordinate enquiry committee are  
a) 1                      b) 2                      c) 3                      d) 4
181. What is the maximum limit of persons which can sit on a BG Push Trolley?

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

182. Validity period of competency certificate for push trolley is  
a) 1 year      b) 2 year      c) 5 ½ year      d) 3 year
183. In which station neutral zone is available  
a) A class      b) B class      c) C class      d) all
184. Which aspect shown in normal position in automatic signal  
a) Green      b) Double yellow      c) Yellow      d) Red
185. What aspect shown in normal position in calling on signal  
a) Red      b) Yellow      c) White      d) No sight
186. Safety range in electrified areas is  
a) 1 m      b) 1.5 m      c) 2.0 m      d) 3.0 m
187. Maintenance of track is not required if the TGI is  
a) >80      b) >85      c) >90      d) >100
188. What parameter of OMS called bad spot  
a) > 0.30g      b) > 0.10g      c) >0.35g      d) All
189. Value of total gap at joint of SKV welding is  
a)  $20^{+/-}2\text{mm}$       b)  $24^{+/-}1\text{mm}$       c)  $25^{+/-}1\text{mm}$       d)  $25^{+/-} 2\text{mm}$
190. When the rail is fractured, at what gap closure should be put in to the track  
a) 15mm                      b) 20mm      c) 25mm      d) 30mm
191. What is the radius in which no one should allowed while testing Detonators  
a) 20m                      b) 25m                      c) 45m                      d) 50m
192. Rail renewed become due for BG 60 kg rail section where vertical wear exceeds  
a) 8mm                      b) 10mm                      c) 12mm                      d) 13mm
193. Rail renewed become due for BG 52 kg rail section where vertical wear exceeds



- a) 6mm                      b) 8mm                      c) 10mm                      d) 13mm
194. Track parameter are recoded is TRC in a block of what length  
a) 50m                      b) 100m                      c) 200m                      d) 300m
195. What parameters are OMS required urgent attention  
a) >0.35g                      b) 0.33g                      c) 0.30g                      d) 0.25g
196. TGI less than 80 is considered for what type track maintenance  
a) Urgent      b) planed Base      c) aeed base concept d) None
197. TGI less than 50 is considered for what type track maintenance  
a) Urgent      b) Planed base      c) need base concept d) None
198. TGI less than 36 is considered for what type track maintenance  
a) Urgent      b) Planed base      c) need base conceptd) None
199. under which correction slip oiling and grissing of ERC is not the Part of Key man duty  
a) 141                      b) 142                      c) 144                      d) 145

## **7. SPEED RESTRICTION AND SUPERVISION LEVEL**

200. The first train after emergency repair to rail breakage should be passed with speed of  
a) Stop with 10 kmph b) 10 mmph c) 20 kmph d) 30 kmph
201. For distressing purpose a caution order of what kmph should be Imposed  
a) 15 b) 20 c) 30 d) 45
202. After maintenance in LWR track with concrete sleeper but consolidation period is due and rail temperature rises above  $t_d + 20^{\circ}C$  what S. R. should be imposed in BG  
a) 20 kmph b) 30 kmph c) 45 kmph d) 50 kmph
203. In deep screened track with manual packing the normal speed is Restored on.  
a) 10<sup>th</sup> day b) 15<sup>th</sup> day c) 18<sup>th</sup> day d) 21<sup>st</sup> day
204. In deep screened track with machine packing the normal speed is restore on  
a) 8<sup>th</sup> day b) 10<sup>th</sup> day c) 12<sup>th</sup> day d) 15<sup>st</sup> day
205. In case of stop dead restriction cautioned indicate shall be Permit at which Distance from work site  
a) 30m b) 600m c) 800m d) 1200m
206. In case of of medical speed rationed caution indicator shall be provided at which distance from work like  
a) 30 m b) 600 m c) 800 m d) 1200 m
207. In which distance banner flag should be placed from work spot on BG Track  
a) 30 m b) 200 m c) 400 m d) 600 m

208. In which distance speed indicator should be placed from work spot
- a) 15m                      b) 30m                      c) 100 m                      d) 600 m
209. Minimum speed restriction to be imposed for track renewal is
- a) 10kmph                      b) 15kmph                      c) 20kmpm                      d) 30kmph
210. In what distance the first detonate to be fired from obstruction during emergency
- a) 30m                      b) 600 m                      c)1200 m                      d) 1220 m
211. While using rail clustered as temporary arrangement what speed Restriction be imposed
- a) stop and 10kmph                      b) 20kmph                      c)30kmph                      d)45kmph
212. What speed restriction imposed when sleeper fastening on Alternative sleeper are loosened before distressing in BG
- a) 10 kmph                      b) 15kmph                      c) 20 kmph                      d) 30 kmph
213. For emergency repairs to buckled track minimum teal of supervision is
- a) JE                      b) SSE                      c) Mate                      d) key man
214. Mechanical screening of ballast in LWR should be done in the supervision of
- a) Mate                      b) Key Man                      c) JE/ SSE                      d) all
215. Minimum level of supervision for renewal of fastening not Requiring lifting in LWR track is
- a) Track man                      b) Key man                      c) Mate                      d) none
216. Minimum level of supervision for renewal of fastening requiring Lifting in LWR track is
- a) Mate                      b) JEE                      c) Key man                      d) none

217. Minimum level of supervision for carrying out Welding of rail Joints at site is  
a) JE                      b) PWS                      c) SSE d) none
218. Which lowest level supervision the making up shortage of ballast in shoulder at isolated plate  
a) Mate                      b) Key man                      c) JE                      d) ALL
219. Which lowest level supervision doing all operation regarding Distressing  
a) SSE b) JE                      c) ADEN                      d) Mate
220. Which lowest level supervision attended the emergency repairs In buckling  
a) SSE b) JE                      c) Key man                      d) Mate
221. Which lowest authority can check the SEJ, oiling and greasing with renewal of fittings once a fort night  
a) Patrol man b) Key Man                      c) Mate                      d) JE

## 8. INSPECTION SCHEDULE

222. SSE/P Way should check the equipment's of level crossing once
- a) in a month                      b) in a two month  
c) in a three month              d) In a four month
223. SEJ's are respected by sectional / in charge (JE/SSE) once in how many days in hottest and coldest months
- a)15              b) 30              c) 45              d) 60
224. SEJ's are respected by sectional / in charge (JE/SSE) once in how many months accept hottest and coldest months
- a) 1              b) 1.50              c) 2.50              d)2
225. Frequency of push trolley inspection by in charge SSE for concrete sleeper track under mechanized the maintenance is once in
- a)one month b) two month c) fort night d) none
226. Frequency of push trolley inspection by sectional JE /SSE for concrete sleeper track under mechanized the maintenance is once in
- a)one month b) two month c) fort night d) none
227. Longitudinal moment of rail is called
- a) Expansion              b) contraction              c) creeps              d) SEJ
228. Frequency of land boundary inspection by SSE is
- a) once in 3 month              b) once in 4 month  
c) once in 6 month              d) once in a year
229. Frequency of gang tools checking by in charge SSE is
- a) Once in a month              b) fort night  
c) once in 2 month              d) Once in three month
230. In what specified time sectional JE/SSE ( P.Way ) should inspect entire section on foot in a systematic manner
- a) 3 month B) 6 month c) 9month d) 12 month

## **9. SCHEDULE OF DIMENSIONS (SOD)**

231. Cross slop on top of formation is  
a) 1 in 30    b) 1 in 36                    c) 1 in 40    d) 1 in 20
232. Width of formation for single line BG embankment with PSC sleepers  
a) 6250 mm   b) 6550 mm                    c) 6850 mm   d) 7000 mm
233. C/C distance of track on BG for new construction is  
a) 4625 mm   b) 4800 mm                    c) 5000 mm   d) 5300mm
234. Width of formation for double line BG in embankment with PSC Sleepers  
a) 12000 mm   b) 12150 mm                    c) 12155 mm   d) 12200 mm
235. Width of formation for single line BG in cutting with PSC sleepers  
a) 6000 mm   b) 6250 mm                    c) 6400 mm   d) 6600 mm
236. Width of formation for double line BG in cutting the PSC sleepers  
a) 10500 mm   b) 11300 mm                    c) 11550 mm   d) 12000 mm
237. Formation width for double line BG in embankment with PSC sleepers for new construction is  
a) 12155mm   B) 12550mm                    c) 13000 mm   d) 13160 mm
238. Formation width for double line BG in cutting with PSC sleeper for new construction is  
a) 12155mm   B) 12550mm                    c) 13000 mm   d) 13160 mm
239. Formation width for single line BG in embankment with PSC sleeper for new construction is  
a) 6850mm    B) 7150mm   c) 7850 mm   d) 8000 mm
240. Formation width for single line BG in cutting with PSC sleeper for new construction is  
a) 6850mm    B) 7150mm   c) 7850 mm   d) 8000 mm

241. Site slope of formation in embankment should not be steeper  
Then  
a) 1:1          b) 1.5 :1          c) 2:1          d) 2.5 :1
242. Bottom of site drains should be centimeter below the chess  
a) 20          b) 30          c) 35          d) 40
243. Maximum check rail clearance for 1673 mm gauge is  
a) 44mm          b)45 mm          c) 47 mm          d) 48 mm
244. Minimum check rail clearance for 1673 mm gauge is  
a) 38 mm          b)40 mm          c) 41 mm          d) 43 mm
245. Heel divergence in case of 1 in 12 fan shaped turn out is  
a) 150 mm          B) 160 mm          c) 175 mm          d) 183 mm
246. Minimum distance of get post from center line of nearest track is  
a) 3m          B)4 m          c) 4.5 m          d) 6 m
247. In normal cases height gauges shall be located at a distance of from the gate post.  
a) 4 m          B)5 m          c) 6 m          d) 8m
248. Minimum distance of duty hut from center line of nearest track and edge of road metaling shall be  
a) 5 m          B) 6m          c) 8 m          d) 10 m
249. Banner flag at level crossing shall be provided at a distance from the ends of the check rail  
a) 2 m          B) 3m          c) 4 m          d) 5 m
250. The census of special class level crossing is done once in  
a) 1 .5 year          B) 2 year          c) 2.5 year          d) 3 year
251. On platform lines the distance Pieces are provided at an interval  
a) 30 m          B) 20m          c) 15 m          d) 10
252. Following mark is provided between to track when the distance between two track is less than

- a) 4.265m c/c b) 4.60m c/c c) 4.625m c/c d) 4.8m c/c
253. Minimum height above R. L. of a high level passenger platform is  
a) 700 mm b) 740mm c) 760mm d) 780mm
254. Maximum height above R. L. of a high level passenger platform is  
a) 760 mm b) 800mm c) 810mm d) 840mm
255. The minimum gape of check rail in level crossing is  
a) 45 mm b) 46mm c) 48mm d) 51mm
256. The maximum gape of check rail in level crossing is  
a) 48 mm b) 51mm c) 57mm d) 59mm
257. Maximum clear distance between to consecutive sleeper on Girder Bridge for new work should not be more then  
a) 250 mm b) 300mm c) 350mm d) 450mm
258. Maximum horizontal distance from center track to face of any platform wall  
a) 1870mm b) 1890mm c) 1905mm d) 1910mm
259. Minimum horizontal distance from center track to face of any Platform wall  
a) 1675mm b) 1680mm c) 1690mm d) 1910 mm
260. As per SOD minimum radius of curve in BG is  
a) 175 m b) 185 m c) 210m d) 250m
261. The minimum horizontal distance from center of track to face of passenger platform copping is  
a) 1650 mm b) 1660mm c) 1670mm d) 1680mm
262. The maximum horizontal distance from center of track to face of passenger platform copping is  
a) 1680 mm b) 1670mm c) 1660mm d) 1650mm
263. For existing works maximum gradient in station yard is  
a) 1 in 200 b) 1 in 400 c) 1 in 600 d) 1 in 1000



264. For new work maximum gradient in station yard is
- a) 1 in 1200   b) 1 in 1000   c) 1 in 400   d) 1 in 200
265. The minimum throw of switch on BG thick web switch is
- a) 115mm   b) 160mm   c) 165mm   d) 95mm
266. The minimum throw of switch on BG turn out is
- a) 95mm   b) 100mm   c) 115mm   d) 120mm

## **10. ESTABLISHMENT AND RAJBHASHA**

267. How many days maternity leave admissible to a female railway employee  
a) 90 days    b) 120 days    c) 160 days    d) 180 days
268. How many days paternity leave admissible to a male railway employee  
a) 15 days    b) 20 days    c) 25 days    d) 30 days
269. LAP can be accumulated up to what maximum number of days  
a) 200 days    b) 240 days    c) 300 days    d) 360 days
270. HLAP can be accumulated up to what maximum number of days  
a) 150 days    b) 250 days    c) 560 days    d) no restriction
271. To whom granted child care leave  
a) Male railway employee    b) female railway employee  
c) both    d) none
272. In what time within which the appeal can be made to appellate authority  
a) 10 days    b) 20 days    c) 30 days    d) 45 days
273. SF 1 means employee under  
a) Suspension    b) deemed suspension    c) revoke    d) none
274. SF 2 means employee under  
a) Suspension    b) deemed suspension    c) revoke    d) none
275. SF 4 means employee under  
a) Suspension    b) deemed suspension    c) revoke    d) none
276. SF11 is given to a railway employee for  
a) Minor penalty    b) major penalty    c) both    d) none
277. SF5 is given to a railway employee for  
a) Minor penalty    b) major penalty    c) both    d) none

278. For conducting departmental inquiry the orders to form the committee will be given by  
a) ADRM b) DRM c)AGM d) ALL
279. For conducting senior sub ordinate inquiry the orders to form the committee will be given by  
a) Sr. DSO b) Sr. DOM c) Sr. DEN d) ALL
280. What is the specified time limit for submission of defense in DAR inquiry  
a) 7 Days b) 10 days c) 15 days d) 30 days
281. Color of the first class privilege pass issued to a subordinate is  
a) Green b) White c) Yellow d) Pink
282. Color of the first class A privilege pass issued to a officer is  
a) Green b) White c) Yellow d) Pink
283. What number of days maximum LAP can be granted at one time  
a) 90 Days b) 120 days c) 180 days d) 360 days
284. Chairman of PNM at zonal level is  
a) GM b)AGM C)Deputy GM d)None
285. Frequency of PNM meeting at divisional level is  
a) 2 month b)3 month c)4 month d) 6month
286. As per minimum wages act limit of hours in a day that employee can do the Work  
a) 6 hours b)8 hour c)9 hour d) 12 hour
287. Under hours of employment regulation railway staff working as JE /SSE (P.Way) is categorized as  
a) Exclusive b) intermittent c) continues d) none
288. What is the color of first class A privileged pass issued to a subordinate is

a) White      b) green      c) Yellow      d) Pink

289. When Rajbhasha Adhiniyam came in force

a) 1949      b) 1960      c) 1962      d) 1963

290. How many dharaye in Rajbhasha Adhuniyam

a) 5      b) 7      c) 9      d) 11

291. How many languages included in 8<sup>th</sup> Sedum of Indian constitution as a Rajbhasha

a) 22      b) 16      c) 14      d) 10

292. When Rajbhasha Niyam made by central government

a) 1963      b) 1965      c) 1973      d) 1976

293. As per Rajbhasha Niyam in how many region India devised

a) 3      b) 2      c) 1      d) Nill

294. In which day Hindi Diwas is celebrated every year

a) 14<sup>th</sup> March      b) 14<sup>th</sup> May      c) 14<sup>th</sup> September      d) 14<sup>th</sup> November

295. How many members are in Hindi Parlimentary Rajbhasha Samiti

a) 10      b) 20      c) 30      d) 40

## **11. TENDERS AND ACCOUNTS**

296. Verification of stock is done by  
a) In charge SSE    b) stock verifier    c) ADEN    d) None
297. The frequency of stock verification for impress store is  
a) 4 year    b) 3 year    c) 2 year    d) once in a year
298. What number of copies of stock asheet is prepared by stock verifier  
a) 3    b) 4    c) 7    d) 6
299. Sores are broadly classified in how many categories  
a) 1    b) 2    c) 3    d) 4
300. Frequency of verification of dead stock by stock holder is  
a) 1 year    b) 2 year    c) 3 year    d) 6 month
301. Frequency of stock verification for MAS stores is  
a) 1 year    b) 5 year    c) 3 year    d) 6 month
302. What percentage of entry in dead stock register should be checked by ADEN every year?  
a) 5%    b) 10%    c) 15%    d) 20%
303. Name the tender which is received after opening of tender  
a) Late    b) delayed    c) open    d) Global
304. What percentage of earnest money for the work costing up to Rupees 25 per crore shall be  
a) 1%    b) 2%    c) 3%    d) 5%
305. What percentage of securities deposit for each work shall be charged of total contract value  
a) 5%    b) 7%    c) 10%    d) none
306. Minimum which rank of officer released securities deposit  
a) HA Grade    b) JA Grade    c) Group B Grade    d) all
307. What percentage of contract value shall be deposited as a performance guarantee for the work?  
a) 4%    b) 6%    c) 5%    d) 10%
308. What numbers of sealed quotation should be invited

- a)1                      b) 2                      c) 3                      d) 4
309. Name the estimate which is prepared to obtain administrative approval
- a) Abstract    b) detailed                      c) completion d) none
310. Name the estimate which is prepared to obtain technical sanction of work
- a) Abstract    b) detailed                      c) completion d) none
311. Name the estimate which is prepared in super session of construction
- a) Abstract    b) detailed                      c) completion d) none
312. Under which section land can be acquired in case of emergency
- a) 11                      b) 14                      c) 17                      d) 5

## 1 jYosVW LVDpj , oafcz

- 1- 52 dsh jy dh Apkbz gsh gA  
 d½151 feeh [W½153 feeh x½156 feeh ?W½156 feeh
- 2- 60 dsh jy dh Apkbz gsh gA  
 d½170 feeh [W½172 feeh x½173 feeh ?W½175 feeh
- 3- 60 dsh jy dsQySt dh pWkbz gsh gA  
 d½150 feeh [W½149 feeh x½152 feeh ?W½154 feeh
- 4- 60 dsh jy dsQySt dh pWkbz gsh gA  
 d½13-5 feeh [W½14-0 feeh x½15-5 feeh ?W½16-5 feeh
- 5- iy dsigp ekZeaLFWbz jy Dykdj dh yEckbz l sde ugh gsh pfg, A  
 d½9 eh [W½10 eh x½11 eh ?W½12 eh
- 6- 90; Wh, l jy ravf/kdre vuqr f" kekj LV1 dsh feel<sup>2</sup> gsk gA  
 d½20 [W½21 x½22 ?W½22-5
- 7- 72 ; Wh, l jy ravf/kdre vuqr f" kekj LV1 dsh feel<sup>2</sup> gsk gA  
 d½17 [W½18 x½19 ?W½20
- 8- 60dsh 90 ; Wh, l jy dh l fol ylbQ gsh gA  
 d½550<sup>th</sup>, eVh [W½600<sup>th</sup>, eVh x½725<sup>th</sup>, eVh ?W½800<sup>th</sup>, eVh

- 9- 60dŧh 72 ;ŧh, l jŧ dh l foŧ ykQ gkŧh gŧ  
 d½450<sup>th</sup>, eVh      [ŧ½500<sup>th</sup>, eVh x½550<sup>th</sup>, eVh      ?ŧ½700<sup>th</sup>, eVh
- 10- 52dŧh 90 ;ŧh, l jŧ dh l foŧ ykQ gkŧh gŧ  
 d½450<sup>th</sup>, eVh      [ŧ½525<sup>th</sup>, eVh x½550<sup>th</sup>, eVh      ?ŧ½700<sup>th</sup>, eVh
- 11- 52dŧh 90 ;ŧh, l jŧ dh l foŧ ykQ gkŧh gŧ  
 d½325<sup>th</sup>, eVh      [ŧ½350<sup>th</sup>, eVh x½450<sup>th</sup>, eVh      ?ŧ½525<sup>th</sup>, eVh
- 12- viŧ 11 vŧŧ cŧn eafufeŧ jŧyŧkŧdŧŧŧŧ; sVŧV Qh vof/k fdruh gkŧhŧŧ  
 d½15 ifr'' kr      [ŧ½20 ifr'' kr      x½25 ifr'' kr      ?ŧ½30 ifr'' kr
- 13- jŧ dh dŧŧjrk eki usdh bdkbZ gkŧh gŧ  
 d½, , p, u      [ŧ½h, p, u      x½l h, p, u      ?ŧ½Mh, p, u
- 14- 72 ;ŧh, l jŧ dh dŧŧjrk ch, p , u gŧ  
 d½200      [ŧ½220      x½240      ?ŧ½250
- 15- 90 ;ŧh, l jŧ dh dŧŧjrk ch, p , u gŧ  
 d½260      [ŧ½265      x½270      ?ŧ½280
- 16- xbM iŧŧŧij QŧLVfue mi ;kŧ djrsgŧ  
 d½yŧVhd      [ŧ½yŧx½jŧQh      ?ŧ½dkbZugh
- 17- , l Mcyŧckj eŧŧ; ŧre cŧŧLV dŧŧ ku gkŧk gŧ  
 d½150 feeh      [ŧ½200 feeh      x½250feeh      ?ŧ½300 feeh



18- ,y Mcywckj eall; qre cSyMLV dđ ku gkřk gđ

d½200 feeh                      [½30 feeh                      x½250feeh                      ?½350 feeh

19- e" ku Vřpř dsfy; sU; qre I Q cSyMLV dđ ku gkřk pľfg, A

d½200 feeh                      [½300 feeh                      x½250 feeh                      ?½350 feeh

20- 40 feeh oxkđkj Nuusij fxVVh : duk pľfg, A

d½20 ifr" kr I s30ifr" kr [½30ifr" kr I s40 ifr" kr  
x½40 ifr" kr I s50 ifr" kr ?½40 ifr" kr I s60ifr" kr

21- 65 feeh oxkđkj Nuusij fxVVh I svřđd ugh : duk pľfg, A

d½2 ifr" kr                      [½4 ifr" kr                      x½5 ifr" kr                      ?½6 ifr" kr

22- e" ku ØbM fxVVh dsfy; s20 feeh oxkđkj Nuusij I sde fxVVh , dy  
ugh pľfg, A

d½95ifr" kr                      [½96ifr" kr                      x½97 ifr" kr                      ?½98ifr" kr

23- gľk nř rMh x; h fxVVh dsfy; s20 feeh oxkđkj Nuusij I sde feVVh  
ugh: duk pľfg, A

d½92ifr" kr                      [½95ifr" kr                      x½97ifr" kr                      ?½98ifr" kr

24- cSyMLV eki usdsfy; sNuusđk I gt gkřk gđ

d½100x70 x 10 I eh                      [½110x 70x 10 I eh                      x½100x 70x 20

?½100x 75x 10 I eh

25- eřkuh řs- eafeVVh dspVVsdh Āpkř I sde ugh gkřh pľfg; A

d½0-50 eh                      [½1-0 eh                      x½1-5 eh                      ?½2-0 eh

26- i gMh řs- eafeVVh dspVVsdh Āpkř I sde ugh gkřk pľfg; A

d½0-50 eh                      [½1-0 eh                      x½1-5 eh                      ?½2-0 eh

- 27- fxVVh dspVVsdh Åpkbz I svf/kd ugh gksh pfg; Å  
 d½1-5 eh [½2-0 eh x½2-5 eh ?½3-0 eh
- 28- tgMØMØV lykvj VuZvkÅV fcNk; sx; sgS, I bZts, oa, I vkj, tsdscp  
 dkil k isy gksh pfg; Å  
 d½, d jy isy [½nksjy isy x½rhu jy isy ?½dkbZHh ugh
- 29- ,yMØywkj eatksh III, oaV dsfy; scQj jy dh I Å; k gksh gÅ  
 d½4 [½3 x½2 ?½1
- 30- ,yMØywkj eaxbM iy ds, cjeV I sfdruh nñh ij nñ fl jsdk , I btsfc[krsgsÅ  
 d½10 eh [½15 eh x½16 eh ?½18 eh
- 31- fdrusoxZeh ; k vf/kd tyekxZokysiy dksegRoiqZiy dgrsgÅ  
 d½100 [½200 x½500 ?½100
- 32- iy dk fufj{k.k , I , I bz@ ihgshñkj o'k eadc , d ckj dguk pfg, Å  
 d½ekul q dsigys [½ekul q ea x½ekul q chn ?½I Hh
- 33- ftI iy dk dy jÅHr, tyekxZ18 eh I sde gksh; k dkbZHh Dyhvj LFku  
 12 eh ; k vf/kd u gksh ml sdgrsgÅ  
 d½ekbuj [½estj x½bãWV ?½dkbZugh
- 34- ftI iy dk dy jÅHr, tyekxZ18 eh vf/kd ml sdgrsgÅ  
 d½ekbuj [½estj x½bãWV ?½dkbZugh
- 35- tc I rr cglo dsfcuk xgjh ?½Vh dksjYosikj djrh gSrc ml sdgrsgÅ  
 d½fct [½I jx x½ok; MDV ?½dkbZugh

## 2- jş dk j [kj [ko

36- iy dsigpp ekZeaLFWbzjş Dyktj dh yEckbzI sde ugh gksh pfg, A

d½9 eh                      [½10 eh                      x½11 eh                      ?½12 eh

37- 90; Wh, I jş ravf/kdre vuqr f" lej LVŞ dsh feel² gkşk gA

d½20                      [½21                      x½22                      ?½22-5

38- 72 ; Wh, I jş ravf/kdre vuqr f" lej LVŞ dsh feel² gkşk gA

d½17                      [½18                      x½19                      ?½20

39- , yMCyokj eafdrusLyhiş ifr fdeh fcNkusdsfy, fLrişkdsch dh nyh

65 I eh gSA

d½1500                      [½1540                      x½1600                      ?½1660

40- xbZ 40-1660 Lyhiş ifr fdeh fcNkusdsfy; sLyhişkdsch nyh fdrus I eh gksh gA

d½50                      [½55                      x½60                      ?½65

41- xbZ iyşij QkVfue mi ; kş djrşgA

d½byşLVd                      [½eşy                      x½jş Qh                      ?½dkbzugh

42- I kş; {s-kæabzvkiş I h dk ikjEkd VksyM VLVx 4 o'k ; k th, evh ikiş gkşij dh tkrh gA

d½100                      [½150                      x½200                      ?½250

43- txş yxusokys{s-kæabzvkiş I h dk ikjEkd VksyM VLVx o'k ; k 100 th, evh

ikiş gkşij dh tkrh gA

d½1                      [½2                      x½3                      ?½4

44- ~~tx~~ yxusokys {~~ls~~-~~ks~~ abzv kj-l h dk yqhd's' ku ea, d ckj fdLr tkrk gS

d½o'kz ea, d ckj [½o'kz eankscjk x½o'kz earhu ckj ?½pkj ckj

45- ~~tx~~ u yxusokys {~~ls~~-~~ks~~ abzv kj-l h dk yqhd's' ku ea, d ckj fdLr tkrk gS

d½o'kz ea, d ckj [½nks o'kz ea, d ckj x½o'kz earhu ckj ?½pkj ckj

46- 12 es1 Qs "MM VuZvkÅV eady , ihp rFk , DtW Lyhijkdh I ½; k gA

d½11 [½13 x½15 ?½17

47- 12 es1 Qs "MM VuZvkÅV eady Lyhijkdh I ½; k gA

d½84 [½91 x½93 ?½96

48- 8-5 gkQ es1 Qs "MM VuZvkÅV eady , ihp rFk , DtW Lyhijkdh I ½; k gA

d½61 [½65 x½67 ?½70

49- I M gā dh , -, u-l h l sdy yākbz gk'h gA

d½60 eh [½66 eh x½72 eh ?½78 eh

50- ch-th Vā i j xMzj sy rFk jfux j sy dschp vrjky gk'k gA

d½200+/-25 feeh [½250+/-50 feeh x½200+/-25 feeh ?½200+/-50 feeh

51- dñ okj Mā cukusdfy; sdfVā l sde Åph gk'h pkfg, A

d½3 eh [½4 eh x½5 eh ?½5-5 eh

52- Vā l fdV {~~ls~~- eaykbuj bLrēky fd; stkrsgA

d½uku bā yVks [½vk; ju x½eVfyd ?½bā yjM

- 53- I h@Qk cMZYoy Økl x I snj yxk; k tkrk gÅ  
 d½500 eh [½600 eh x½800 eh ?½dkbZHh ugha
- 54- yoy Øfl x ij psd Vy dh yEcbZ I Md dh pMkbZ I sfdruh vf/kd gkrh gÅ  
 d½1 eh [½1-5 eh x½2-0 eh ?½3-0 eh
- 55- ,y Mcyvvkj dh vf/kdre yakbz gkrh gS  
 d½1000 eh [½2000 eh x½, d CyM tD'' ku ?½dkbzugh
- 56- fdt vf/kdre xM ij ,y Mcyvvkj MkyI drsgS  
 d½50 es1 [½100 es1 x½136 ea1 ?½113 ea1
- 57- cdfyx ds vujj (ku ds njsku U; ure yakbz dk Dyktj Mkyk tkrk gS  
 d½4-5 eh [½5-0 eh x½6-0 eh ?½6-5 eh
- 58- xgjh Nulbz dk dle fuEu eaI sfdI h fl ek ds vaxZ ,y Mcyvvkj @I h Mcyvvkj ds dWsf cuk fd; k tk I drk gS  
 d½ $t_d+10^{\circ}\text{C}$  I std- $20^{\circ}\text{C}$  [½ $t_d+10^{\circ}\text{C}$  I std- $10^{\circ}\text{C}$   
 x½ $t_d+20^{\circ}\text{C}$  I std- $20^{\circ}\text{C}$  ?½ $t_d+20^{\circ}\text{C}$  I std- $10^{\circ}\text{C}$
- 59- ,y Mcyvvkj @I h Mcyvvkj es Qylo o fl dMu ds fy, ds iR; d fl js ij Mkyh tkusokyh ; Ørh dks drsgS  
 d½cQj jy [½, I b ts x½iMw , o ØM x ?½xM ylbZ
- 60- ,y Mcyvvkj I h Mcyvvkj eafu; fer vuq ju ds dk; Zrkieku ds chp fd; s tkrsgS  
 d½ $t_d-20^{\circ}\text{C}$  I std+ $20^{\circ}\text{C}$  [½ $t_d-30^{\circ}\text{C}$  I std+ $10^{\circ}\text{C}$   
 x½ $t_d-30^{\circ}\text{C}$  I std+ $20^{\circ}\text{C}$  ?½ $t_d-20^{\circ}\text{C}$  I std+ $10^{\circ}\text{C}$
- 61- ,y Mcyvvkj I h Mcyvvkj vuq ju ds njsku fLyij ds nks cm txg ds chp fdrus fLyij [kys tkrsgS  
 d½15 [½20 x½25 ?½30
- 62- ,y Mcyvvkj es QLVh ds vldf led ufofudj.k dk U; ure Lrj ftI ea fy Vh "kfy gkrk gS  
 d½tbZ [½fd eW x½eW ?½V eW
- 63- 52 dsth jy es VMh ij , I bZ tsdk eW gkrk pfg,  
 d½35 feeh [½40 feeh x½50 feeh ?½60 feeh
- 64- plcmkj }kjk , I bZ sdh vMfyx rFk fxiI x fdrusfnu es, d ckj dh tkrh gS  
 d½7 [½10 x½12 ?½15

- 65- ,y Mcywvkj eaeV fdrusLyilZes ,d Lyhij cny I drk gA  
 d½20 [½25 x½30 ?½4
- 66- ØKØH Lyhij ; Ør ,yMcywkj Vd ea ,d ckj eamBkZfdrusfeeh I svf/kd  
 ugh gkik plfg, A  
 d½25 feeh [½35 feeh x½40 feeh ?½50 feeh
- 67- ,yMcywkj Vd eafdl idkj dsXywtØKØ dk mi ; k fd ; k tkrk gS  
 d½th 3 [½th 4 ,y x½th 3 ,y ?½th 3 ,Q
- 68- tkØ rFk ØKØH I fgr LVs' ku ; MZ tksyxkrkj tkusokys ,yMcywkj dksdgrsgS  
 d½, I bts [½, I Mcywkj x½I Mcywkj ?½dkØZugh
- 69- jy cdt dhejer ,yMcywkj Vd eafdrusLrjkeadh tkrh gS  
 d½4 [½3 x½2 ?½1
- 70- cdYM Vd dhejer ,yMcywkj Vd dafdrusLrjkeadh tkrh gS  
 d½1 [½2 x½3 ?½4
- 71- xgjh NukZdsnkj ku viskr vfkdre jy rkieku I sfdrusulpsrkieku ij  
 vLFk; h fMLVØI x dh tkh plfg, A  
 d½5°C [½10°C x½15°C ?½20°C
- 72- MHLVØI x dsnkj ku jy dksir; d dkØI sLyhij ij mBk; k gA  
 d½10 os [½12 os x½14 os ?½15 os
- 73- 1540 fdeh , Ø ml dsvf.kd Lyhij ?kuRo okysØkdV I yhij ; Ør ,yMcywkj  
 eajy rkieku fdrusI svf.kd gkisij xelZdj iVkyx "k dh tkrh gA  
 d½d+10°C [½td+20°C x½td+25°C ?½I Hh
- 74- jy Vd j Ønkj , Mcywkj dh fMLVØI x djusdsfy; stp dk eku fdl I s  
 de gkik plfg, A  
 d½m [½td x½t<sub>o</sub> ?½dkØZugh

75- vuj{k.k dscin I pf<dj.k vof/k dsnjku tc jy rkieku td +20° I s vf/kd  
 gksij fdl dsnljk xelz dh iVkyx "kq fd tk I drh gS  
 d½fdesu [½eV x½tbZ ?½dkbz ugha

76- vLFkbZMLVbl tæ dh oårk fdrusfnu gksh gA  
 d½10 fnu [½15 fnu x½30 fnu ?½40 fnu

77- xS I odfdl eghuseafd; k tkuk plfg, A  
 d½, fiy [½ tykbZ x½uloej ?½Qscqjh

78- xS I oadh vof/k D; k gksh gA  
 d½4 efgusea, d ckj [½6 efgusea, d ckj x½ I ky es, d ckj  
 ?½nks I ky es, d ckj

79- dk; Z vkjkk fnol dh I á; k rd iwZ gis tkusokysdk; k dksdgrsgA  
 d½ "kVZ MeV's" ku dk; Z [½ ykx MeV's" ku dk; Z x½ fVu eVsi dk; Z ?½ I Hh

80- tksdk; Z24 ?½s I sT; knk rd , o fu/kWj r xfr ifrcak ds I fK pyrsgS  
 mlgsdgrsgA  
 d½ "kVZ MeV's" ku dk; Z [½ ykx MeV's" ku dk; Z x½ fu; fer j [kj [ko ?½  
 I Hh

81- ftu dk; k dksdjuseafdl h idkj xfr ifrcak ; k gkfk fl xuy fn [kusdh  
 t: jr ugh gksh gA  
 d½ "kVZ MeV's" ku dk; Z [½ ykx MeV's" ku dk; Z  
 x½ fu; fer j [kj [ko ?½ I Hh

82- xS chV dsfl Vsij Vbl ekud I D" ku dk I biy fdruh yeckbz eacukuk plfg, A  
 d½100 eh [½ d jy yabk ½ nks jy dh yabz ?½ rhu jy dh yabz

83- iwZ Vbl dh xgjh Nulbz de I sde fdrus I ky ea, d ckj djus plfg, A  
 d½5 I ky ea, d ckj [½ I ky ea, d ckj  
 x½10 I ky ea, d ckj ?½15 I ky ea, d ckj

84- Vbl vuj{k.k dsmnns' ; I sdrus VuZ vlmV dks, d fdfe dscjkj eluk tkrk gA  
 d½8 [½10 x½15 ?½18





### 3 xlykbZ

- 93- , : V ij ofVZdy doZ dh U; qre f«kT; k fdruh gksh plfg, A  
 d½1500eh [½2000eh x½3000 eh ?½4000 eh
- 94- ch : V ij ofVZdy doZ dh U; qre f«kT; k fdruh gksh plfg, A  
 d½1500eh [½2000eh x½3000 eh ?½4000 eh
- 95- doZ ij ifdx dsnljku dkl h cd j sy ekuh tkrh gA  
 d½buj [½vkmVj x½ksks ?½dkbZHH ugh
- 96- xlykbZ ij dkl sjy dkl kbZVx j sy ysik plfg, A  
 d½buj [½vkmVj x½ksks ?½dkbZHH ugh
- 97- chth Vkl ij doZ dh vk/kdre fMxh gksh gA  
 d½4° [½6° x½8° ?½10°
- 98- chth , : V ij vf/kdre vuqr dW gA  
 d½75 eh [½100 feeh x½165 feeh ?½185 feeh
- 99- chth , : V ij vf/kdre vuqr QW MfQfy, W h gA  
 d½60 eh [½75 feeh x½90 feeh ?½100 feeh
- 100- chth , : V ij vf/kdre vuqr dW , DI d gA  
 d½60 eh [½75 feeh x½85 feeh ?½100 feeh
- 101- doZ dk ol kbZ fdl sdMIZ ij ekuk tkrk gA  
 d½6 eh [½9ehx½10eh ?½20eh
- 102- D; k gkrk tc dkbZxMh doZ ij I rfyx xfr I svf/kd xfr I spyrh gA  
 d½dW [½dW MfQf'' k, d h x½dW , DI d ?½dkbZHH ugh
- 103- D; k gkrk tc dkbZxMh doZ ij I rfyx xfr I sde xfr I spyrh gA  
 d½dW [½dW MfQf'' k, d h x½dW , DI d ?½dkbZHH ugh
- 104- lyVQleZykbZ ij doZ Vkl dsvmj dh vj , dLVk fDy; Vt ed sfdruk  
 ?W/k; k tkrk gA  
 d½25 feeh [½50 feeh x½51 feeh ?½60 feeh

- 105-  $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$  ij doZVd dsclgj dh vj , dLVk fDy; Vd ed sfdrak  
 ?k/k; k tkrk gA  
 d $\frac{1}{2}$ 25 feeh                      [k $\frac{1}{2}$ 50 feeh                      x $\frac{1}{2}$ 51 feeh                      ?k $\frac{1}{2}$ 60 feeh
- 106- doZl sfdl Hkx esl qjbfyo' ku , d l eku gk'k gA  
 d $\frac{1}{2}$  d $\frac{1}{2}$ j                      [k $\frac{1}{2}$ Vk " ku                      x $\frac{1}{2}$  i gHkx                      ?k $\frac{1}{2}$  l Hh
- 107- Vkt " ku doZdsVjHk eal qjbfyo' ku fdruk gk'k gA A  
 d $\frac{1}{2}$ >H/s                      [k $\frac{1}{2}$ 20                      x $\frac{1}{2}$ &10                      ?k $\frac{1}{2}$ dkZ Hh ugha
- 108- chth doZdsV, ykeV dsfy; sygHkfr 120 fdyksi fr ?k/k vf/kd gk'k r  
 l d $\frac{1}{2}$ j cV l ku dh l h'k D; k gk'h gA  
 d $\frac{1}{2}$ 10 feeh                      [k $\frac{1}{2}$ 15 feeh                      x $\frac{1}{2}$ 20 feeh                      ?k $\frac{1}{2}$ 25 feeh
- 109- chth doZdsV, ykeV dsfy; s t gHkfr 80 l s120 fdyksi fr ?k/k gk'  
 v'k r l d $\frac{1}{2}$ j cV l ku dh chp D; k gk'h gA  
 d $\frac{1}{2}$ 10 feeh                      [k $\frac{1}{2}$ 15 feeh                      x $\frac{1}{2}$ 20 feeh                      ?k $\frac{1}{2}$ 25 feeh
- 110- chth doZdsfM, ykeV dsfy; sygHkfr 80 l s120 fdyksi fr ?k/k vf/kd gk'  
 v'k r l d $\frac{1}{2}$ j ij l ku dh chp D; k gk'h gA  
 d $\frac{1}{2}$ 10 feeh                      [k $\frac{1}{2}$ 15 feeh                      x $\frac{1}{2}$ 20 feeh                      ?k $\frac{1}{2}$ 25 feeh

## 4 vkw Vd ef" kus

- 111- ØKdV Lyhij dsfy; sL0; ftæ i' kj fdrusdth@l eif gkrk gA  
 d½50&60 [½80&100 x½110&120 ?½120&130
- 112- ØKdV Lyhij eafdruh mBkZdsfy; bñ " ku dh I ; k , d gkrh gA  
 d½20 feeh [½35feeh x½30feeh ?½40 feeh
- 113- vKpud e" kulaeafdl ykbfuz fl LVe dk mi ; læ fd; k tkrk gA  
 d½fl æy dMIZ [½McydMIZ x½Flk dMIZ ?½dkbZHh ugha
- 114- Vd I Vhdj.k dsfy; smi ; læ eayk, tkusokyh e" ku dk rdudh uke gA  
 d½Mhth, I [½MMh, I x½VMh, e ?½I h, I , e
- 115- e" ku Vñi læ dk; Zcm djrs l e; fdruk mrkj gkrk pfg,  
 d½500 ea1 [½600 ea1 x½1000 ea1 ?½dkbZugh
- 116- I ery txg okysLyhijlædsfupysry l sVÆiæ Vy dh xgjbZfdruh gkrh pfg,  
 d½6&8 feeh [½8&10 feeh x½9&10 feeh ?½10&12 feeh
- 117- VÆiæ ,DI id }kjk ,d txg l sfdrusLyhij dh ifdæ gkrh gS  
 d½4 [½3 x½2 ?½1
- 118- ihvkj l h Lyhij jkM ij 30 feeh l svf/kd mBkZgksij fdrusbñ " kuzvlo" ; d gS  
 d½2 [½1 x½3 ?½2

- 119- ihvj l h Lyhij ij VÆia dh vlofr gk h gS  
 d½50 theVh@1 I ky [½100 theVh@1 I ky x½100 theVh@2 I ky  
 ?½200 theVh@2 I ky
- 120- VÆia Vy eavuer f?kl ko ekur I kbt dk fdruk ifr" kr gk gS  
 d½20 [½25 x½15 ?½10
- 121- iMhV , oæ ØMh x dh fxVh dh NulbZdsfy, fdI e" hu dk mi ; k fd ; k  
 tkrk gS  
 d½ , Qvkj , e 80 [½Vh 2 x½vkj , e 76 ?½fl , I , e
- 122- "Mj cLV Dylvfjx dsfy, dhl e" hu dk mi ; k djrsgS  
 d½ , Qvkj , e 80 [½Vh 28 x½vkj , e 76 ?½fl , I , e
- 123- xgh NulbZdscln Vfpz ds I Fk Mh, I ds, d jkMh dscln VQd fdrusxfr  
 ifrcak ds I Fk i q %plywfd ; k tkrk gA  
 d½20 fdyl@ifr ?½[½30 fdyl@ifr ?½ x½40 fdyl@ifr ?½  
 ?½45 fdyl@ifr ?½
- 124- VuZvkv dsufouhdj.k dsfy ; sfdI e" hu dk i ; k fd ; k tkrk gS  
 d½ID ; vkj , I [½ Qvkj , e x½h28 ?½vkj , e 76
- 125- e" hu Vhi x ges' k fdI eMh djuk plfg, A  
 d½MtkbZ eMh [½ukj eMh x½nksa ?½dkbZugha
- 126- iD ; vkj , I dsfy, Llg ; d Vh orëku Vh I fdruk vf/kd Åvk ughagk plfg, A  
 d½50feeh I sT ; knk [½40feeh I sT ; knk x½30feeh I sT ; knk  
 ?½dkbZugha

## 5 VuŕkÅV , 0e ; q I , QMh

- 127- I h,e,l Øk h dsuld ij vf/kdre f?k lo fdruk gkrk gSA  
 d½ feeh [W feeh x½8 feeh ?W½10 feeh
- 128- 60 dsh I h,e,l Øk h dseki sq f?k lo I sfdruk feeh ?W;k tkrk gA  
 d½1-5 [W2 x½2-5 ?W½3
- 129- 52 dsh I h,e,l Øk h dseki sq f?k lo I sfdruk feeh ?W;k tkrk gA  
 d½1-5 [W2 x½2-5 ?W½3
- 130- I h,e,l Øk h dstk dlsxsfy culusdsfy, jy gly dk 0;kl fdruk  
 j[kuk vlo" ; d gA  
 d½26 feeh [W½26-5 feeh x½27 feeh ?W½31 feeh
- 131- I h,e,l Øk h dsfjdkMfi fux dsfy, fdl idkj dk byDVMI iz k djrsgA  
 d½, p 1 [W½, p 2 x½, p 3 ?W½, p 4
- 132- 12 ea1 Qn I QM VuŕkÅV eady vihp rFk , DI W Lyki jkafd I ½ ; k  
 fdruk gksh A  
 d½11 [W½13 x½15 ?W½17
- 133- 12 ea1 Qn I QM VuŕkÅV eaLyki jkafd dy I ½ ; k fdruk gSA  
 d½84 [W½91 x½93 ?W½96
- 134- 8 1@2 ea1 Qn I QM VuŕkÅV eaLyki jkafd dy I ½ ; k fdruk gSA  
 d½61 [W½65 x½67 ?W½70
- 135- 12 ea1 Qn I QM VuŕkÅV eaLop fd yabz fdruh gksh gSA  
 d½8800 feeh [W½9500 feeh x½10125 feeh ?W½11000 feeh

- 136- 8 1@2 ea1 Q& I QM Vu&v&V eaflop fd y&kbZ fdruh g&sh gSA  
 d½6000 feeh [½6400 feeh x½6800 feeh ?½7100 feeh
- 137- 12 ea1 Q& I QM Vu&v&V eady y&kbZ fdruh g&sh gSA  
 d½37850 feeh [½38700 feehx½39900 feeh ?½39975 feeh
- 138- 8 1@2 ea1 Q& I QM Vu&v&V eady y&kbZ fdruh g&sh gSA  
 d½28798 feeh [½28710 feeh x½27980 feeh?½27800 feeh
- 139- 8 1@2 ea1 Q& I QM Vu&v&V ij vf/kdre vu&er xfr gSA  
 d½8 fdeh@ifr?½k [½10 fdeh@ifr?½k  
 x½15 fdeh@ifr?½k ?½20 fdeh@ifr?½k
- 140- 8 1@2 ea1 fl feVdy fLlyV Vu&v&V ij vf/kdre vu&er xfr gSA  
 d½10 fdeh@ifr?½k [½15 fdeh@ifr?½k  
 x½20 fdeh@ifr?½k ?½30 fdeh@ifr?½k
- 141- 12 ea1 Q& I QM Vu&v&V ij vf/kdre vu&er xfr gSA  
 d½10 fdeh@ifr?½k [½15 fdeh@ifr?½k x½20 fdeh@ifr?½k  
 ?½30 fdeh@ifr?½k
- 142- 12 ea1 fl ,e,I ØkI x fd y&kbZfdruh g&A  
 d½3600 feeh [½4100feeh x½4350feeh ?½4600 feeh
- 143- 8 1@2 ea1 fl ,e,I ØkI x fd y&kbZfdruh g&A  
 d½3330 feeh [½3400 feeh x½3850 eeh ?½3900 feeh
- 144- fyM H&x ea&jI kb&Z ds fdI d&M&Z ij ek&k t&rk g&A  
 d½3 eh [½4-5 eh x½6 eh ?½9 eh

- 145- fMQSDVo oYM dksØkl fu'' ku fdrusyxluk plfg, A  
d½1 yky [½2 yky x½1 fiyk ?½2 fiyk
- 146- vk; , evkj jy iRrk pyusdsfdrusfnukadsHtrj cny nsuk plfg, A  
d½1 [½2 x½3 ?½4
- 147- ; q I , QfM dM 421 ea4 dk vFkD; k gA  
d½jy [½oYMHx x½tKV ?½gly
- 148- , Vh oYMHx dk iFle vlof/kd ifj{k.k fdruso'kcln djuk plfg, A  
d½1 o'k [½1-5 o'k x½2 o'k ?½3 o'k

## 6 वलु; ज्यिफक l kexh

- 149- ज्य रकिेलु दsvk/Wj ij Hkjrh; jYosfdrus>ks eack/k x; k gA  
 d1/4 [1/2 3 x1/2 2 ?1/2 1
- 150- xYesi dk eMdy l rj fdruk gksk pfg, gA  
 d1/2, 1 [1/2, 3 x1/2 ch 2 ?1/2 l h
- 151- u;s, l dsh oym dsfy; sgM ij , d ehMj LVV , t dsfl jsij vf/kdre  
 ojVhdy , ykbW VkyjA fdruk gksk gA  
 d1/2 \$ 1-0 feeh@&0-0 feeh [1/2 \$ 0-5 feeh@&0-4 feeh x1/2 \$ 1-0 feeh@&0-4 feeh ?1/2  
 \$ 1-0 feeh@&0-5 feeh
- 152- u;sfQful x oym dsfy; sgM ij 10 l eh LVV , t l s vf/kdre ojVhdy , ykbW  
 VkyjA fdruk gksk gA  
 d1/2 \$ 0-5 feeh@&0-0 feeh [1/2 \$ 0-4 feeh@&0-0 feeh x1/2 \$ 0-4 feeh@&0-1 feeh ?1/2  
 \$ 0-5 feeh@&0-1 feeh
- 153- ज्य fd ik'' kb l rg ij 1 ehMj fl /ks iVVsij ekisx; sfQful x VkyjA fd  
 fl ek D; k gks h gA  
 d1/2 0-4 feeh [1/2 0-3 feeh x1/2 0-5 feeh ?1/2 0-6 feeh
- 154- ज्य fd ik'' kb l rg ij 10 l eh fl /ks iVVsij ekisx; sfQful x VkyjA fd  
 fl ek D; k gks h gA  
 d1/2 0-2 feeh [1/2 0-3 feeh x1/2 0-4 feeh ?1/2 0-5 feeh
- 155- , vj iVky feDI Onkj , Vh oYMhx dsfy; sfigVhx fdruk gksk gA  
 d1/2 8&10 fefuV [1/2 10&12 fefuV  
 x1/2 15&18 fefuV ?1/2 18&12 fefuV
- 156- oym dh vfire f/kl kbZfdrus?k/s dsHrj ijk fd; k t luk pfg, A  
 d1/2 12 [1/2 16 x1/2 18 ?1/2 24
- 157- oYMhx dsfy; sjykdj ofVdy f/kl lo fdl fl ek l s vf/kd ughagksk pfg, A  
 d1/2 6 feeh [1/2 8 feeh x1/2 10 feeh ?1/2 12 feeh



- 158- ,yMcywkyj @ I HMCYkykj eadk;Zdjusdfy; sI {kerk iek.k fd o&rk fdrus  
o'k'fd gksh gA  
d½1 I ky                      [½2 I ky                      x½2-5 I ky                      ?½3 I ky
- 159- chth ij iq Vkyh djrsI e; fdrusnj rd n'' ;rk I kQ u gksij cpl  
fd;k tkrk gA  
d½30 eH/j                      [½600 eH/j                      x½900 eH/j                      ?½1200 eH/j
- 160- ih ekul q dk;Zdh vof/k fdrusekg gksh gA  
d½3 efgus                      [½2 efgus                      x½4 efgus                      ?½1 efgus
- 161- ekul q dk;Zdh vof/k fdrusekg gksh gA  
d½3 efgus                      [½2 efgus                      x½4 efgus                      ?½1 efgus
- 162- ikV ekul q dk;Zdh vof/k fdrusekg gksh gA  
d½6 efgus                      [½4 efgus                      x½3 efgus                      ?½2 efgus
- 163- jyskfd yabZfd fn'' k eal pyudksD; k dgrsgA  
d½i i kj                      [½fi dMj                      x½0i                      ?½, I bZs
- 164- fdruk f0i gksij jyskdk I ek;ktu vlo'' ; d gksh gA  
d½150 feeh                      [½200 feeh                      x½100 feeh                      ?½50 feeh
- 165- vubduud dksfdI cd ij ekik tkrk gA  
d½1-5 eh                      [½3 eh                      x½3-6 eh                      ?½7-2 eh
- 166- chth ij iq Vkyh djrsI e; n'' ;rk I kQ u gksij 1200 ehsnj ij fdrusfMVsVj  
dsI kfk gkfk fl xy Onjk cpl fdI k tkrk gSA  
d½1                      [½2                      x½3                      ?½dkbZugh
- 167- iVky esu Onjk , d fnu eapyh x; h njh fdrusfdyleHj I svf/kd ugh  
gksk plfg, A  
d½6 fdeh                      [½10fdeh                      x½15 fdeh                      ?½20 fdeh
- 168- , d fg ykbZ ij pyusokysnkskVj Vkyh dschp U; qre njh fdruk gksk plfg, A  
d½500 eh                      [½400 eh                      x½200 eh                      ?½100 eh

- 169- fdrusl svf/kd rst xM ij jy MMyh l sck; Zugh djuk plfg, A  
 d½200 es1 [½100 ea1 x½60 es1 ?½50 es1
- 170- eMM oVh I e; fdruk glsk plfg, A  
 d½2&3 feuV [½3&4 feuV x½4&5 feuV ?½4&6 feuV
- 171- oVMj dsI {kerk iek.ki = fd oSkrk fdruh glsh gA  
 d½6 efgus [½1 I ky x½2 I ky ?½2-5 I ky
- 172- chth ij fxVh dh vf/kdre I kbt fdruh glsh gA  
 d½75 feeh [½65 feeh x½40 feeh ?½20 feeh
- 173- 60dst h jy eavuer Hkj eadeh fdruh glsh gA  
 d½2 ifr" kr [½4 ifr" kr x½6 ifr" kr ?½10 ifr" kr
- 174- vfdI yfj Vh dk xst fdruk glsk gA  
 d½1676 feeh [½1680 feeh x½1750 feeh ?½3400 feeh
- 175- i q VMyh Onjk Vh dk fujh(k.k fdI voLFk eafd; k tkrk gA  
 d½yMM [½QyVx x½nlsk ?½dkZugh
- 176- QV ly@ fj; j os Onjk Vh dk fujh(k.k fdI voLFk eafd; k tkrk gA  
 d½yMM [½QyVx x½nlsk ?½dkZugh
- 177- vlse, I 2000 Onjk dhl svhl yd u ekis tkrsgA  
 d½ojfVdy [½yVjy x½nlsk ?½dkZugh
- 178- 130fdeh ifr?k I svf/kd xfr okys: V ij Vh fjdMxdh vkofRr fdruh glsh gA  
 d½15 fnu [½1 efguk x½2 efguk ?½3 efguk
- 179- 110fdeh ifr?k I svf/kd xfr okys: V ij Vh fjdMxdh vkofRr fdruh glsh gA  
 d½efgusea, d ckj [½nksefgusea, d ckj  
 x½rhu efgusea, d ckj ?½pkj efgusea, d ckj
- 180- ofj' B vf/kuLFk tK I ferh ea I nL; kadh U; qre I ; k fdruh glsh gA  
 d½1 [½2 x½3 ?½4
- 181- chth i q VMyh ij vf/kdre fdrus0; Drh cB I drsgA

- 182- d½4 [½6 x½8 ?½10  
 i q Vlyh dsfy; s l {kerk i ek.ki = fd oDrk fdruh glsh gA  
 d½1 l ky [½2 l ky x½2-5 l ky ?½3 l ky
- 183- U; W y tks dkl sLVs' ku ij glsrgA  
 d½, Dykl [½ch Dykl x½l h Dykl ?½ l Hh
- 184- vWleS/d fl xuy l keW; fLFkrh eaD; k fn [WrsrgA  
 d½xku [Wlcy , yls x½; yls ?½yky
- 185- cylok fl xuy vks fLFkrh eaD; k fn [WrsrgA  
 d½yky [Wlky x½ l Qn ?½dN ugh
- 186- fonq| rhdr {ks- ea l QVh jst fdruh glsh gA  
 d½1 ehWj [W1-5ehWj x½2 ehWj ?½3ehWj
- 187- Vht h v b z dk eku fdrus l svf/kd gls i j VSl dk vu j {k.k vlo" ; d ugh gSA  
 d½80 l svf/kd [W85 l svf/kd x½90 l svf/kd ?½100 vf/kd
- 188- dkl l sLFku vks e, l ea [kjc LFku dgykrsgA  
 d½0-3 th l svf/kd [W0-2 th l svf/kd x½0-35 th l svf/kd ?½ l Hh
- 189- , l dsh oYMHx dsfy; sdy xS fdruk j [k tkrk gS  
 d½20 \$ @ & 2 feeh [W24 \$ @ & 1 feeh  
 x½25 \$ @ & 1 feeh ?½25 \$ @ & 2 feeh
- 190- fdrus xS dsckn j y QDpj ij Dyktj Mkyuk pfg, A  
 d½15feeh [W20 feeh x½25 feeh ?½30 feeh l svf/kd
- 191- QVks VSLVx ds l e; dkbZ Hh 0; Drh fdruh f=T; k ds vñj ugh vkuk pfg, A  
 d½20 eh [W25eh x½45eh ?½50eh
- 192- 60 dsh j y dk ojfvdy f?kl kc fd l l svf/kd gls i j ufouhdj.k vlo" ; d  
 gls tkrk gA  
 d½8 feeh [W10feeh x½12feeh ?½13feeh
- 193- 52 dsh j y dk ojfvdy f?kl kc fd l l svf/kd gls i j ufouhdj.k vlo" ; d  
 gls tkrk gA

- d $\frac{1}{2}$ 6 feeh    [W8feeh    x $\frac{1}{2}$ 10feeh    ?W $\frac{1}{2}$ 13feeh  
 194- Vhvkj l h Onkjk Vd ijleWj fdruh yabZ dsCyM eaki st l rsgA  
 d $\frac{1}{2}$ 50 eh    [W100eh    x $\frac{1}{2}$ 200eh    ?W $\frac{1}{2}$ 300eh  
 195- dK I k vls e, l ihd rjr vVsm djuk plfg, gA  
 d $\frac{1}{2}$ 0-35 th l st; l nk    [W0-33 th    x $\frac{1}{2}$ 0-30 th    ?W $\frac{1}{2}$ 0-35 th  
 196- Vd j [kj [ko dk rjhdk D; k jgsk tc Vht hvkbZ80 l sde glA  
 d $\frac{1}{2}$ vjtV    [Wylucd M    x $\frac{1}{2}$ uMcd M    ?W $\frac{1}{2}$ dkbZugh  
 197- Vd j [kj [ko dk rjhdk D; k jgsk tc Vht hvkbZ50 l sde glA  
 d $\frac{1}{2}$ vjtV    [Wylucd M    x $\frac{1}{2}$ uMcd M    ?W $\frac{1}{2}$ dkbZugh  
 198- Vd j [kj [ko dk rjhdk D; k jgsk tc Vht hvkbZ36 l sde glA  
 d $\frac{1}{2}$ vjtV    [Wylucd M    x $\frac{1}{2}$ uMcd M    ?W $\frac{1}{2}$ dkbZugh  
 199- fdl "knh i = dsOnkjk plch nkj dh M; Vh ed spch; kadh vWfyx @ xfl x  
 cm dj nh gSA  
 d $\frac{1}{2}$ 141    [W $\frac{1}{2}$ 142    x $\frac{1}{2}$ 144    ?W $\frac{1}{2}$ 145

## 7 xfr i frca k , oadk; Z fufj {k.k yoy

- 200 jy cdst dj vikr ejEr dscln igyh Vsi dki h xfr I spykz tkrh gA  
 d½LVMI , 10 fdeh ifr?k/k [k/10 fdeh ifr?k/k  
 x½20 fdeh ifr?k/k ?k/30 fdeh ifr?k/k
- 201 MHLVsi x dsfy; sfdruk I rdzk vns' k yxk; k pfg; A  
 d½15 fdeh ifr?k/k [k/20 fdeh ifr?k/k  
 x½30 fdeh ifr?k/k ?k/45 fdeh ifr?k/k
- 202 ØkdV fLyij ; qr , yMcywkj Vsi eavut' ku dscln I v<hdj.k vof/k dsnk ku  
 jy rkieku t<sub>d</sub>+20<sup>0</sup>c I svf/kd gksij chth eafdruk cfr ifrcak yxkuk pfg, A  
 d½20 fdeh ifr?k/k [k/30 fdeh ifr?k/k  
 x½45 fdeh ifr?k/k ?k/50 fdeh ifr?k/k
- 203 esuyy ifca Ønkj xgjh Nukzfd; sx; sVsi eal keW; xfr dki I sfnu  
 cgky fd tkrh gA  
 d½10 osfnu [k/15 osfnu x½18 osfnu ?k/21 osfnu
- 204 e'' ku ifca Ønkj xgjh Nukzfd, x, Vsi eal keW; xfr dki I sfnu cgky  
 dh tkrh gSA  
 d½8 osfnu [k/10 osfnu x½12 osfnu ?k/15 osfnu
- 205 : ddj tkuskys I rdzk vns' k dsfy; s I rdzk I dsr QkeZLFky I sfdruh njh  
 ij yxk; k tkrh gA  
 d½30 eh [k/600 eh x½800 eh ?k/1200 eh
- 206 de xfr I stkusokys I rdzk vns' k dsfy; s I rdzk I dsr dk; ZLFky I s  
 fdruh njh ij yxk; k tkrh gA  
 d½30 eh [k/600 eh x½800 eh ?k/1200 eh
- 207 chth ij csi j fLyDI dks dk; ZLFky I sfdruh njh yxk; k tkrh gA  
 d½30 eh [k/200 eh x½400 eh ?k/600 eh
- 208 xfr I dsrd dk; ZLFky I sfdruh njh ij yxkuk pfg, A  
 d½30 eh [k/200 eh x½400 eh ?k/600 eh

- 209 jş DyLVj dks vLFkbZ; oLFk dh rjg mi ; k djrs l e; fdruk xfr  
ifrcak yxkuk pfg, A  
d½10 fdeh ifr?k/k [k/20 fdeh ifr?k/k  
x½30 fdeh ifr?k/k ?k/45 fdeh ifr?k/k
- 210 vki krdky eaigyk QVkdK vojks l sfdrusnj yxk; k tkrk gA  
d½30 eh [k/600 eh x½1200 eh ?k/1220 eh
- 211- jş DyLVj dks LFKbZ voLFk dh rjg mi ; k djrs l e; fdruk xfr ifrcak  
yxkuk pfg, -  
d½10 fdeh ifr?k/k [k/20 fdeh ifr?k/k x½30 fdeh ifr?k/k  
?k/45 fdeh ifr?k/k
- 212 chth VSI eatc MHLVSI x dsigys Øfed Lyhij k ij ckd dks nhyk fd; k  
tkrk gS xfr ifrcak D; k gkrk gA  
d½10 fdeh ifr?k/k [k/15 fdeh ifr?k/k x½20 fdeh ifr?k/k  
?k/30 fdeh ifr?k/k
- 213 cdy VSI eavki kr ejDer dsfy; sl ijfotu dk U; qre Lrj gSA  
d½ t bZ [k/ I , I bZ x½ eV ?k/ p k m k j
- 214 , yM0y w k j eae" ku 0nkj NukbZfdl dsfujh (k.k eadh tk l drh gA  
d½ eV [k/ p k m k j x½ t b @ , I , I bZ ?k/ I H h
- 215 , yM0y w k j ea QKLVfue dh fuofudj .k ftueam Bk bZ vko" ; d ugh gS ds  
fy; sl ijfotu dk U; qre l rg dk d k  
d½ V S I e s [k/ d h e S x½ e V ?k/ d k b Z
- 216 , yM0y w k j ea QKLVfue dh fuofudj .k fyueam Bk bZ vko" ; d gS ds fy; sl ijfotu  
dk U; qre Lrj dk d k  
d½ e V [k/ t b Z x½ d h e S ?k/ d k b Z

- 217 I kV ij jy tMkadh oVMx dsfy; sI ijfotu dk U; qre Lrj gS  
d½ t bZ [kM O y q I x½ I , I bZ ?k½ dk bZ ugh
- 218 dK I k fuEure dk; i Hkjh , dkdh LFkuk i j “kM j laefxV Vh dh dk; Z dk i j k  
djusdk dke n[ krk gA  
d½ eV [k½ p k c m k j x½ t bZ ?k½ I Hh
- 219 dK I k fuEure dk; i Hkjh fMLV i x I s I e f / k r I Hh dk; Z n[ krk gA  
d½ , I , I bZ [k½ t bZ x½ M h b Z , p ?k½ eV
- 220 dK I k fuEure dk; i Hkjh cdfy x ds n[ ku bej t i h fV i e f V x dj I d r k gA  
d½ , I , I bZ [k½ t bZ x½ d h e s u ?k½ eV
- 221 dK I k fuEure dk; i Hkjh , I bZ s dh p f d x i R; d i [ k o M s e a , d c k j r y M k y u k x h l  
y x l u k , o f Q f V x dk u o h u h d j . k d j r k g A  
d½ i v h y e s i [k½ p k c m k j x½ e V ?k½ t b Z

## 8 fujh{k.k vkofRr

- 222 , l , l bZ@iH0gs0nkj yoy 0Wl x midj.Wadh tK0 ea , d ckj dh tkrh gA  
 d½ , d eghus [W0kseghu0 x½ru eghus ?W½pkj efgus
- 223 l cl sxeZ , 0 l cl sl nZeghulæes t bZ@ , l , l bZ¼ 0l uy@ bakt½0nkj , l bZsck  
 fufj{k.k fdrusfnulæea , d ckj fd ; k tkrk gA  
 d½15 [W30 x¼45 ?W½60
- 224 l cl sxeZ , 0 l cl sl nZeghulædksN0Wdj t bZ@ , l , l bZ¼ 0l uy@ bakt½  
 0nkj , l bZsck fufj{k.k fdrusfeghulæea , d ckj fd ; k tkrk gA  
 d½1 [W1 1@2 x½2 1@2 ?W½2
- 225 ef" lu vuj{k.k dsvraxZ 0K0W Lyhij V0l ij iHkj , l , l bZ0nkj i 0  
 V0yh fufj{k.k dh vkofRr fdruh gkrh gA  
 d½eghusea , d ckj [W½nksefgusea , d ckj x¼R ; d ikdoM0s ?W½d0bZugh
- 226 ef" lu vuj{k.k dsvraxZ 0K0W Lyhij V0l ij l 0l uy t bZ@ , l , l bZ0nkj  
 i 0 V0yh fufj{k.k dh vkofRr fdruh gkrh gA  
 d½eghusea , d ckj [W0ksefgusea , d ckj x¼R ; d ikdoM0s ?W½d0bZugh
- 227 jysldh y0WbZ dh fn" k ea l pyu dksdgrsgA  
 d½i d kj [W½fl d0lu x¼0hi ?W½ , l bZs
- 228- , l , l bZ0nkj H0h fl ek fufj{k.k fd ; k tkrk gA  
 d½3 eghuses1 ckj [W½4 eghuses1 ckj  
 x½6 eghuses1 ckj ?W½l ky ea1 ckj
- 229 b0ktZ , l , l bZ0nkj x0 V0y tK0 dh vkofRr fdruh gkrh gA  
 d½eghusea , d ckj [W15fnu  
 x½2 efgusea , d ckj ?W½ru efgusea , d ckj
- 230 l 0l uy t bZ@ , l , l bZ¼ h00nkj fdrusl e ; eavius ijsl 0l u dk  
 fl lV0Vhd rfjds l si0y fufj{k.k djuk pK0g , A  
 d½3 eghus [W6 efgus x½9 efgus ?W½12 efgus



## 9 "कल; ग वक्रवक्र' कु

231 Qkeš' ku dh mijh l rg ij ØKW Lyki fdruk gkšk gA

d½30 ea1 [k/36 es1 x½40 ea1 ?k/20 ea1

232 chth fl xy ykbū ij Hkjo dsfy, ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ fdruh gkšk gA

d½6250 feeh [k/6550 feeh x½6850 feeh ?k/7000feeh

233 u; sfuelk dsfy; schth VSI ds l vj l sl vj dh njh fdruh gkšk gA

d½4625 feeh [k/4800 feeh x½5000 feeh ?k/5300feeh

234 chth Mcy ykbū ij Hkjo dsfy; sih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ fdruh gkšk gA

d½12000 feeh [k/12150 feeh x½12155 feeh ?k/12200feeh

235 chth fl xy ykbū ij dVhx ea ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ fdruh gkšk gA

d½6000 feeh [k/6250 feeh x½6400 feeh ?k/6600 feeh

236 chth Mcy ykbū ij dVhx ea ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ fdruh gkšk gA

d½10500 feeh [k/11300feeh x½11550 feeh ?k/12000 feeh

237 chth Mcy ykbū ij Hkjo ea ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ u; s dk; k ea fdruh gkšk gA

d½12155 feeh [k/12550feeh x½13000 feeh ?k/13160 feeh

238 chth Mcy ykbū ij dVhx ea ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ u; s dk; k ea fdruh gkšk gA

d½12155 feeh [k/12550feeh x½13000 feeh ?k/13160 feeh

239 chth fl xy ykbū ij Hkjo ea ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ u; s dk; k ea fdruh gkšk gA

d½6850 feeh [k/7150feeh x½7850 feeh ?k/8000 feeh

240 chth fl xy ykbū ij dVx ea ih, l l h fLyij ds l kfk Qkeš' ku dh pKkibZ u; s dk; k ea fdruh gkšk gA

d½6850 feeh [k/7150feeh x½7850 feeh ?k/8000 feeh

- 241 Hkjlo okyh Qleš' ku ea l kbm Lyki l sfdruk vf/kd rst gksk plfg, A  
 d½1% [½1-5% x½2% ?½2-5%
- 242 l kbm Mš dk ry l š l sfdrus l eh fupsgksk plfg, A  
 d½20 [½30 x½35 ?½40
- 243 1673 feeh xst dsfy; svf/kdre pñ jy vřjky fdruk gksk plfg, A  
 d½44 feeh [½45 feeh x½47 feeh ?½48 feeh
- 244 1673 feeh xst dsfy; sl; qre pñ jy vřjky fdruk gksk plfg, A  
 d½38 feeh [½40 feeh x½41 feeh ?½43 feeh
- 245 12 ea l Qš "kQM VuZvkÅV dk ghy Mkbota fdruk gksk gš  
 d½150 feeh [½165 feeh x½175 feeh ?½183 feeh
- 246 fudV dsVš l Vj ykñ l sxV i kV dh U; qre nñh fdruh gksh gš  
 d½3 ehVj [½4 ehVj x½4-5 ehVj ?½6 ehVj
- 247 l kkl; flFkrh eagkbV xst dksxV i kV l sfdruk nñ yxkrsgš  
 d½4 ehVj [½5 ehVj x½6 ehVj ?½8 ehVj
- 248 fudVre Vñ l Vj ykñ rFk jMl ešfyx l sm; qh gV dh U; qre nñh fdruh  
 gksh gš  
 d½5 ehVj [½6 ehVj x½8 ehVj ?½10 ehVj
- 249 yoy Økñ x ij csj Qyš pñ jy dsfl js l sfdrusnñ yxk; k tkrk gš  
 d½2 ehVj [½3 ehVj x½4 ehVj ?½5 ehVj
- 250 Lis' ky Dykl yoy Økñ x dk l kkl fdrus l ky ea, d klj fd tkrh gš  
 d½1-5 l ky [½2 l ky x½2-5 l ky ?½3 l ky
- 251 lyšQleZykñkñij flMLVš ihl fdrusvřjky ij yxk; stkrsgš  
 d½30eh [½20 eh x½15 eh ?½10 eh
- 252 t gMhksVñ l Vj dschp dh nñh l sde gksh gšogk Qlmfyx ekZ yxk; k tkrk gš  
 d½4-265 eh l s@ l s [½4-60 eh l s@ l s x½4-625 eh l s@ l s ?½4-8 eh l s@ l s

- 253    **gkbyoy i\$ stj lyvQkezd h jy yoy I su; qre ÅWkZfdruh gksh gA**  
          d½700 feeh                    [W½740 feeh    x½760 feeh    ?W½780 feeh
- 254    **gkbyoy i\$ stj lyvQkezd h jy yoy I svf/kdre ÅWkZfdruh gksh gA**  
          d½760 feeh                    [W½800 feeh    x½810 feeh ?W½840 feeh
- 255    **yoy Økl x ij psl jy dk U; qre xi fdruk gksh gA**  
          d½45 feeh                    [W½46 feeh    x½48 feeh ?W½51 feeh
- 256    **yoy Økl x ij psl jy dk vf/kdre xi fdruk gksh gA**  
          d½48 feeh                    [W½51 feeh    x½57 feeh ?W½59 feeh
- 257    **xMj iy ij u; sdk;Zdsfy; snksyxkrkj fLyijksdscip Li 'V ngh I sfdruh**  
          **vf/kd gksh plfg, A**  
          d½250 feeh                    [W½300 feeh    x½350 feeh    ?W½450 feeh
- 258    **VSl dsI vj I sfdl h lyvQkeZfnokj dh vf/kdre {krt ngh fdruh gksh gA**  
          d½1870 feeh                    [W½1890 feeh    x½1905 feeh ?W½1910 feeh
- 259    **VSl dsI vj I sfdl h lyvQkeZfnokj dh U; qre {krt ngh fdruh gksh gA**  
          d½1675 feeh                    [W½1680 feeh    x½1690 feeh ?W½1695 feeh
- 260    **, I vksMh dsvuq kj chth ij doZ dh U; qre f=T; k fdruh gksh gA**  
          d½175 eh                      [W½185 eh    x½210 eh ?W½250 eh
- 261    **VSl I vj I si\$ stj lyvQkeZdkix Ql fd U; qre {krt ngh fdruh gksh gA**  
          d½1650 feeh                    [W½1660 feeh    x½1670 feeh ?W½1680feeh
- 262    **VSl I vj I si\$ stj lyvQkeZdkix Ql fd vf/kdre {krt ngh fdruh gksh gA**  
          d½1680 feeh                    [W½1670 feeh    x½1660 feeh ?W½1650 feeh
- 263    **ijklusdk;Zdsfy, LVs' ku ; MZeavf/kdre xM fdruk gksh gA**  
          d½200 ea1                      [W½400 ea1    x½600 ea1 ?W½1000 ea1

- 264 u; sdk; Zdsfy, LVs' ku ; MZ eavf/kdre xM fdruk gk'k gA  
d<sup>1</sup>/<sub>2</sub>200 ea1 [W<sup>1</sup>/<sub>2</sub>1000 ea1 x<sup>1</sup>/<sub>2</sub>400 ea1 ?W<sup>1</sup>/<sub>2</sub>200 ea1
- 265 chth VuZ/kAV ij fLop dk U; qre Fksfdruk gk'k gA  
d<sup>1</sup>/<sub>2</sub>95 feeh [W<sup>1</sup>/<sub>2</sub>100 feeh x<sup>1</sup>/<sub>2</sub>115 feeh ?W<sup>1</sup>/<sub>2</sub>120 feeh
- 266 chth fkdos fLop ij U; qre Fksfdruk gk'k gA  
d<sup>1</sup>/<sub>2</sub>115 feeh [W<sup>1</sup>/<sub>2</sub>160 feeh x<sup>1</sup>/<sub>2</sub>165 feeh ?W<sup>1</sup>/<sub>2</sub>95 feeh

## 10 bLVfCy'' leV , o jktHk'k

- 267 efgyk jy deplkj dksfdrusfnu dk ekrRo vodk'' k fn;k tkrk gA  
 d'90 fnu [W/2120 fnu x'1/2160 fnu ?W/2180 fnu
- 268 iq 'k jy deplkj dksfdrusfnu dk firRo vodk'' k fn;k tkrk gA  
 d'45 fnu [W/220 fnu x'1/225 fnu ?W/230 fnu
- 269 vR r osu vodk'' k fdrusfnu rd tek fd;k rk I drk gA  
 d'200 fnu [W/2240 fnu x'1/2300 fnu ?W/2360 fnu
- 270 vR r v/R osu vodk'' k fdrusfnu rd tek fd;k rk I drk gA  
 d'150 fnu [W/2250 fnu x'1/2560 fnu ?W/2dkZ I hek ugh
- 271 plbYM dsj fyo fdl sfn;k tkrk gA  
 d'1q 'k j'osdeplkj [W/2efgyk j'osdeplkj x'1/2nks ?W/2dkZugh
- 272 fdruh I e; fl ek rd deplkj Onjk vihy vFkSV dksviy dh tk I drh gA  
 d'10 fnu [W/220 fnu x'1/230 fnu ?W/245 fnu
- 273 deplkj dks, I , Q1 feyusdk eryc gSA  
 d'1 Li' ku [W/2MheM I Li' ku x'1/2fjokdy ?W/2dkZugh
- 274 deplkj dks, I , Q2 feyusdk eryc gSA  
 d'1 Li' ku [W/2MheM I Li' ku x'1/2fjokdy ?W/2dkZugh
- 275 deplkj dks, I , Q4 feyusdk eryc gSA  
 d'1 Li' ku [W/2MheM I Li' ku x'1/2fjokdy ?W/2dkZugh
- 276 , I , Q 11 eadeplkj dksD;k I tk fey I drh gA  
 d'1W/h islyVh [W/2cMh islyVh x'1/2nks ?W/2dkZugh
- 277 , I , Q 5 eadeplkj dksD;k I tk fey I drh gA  
 d'1W/h islyVh [W/2cMh islyVh x'1/2nks ?W/2dkZugh

- 278 foHkxh; t<sup>kl</sup> dsfy, I ferh culusdk vlns' k fdI ds0kjk fn; k tkrk gA  
 d<sup>1/2</sup>Mhv<sup>kl</sup>,e [k<sup>1/2</sup>Mhv<sup>kl</sup>,e x<sup>1/2</sup>,th,e ?k<sup>1/2</sup>I Hh
- 279 ofj'B vf/kulR t<sup>kl</sup> dsfy, I ferh culusdk vlns' k fdI ds0kjk fn; k tkrk gA  
 d<sup>1/4</sup> Hh, I vks [k<sup>1/2</sup>I Hhvk<sup>kl</sup>e x<sup>1/2</sup>I Hh<sup>kl</sup>z,u ?k<sup>1/2</sup>I Hh
- 280 Mh,vkj t<sup>kl</sup> cplo ii = tek djusdh I e; fl ek fdrusnu fu/Mjr gA  
 d<sup>1/2</sup> fnu [k<sup>1/2</sup>10fnu x<sup>1/2</sup>15 fnu ?k<sup>1/2</sup>30 fnu
- 281 vf/kulR dks tkjh fd; stkusokys iEke Jsh I fp/k ikl dk D; k jx gkrk gA  
 d<sup>1/2</sup>gjk [k<sup>1/2</sup>I Qn x<sup>1/2</sup>i hyk ?k<sup>1/2</sup>x<sup>kl</sup>gkch
- 282 vf/kdkjh dks tkjh fd; stkusokys iEke Jsh , I fp/k ikl dk D; k jx gkrk gA  
 d<sup>1/2</sup>gjk [k<sup>1/2</sup>I Qn x<sup>1/2</sup>i hyk ?k<sup>1/2</sup>x<sup>kl</sup>gkch
- 283 ,d I e; eavf/kdre fdrusnu dk vls r oru vodk'' k fn; k tk I drk gA  
 d<sup>1/2</sup>0 fnu [k<sup>1/2</sup>120 fnu x<sup>1/2</sup>180 fnu ?k<sup>1/2</sup>160 fnu
- 284 >ky I rj ij LFkbZokrkZra: dspvsjesu dks gkrsgA  
 d<sup>1/2</sup>th,e [k<sup>1/2</sup>,th,e x<sup>1/2</sup>fMIVh th,e ?k<sup>1/2</sup>d<sup>kl</sup>zugh
- 285 eMy Lrj ij LFkbZokrkZra: dh fefVx fdrusekg ea,d ckj gkrh gA  
 d<sup>1/2</sup>efgus [k<sup>1/2</sup>3 efgus x<sup>1/2</sup>4 efgus ?k<sup>1/2</sup>6 efgus
- 286 U; qre oru vf/kfu; e dsvu<sup>kl</sup> kj ,d fnu eade<sup>kl</sup>gjh dsdk; Zdy ?k<sup>1/2</sup>s  
 fdrusg<sup>kl</sup>gk pl<sup>kl</sup>g,A  
 d<sup>1/2</sup>?k<sup>1/2</sup>s [k<sup>1/2</sup>8 ?k<sup>1/2</sup>s x<sup>1/2</sup>9 ?k<sup>1/2</sup>s ?k<sup>1/2</sup>12 ?k<sup>1/2</sup>s
- 287 dk; Zds?k<sup>1/2</sup>s jxys' ku dsvu<sup>kl</sup> kj t<sup>kl</sup>@, I, I bZ<sup>kl</sup>h<sup>kl</sup>sd: i esdk; Zdjusokys  
 jy de<sup>kl</sup>gjh fdI oxZesj [k<sup>1/2</sup>tkrsgA  
 d<sup>1/2</sup>DI Dy<sup>kl</sup>o [k<sup>1/2</sup>b<sup>kl</sup>jfeVVM x<sup>1/2</sup>duVhu<sup>kl</sup>I ?k<sup>1/2</sup>d<sup>kl</sup>zugh
- 288 vf/kulR dksfn; stkusokys iEke Jsh , I fp/k ikl dk D; k jx gkrk gA  
 d<sup>1/4</sup> Qn [k<sup>1/2</sup>gjk x<sup>1/2</sup>i hyk ?k<sup>1/2</sup>x<sup>kl</sup>gkch

- 289 jktHk'k vf/Ku; e dc cuk A  
 d¼1949 [½1960 x½1962 ?½1963
- 290 jktHk'k vf/Ku; e eafdruh /Mjk; sgSA  
 d½5 [½7 x½9 ?½11
- 291 Hkjr; I fo/Ku dh 8ohvuq fp eafdruh Hk'k dks jktHk'k ds: lk eaekU; rk fn  
 xbZ gA  
 d¼22 [½16 x½14 ?½10
- 292 dnZ I jdkjus jktHk'k fu; e dc cuk; A  
 d¼1963 [½1965 x½1973 ?½1976
- 293 jktHk'k fu; e dsv r x r Hkjr dks fdrus Hk'k es ch k x; k gA  
 d½3 [½2 x½1 ?½ dks Z ugh
- 294 iR; d o'kZ fgmh fnol dc euk; k tkrk gA  
 d¼14 ekpZ [½14 es x½14 fl rcj ?½14 uoæj
- 295 fgmh I d nh; jktHk'k I ferh eafdrus I nL; gk rsgA  
 d¼10 [½20 x½30 ?½40

# 11 VMj , oavdknVt

- 296 LVkd dk I R; ki u fdl dsOnkj fd; k tkrk gA  
 d'paktZ , I , I bZ [k½LVkd ofjQk; j x½, Mh, u ?k½dkbZugla
- 297 bāLVV LVkd Zds I R; ki u dh vloRrh fdruh gkrh gA  
 d'4 I ky [k½3 I ky x½2 I ky ?k½I ky ea, d ckj
- 298 LVkd ofjQk; j Onkj LVkd fl V fdruh dMh eaculbZ tkrh gA  
 d'3 [k½4 x½5 ?k½7
- 299 LVkd Zdsē; r%fdruh oxkZeachk x; k gA  
 d'1 [k½2 x½3 ?k½4
- 300 MM LVkd dk LVkd gVMj Onkj I R; ki u dh vloRrh fdruh gkrh gA  
 d'1 o'kZ [k½2 o'kZ x½3 o'kZ ?k½6 efgus
- 301 , e, , I LVkd ZdsLVkd I R; ki u dh vloRrh fdruh gkrh gA  
 d'1 o'kZ [k½2 o'kZ x½3 o'kZ ?k½6 efgus
- 302 MM LVkd jftLVj esdrusifr" kr ifo'Bh; k , MhbZ, u Onkj ifro'kZ tMh tkrh gSA  
 d'5 ifr" kr [k½10 ifr" kr x½15 ifr" kr ?k½20 ifr" kr
- 303 VMj vkiuhx dscin iMg gskokysVMj dksD; k dgrsgSA  
 d'½yV [k½Mhys x½vki u ?k½Xyky
- 304 25 djM e; dsdk;Zdsfy, c; kuk jk" h VMj e; dk fdrusifr" kr gsk pfg, A  
 d'1 ifr" kr [k½2 ifr" kr x½3 ifr" kr ?k½5 ifr" kr
- 305 iR; d dk;Zdsfy, tekur jk" h VMj e; dk fdruk ifr" kr fy; k tkuk pfg, A  
 d'5 ifr" kr [k½7 ifr" kr x½10 ifr" kr ?k½dkbZugh
- 306 tekur jk" h de l sde fdl Lrj dsvf/kdjh Onkj gh oki l fd tk l drh gA  
 d'½p, xM [k½tşxM x½xi ch xM ?k½I Hh



307 fdl h dk;Zdsfy, ijQk's' k xkjVh Bdk eV; dsfdrusifr'' kr dh nj l s  
tek tk, xkA

d $\frac{1}{4}$  ifr'' kr [k $\frac{1}{2}$ 6 ifr'' kr x $\frac{1}{2}$ 5 ifr'' kr ?k $\frac{1}{2}$ 10 ifr'' kr

308 U; qre fdrusfl y cm dk's' ku vkef=r djuk plfg, A

d $\frac{1}{4}$  [k $\frac{1}{2}$ 2 x $\frac{1}{2}$ 3 ?k $\frac{1}{2}$ 4

309 iz' k'' kud vuqk'u grqdk' l k ,flVeV cuk; k tkrk gA

d $\frac{1}{4}$ cLV $\text{\textcircled{V}}$  [k $\frac{1}{2}$ fMVsyM x $\frac{1}{2}$ dk'lfy'' ku ?k $\frac{1}{2}$ dk'Z ugha

310 V $\text{\textcircled{D}}$ udy e $\text{\textcircled{t}}$ jh i $\text{\textcircled{r}}$  djusgrwdk' l k ,flVeV cuk; k tkrk gA

d $\frac{1}{2}$ , DI V $\text{\textcircled{D}}$  [k $\frac{1}{2}$ fMVsyM x $\frac{1}{2}$ dk'lfy'' ku ?k $\frac{1}{2}$ dk'Z ugha

311 fuek.k'z iqk'Z gk'sij dk' l k ,flVeV cuk; k tkrk gA

d $\frac{1}{2}$ , DI V $\text{\textcircled{D}}$  [k $\frac{1}{2}$ fMVsyM x $\frac{1}{2}$ dk'lfy'' ku ?k $\frac{1}{2}$ dk'Z ugha

312 dk' l s l DI '' ku ds v $\text{\textcircled{r}}$ x $\text{\textcircled{r}}$  vkikdky e $\text{\textcircled{h}}$ pe vf/lxg.k fd; k tkrk gA

d $\frac{1}{2}$ 11 [k $\frac{1}{2}$ 14 x $\frac{1}{2}$ 17 ?k $\frac{1}{2}$ 5

## Answer Sheet

Que. no	Answer	Que. no	Answer	Que.no	Answer
1	c) 156 mm	26	a)0.50m	51	b)4m
2	b)172 mm	27	b 2.0m	52	a)Insulated
3	a)150 mm	28	c)3 Rail panel	53	b)6oom
4	d)16.5	29	a)4	54	c)2.0m
5	c)11m	30	a)10m	55	c)One block Section
6	a)22.5	31	d)1000	56	b) lin 100
7	b)18	32	a)Before monsoon	57	d)6.5m
8	d)800 GMT	33	a)Minor	58	a) $t_d+10^{\circ}c$ to $t_d-20^{\circ}c$
9	c)550 GMT	34	b)Major	59	b)SEJ
10	b) 525 GMT	35	c) viaduct	60	b) $t_d-30^{\circ}c$ to $t_d+10^{\circ}c$
11	b) 350 GMT	36	c) 11 m	61	d) 30
12	c) 25%	37	d) 22.5	62	c) Mate
13	b)BHN	38	b)18	63	b)40mm
14	b) 220	39	b) 1540	64	d) 15
15	a)260	40	C)60	65	c)30
16	C) rail free	41	c)rail free	66	a)50mm
17	b) 200 mm	42	c) 200	67	c) G3L
18	C) 250 mm	43	b) 2	68	c) CWR
19	C) 250mm	44	a)Once in a year	69	a)4
20	d) 40% to 60%	45	b) once in 2 year	70	c)3
21	c) 5%	46	b)13	71	b)10 <sup>o</sup> c
22	d)98%	47	d)96	72	d)15 <sup>th</sup>
23	b)95%	48	c)67	73	c) $t_d + 25^{\circ}c$
24	a)100x 70x 10 cms	49	d) 78m	74	c) $t_o$
25	b) 1.0m	50	b) 250 +- 50 mm	75	b) mate

Question no	Answer	Que. no	Answer	Que.no	
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76	b) 15 days	114	a)DTS	152	b)+0.4 mm/ -0.00mm
77	d) February	115	c) lin 1000	153	c)0.5mm
78	c) once in a year	116	d)10-12mm	154	b)0.3mm
79	a)Short duration	117	b)3	155	b)10-12mm
80	b)Long duration	118	a)2	156	d)24
81	c)Routine maintenance	119	c) 100 GMT or 2 year	157	a)6mm
82	a) 3 rail length	120	a)20%	158	d)3 year
83	c) Once in 10 year	121	c)RM 76	159	d)1200 m
84	b)10	122	a)FRM 80	160	b)2 months
85	b)1673mm	123	c)40kmph	161	c)4months
86	d)880	124	c)T-28	162	a)6 months
87	b)100m	125	a) Design mode	163	c)creep
88	c)Green flag	126	a)>50mm	164	a)150mm
89	d)C-2	127	d)10mm	165	c)3.60mm
90	b)Hor P	128	c)2.5	166	c)3
91	c) O+-	129	b)2.0	167	d)20 km
92	d) 	130	b) 26.5mm	168	a)500m
93	d)4000m	131	c)H3	169	a)lin 200
94	c)3000m	132	b)13	170	d) 4-6 minute
95	a) inner	133	d)96	171	c)2 year
96	b)outer	134	c)67	172	b)65mm
97	d) 10°	135	c)10125mm	173	b)6%
98	c)165mm	136	b)6400mm	174	d)3400mm
99	d)100mm	137	d)39975mm	175	b) Floating
100	b)75mm	138	a)28789mm	176	a)loaded
101	d)20m	139	c)15 kmph	177	c)both
102	b)caut deficiency	140	d)30kmph	178	c)2 months
103	c)cant excess	141	d)30kmph	179	a)once in a month
104	c)51mm	142	c)4350mm	180	c)3
105	a)25mm	143	a)3330mm	181	d)10
106	a)circular	144	c)6.0m	182	a)1year
107	a)zero	145	b)Two red	183	a)A class
108	a)10mm	146	c)three	184	a)green
109	b)15mm	147	b)welding	185	d)No sight
110	d)40mm	148	a)1 year	186	c)2.0m
111	c)110-120	149	a)4	187	a)>80
112	b)30mm	150	b)A III	188	a)>0.30g
113	a)Single cord	151	a)+1.00 mm/ - 0.00mm	189	c)25+-1mm

## Answer Sheet

Que no	Answer	Que.no	Answer	Que.no	Answer
190	d)>30mm	230	b)6month	270	d)No restriction
191	d)50m	231	c)1 in 40	271	b) Female rly employee
192	d)13mm	232	c)6850mm	272	d)45 days
193	b)8mm	233	d)5300mm	273	a)suspension
194	c)2oom	234	c)12155mm	274	b)Deemed suspension
195	a)>0.35g	235	c)6250mm	275	c)revokal
196	c)need base concept	236	c)11550mm	276	a)minor penalty
197	b) planned based	237	d)13160mm	277	b) major penalty
198	a)urgent	238	d)13160mm	278	b)DRM
199	b)142	239	c)7850mm	279	a)Sr.DSO
200	a)stop with 10 kmph	240	c)78500mm	280	b)10days
201	c)30	241	c)2:1	281	a)Green
202	d)50kmph	242	b)30	282	b)white
203	d)21 <sup>st</sup> day	243	c)45mm	283	c)180 days
204	b)10 <sup>th</sup> day	244	c)41mm	284	b)AGM
205	d)1200m	245	a)175mm	285	a)2months
206	c)800m	246	d)3m	286	c)9 hours
207	d)600m	247	b)8m	287	a)exclusive
208	b)30m	248	b)6m	288	c)yellow
209	c)20kmph	249	d)5m	289	d)1963
210	b)600m	250	c)2 <sup>1/2</sup> year	290	c)9
211	a)stop with 10 kmph	251	a)30m	291	a)22
212	d)30kmph	252	a)4.265m c/c	292	d)1976
213	b)SSE	253	c)760mm	293	a)3
214	c) JE/SSE	254	d)840mm	294	c)14th September
215	b) key man	255	d)51mm	295	c)30
216	a)mate	256	c)57mm	296	b)stock verifier
217	a)JE	257	d)450mm	297	d)once in a year
218	a)mate	258	c)1905m	298	b)4
219	a)SSE	259	a)1675mm	299	c)3
220	a)SSE	260	a)175m	300	b)2 year
221	b)key man	261	c)1670mm	301	a)1 year
222	a)in a month	262	a)1680mm	302	d)20%
223	a)15	263	b) 1 in 400	303	a)late
224	d)2	264	a)1in 1200	304	a)1%
225	a) a month	265	b)160mm	305	a)5%
226	c)fortnight	266	c)115mm	306	b)JA Grade

227	c) CREEP	267	d) 180 days	307	c) 5%
228	d) once in a year	268	a) 15	308	c) 3
229	c) once in a month	269	c) 300	309	a) Abstract
				310	b) detailed
				311	c) Completion
				312	b) 14

**\*\* mRrj "kV \*\***


<b>lk' u I ; k</b>	<b>mRrj</b>	<b>i' u I ; k</b>	<b>mRrj</b>	<b>lk' u I ; k</b>	<b>mRrj</b>
1	x½ 156 feeh	26	d½ 0-50 eh	51	[k½ 4 eh
2	[k½ 172 feeh	27	[k½ 2-0 eh	52	?k½d g½M
3	d½ 150 feeh	28	x½ 3 jy iuy	53	[k½ 600 eh
4	?k½ 16-5 feeh	29	d½ 4	54	x½ 2-0 eh
5	x½ 11 feeh	30	d½ 10eh	55	x½ , d c½ykd I D" ku
6	?k½ 22-5	31	?k½ 1000	56	[k½ 1 ea 100
7	[k½ 18	32	d½ ekul q ds i gys	57	6-5 eh
8	?k½ 800 th, eVh	33	d½ ekbuj	58	d½ td+10°C I std-20°C
9	x½ 550 th, eVh	34	[k½ est j	59	[k½ , I b½t s
10	[k½ 525 th, eVh	35	x½ ok; MDV	60	[k½ td-30°C I std+10°C
11	[k½ 350 th, eVh	36	x½ 11 eh	61	?k½ 30
12	x½ 25 ifr" kr	37	?k½ 22-5	62	x½ e½
13	[k½ ch, p, u	38	[k½ 18	63	[k½ 40 feeh
14	[k½ 220	39	[k½ 1540	64	?k½ 15
15	d½ 260	40	x½ 60	65	x½ 30
16	x½ jy Qh	41	x½ jy Qh	66	d½ 50 feeh

17	[k½ 200 feeh	42	x½ 200	67	x½ th 3 , y
18	x½ 250 feeh	43	[k½ 2	68	x½ l hMcyw/kj
19	x½ 250 feeh	44	d½ l ky es1 ckj	69	d¼
20	?k½ 40 ifr" kr l s60 ifr" kr	45	[k½ 2 l ky es1 ckj	70	x½ 3
21	x½ 5 ifr" kr	46	[k½ 13	71	x½ 10°C
22	?k½ 98 ifr" kr	47	?k½ 96	72	?k½ 15 ok
23	[k½ 95 ifr" kr	48	x½ 67	73	x½ td+25°C
24	d½ 100X70X10 l eh	49	?k½ 78 eh	74	[k½ t <sub>o</sub>
25	[k½ 1-0 eh	50	d½ 250 ± 50 feeh	75	[k½ eV

4

**\*\* mRrj "kV \*\***

lk' u l ĩ; k	mRrj	iz' u l ĩ; k	mRrj	lk' u l ĩ; k	mRrj
76	x½ 15 fnu	101	?k½ 20 eh	126	d½ 50 feeh l sT; knk
77	?k½ Qcsvjh	102	[k½ dV MQhf" k; yh	127	?k½ 10 feeh
78	x½ l ky ea1 ckj	103	x½ dV , DI d	128	x½ 2-5
79	d½ "kVZ M; v/s" ku	104	x½ 51 feeh	129	[k½ 2-0
80	[k½ ykx M; v/s" ku	105	d½ 25 feeh	130	[k½ 26-5 feeh
81	x½ fu; fer j [kj [kko	106	d½ l diyj	131	x½ , p 3
82	?k½ 3 jsy yckbz	107	d½ f>jks	132	[k½ 13
83	x½ 10 o'kz ea , d ckj	108	d½ 10 feeh	133	?k½ 96
84	[k½ 10	109	[k½ 15 feeh	134	x½ 67
85	[k½ 1673 feeh	110	?k½ 40 feeh	135	x½ 10125feeh
86	?k½ 880	111	x½ 110&120	136	[k½ 6400 feeh

87	[k½ 100 eh	112	x½ 30 feeh	137	?k½ 39975 feeh
88	x½ gjh >Mh	113	d½ fl xy dMz	138	d½ 28789 feeh
89	d½ h&2	114	d½ Mhth, l	139	x½ 15 fdeh@?k/k
90	[k½ p ; k ih	115	x½ 1 ea 1000	140	?k½ 30 fdeh@?k/k
91	x½ o 	116	?k½ 10&12feeh	141	?k½ 30 fdeh @?k/k
92	?k½  	117	[k½ 3	142	x½ 4350 feeh
93	?k½ 4000 eh	118	d½ 2	143	d½ 3330 feeh
94	x½ 3000 eh	119	x½ 100 th, eVh ; k 2 o'kz	144	x½ 6-0 eh
95	d½ buj	120	d½ 20 ifr" kr	145	[k½ nks yky
96	[k½ vkmVj	121	x½ vkj, e 76	146	x½ rhu
97	?k½ 10 <sup>u</sup> feeh	122	d½, Qvkj, e 80	147	[k½ ofYMa
98	x½ 165feeh	123	x½ 40 feeh@?k/k	148	d½ o'kz
99	?k½ 100 feeh	124	x½ Vh&28	149	d½ 4
100	[k½ 75 eh	125	d½ fM'tkbuekM	150	[k½, III

**\*\* mRrj "kV \*\***

lk' u l ; k	mRrj	iz' u l ; k	mRrj	lk' u l ; k	mRrj
151	d½+ 1.00 feeh/ -0.00 feeh	176	d½ ykMM	201	x½ 30
152	[k½+ 0.4 feeh/ -0.00 feeh	177	x½ nksks	202	?k½ 50 fdeh@?k/k
153	x½ 0-5 feeh	178	x½ 2 eghus	203	?k½ 21 fnu
154	[k½ 0-3 feeh	179	d½ eghus ea 1 ckj	204	[k½ 10 fnu
155	[k½ 10&12 fefuV	180	x½ 3	205	?k½ 1200 eh
156	?k½ 24	181	?k½ 10	206	x½ 800eh

157	d½ 6 feeh	182	d½ 1 o'kz	207	?k½ 600 eh
158	?k½ 3 o'kz	183	d½ , Dykt	208	[k½ 30 eh
159	?k½ 1200eh	184	d½ xhu@gjk	209	x½ 20 fdeh @ ?k½k
160	[k½ 2 eghus	185	?k½ uks l kbV	210	[k½ 600 eh
161	x½ 4 eghus	186	x½ 2-0 eh	211	d½ LVkQ 10 fdeh@?k½k
162	d½ 6 eghus	187	d½ >80	212	?k½ 30 fdeh @ ?k½k
163	x½ Øhi	188	d½ >0-30g	213	[k½ , l , l bz
164	d½ 150 feeh	189	x½ 25 $\frac{+}{-}$ 1 feeh	214	x½ t b@, l , l bz
165	x½ 3- 6 eh	190	?k½ >30 feeh	215	[k½ dheu
166	x½ 3	191	?k½ 50 eh	216	d½ eV
167	?k½ 20 fdeh	192	?k½ 13 feeh	217	d½ t bz
168	d½ 500 eh	193	[k½ 8 feeh	218	d½ eV
169	d½ 1 ea 200	194	x½ 200 eh	219	d½ , l , l bz
170	?k½ 4&6 fefuV	195	d½ >0-35g	220	d½ , l , l bz
171	x½ 2 l ky	196	x½ uM-cM d l lV	221	[k½ dheu
172	[k½ 65 feeh	197	[k½ lyku cM-	222	d½ eghus ea 1 ckj
173	x½ 6 i fr" kr	198	d½ vj tV	223	d½ 15
174	?k½ 3400 feeh	199	[k½ 142	224	?k½ 2
175	[k½ Qykvx	200	d½ LVki , 10 fdeh@?k½k ds l kfk	225	d½ , d efguk

**\*\* mRrj "kV \*\***

lk' u l ; k	mRrj	iz' u l ; k	mRrj	lk' u l ; k	mRrj
226	x½ 15 fnu	251	d½ 30 eh	276	d½ ekbuj ea i sukVh



227	x½ Øhi	252	d½ 4-265 eh l s@l s	277	[k½ est j i sukYVh
228	?k½ o'kz ea 1 ckj	253	x½ 760 feeh	278	[k½ Mhvkj , e
229	d½ eghus ea , d ckj	254	?k½ 840 feeh	279	d½ l h- Mh, l vks
230	[k½ 6 eghus	255	?k½ 51 feeh	280	[k½ 10 fnu
231	x½ 1 ea 40	256	x½ 57 feeh	281	d½ gjk
232	x½ 850 feeh	257	?k½ 450 feeh	282	[k½ l Qn
233	?k½ 300 feeh	258	x½ 1905 feeh	283	x½ 180 fnu
234	x½ 2155 feeh	259	d½ 1675 feeh	284	[k½ , th, e
235	x½ 6250 feeh	260	d½ 175 eh	285	d½ 2 efgus
236	x½ 1550 feeh	261	x½ 1670 feeh	286	x½ 9 ?k/s
237	?k½ 13160 feeh	262	d½ 1680 feeh	287	d½ , DI Dyfl o
238	?k½ 13160 feeh	263	[k½ 1 ea 400	288	x½ i hyk
239	x½ 7850 feeh	264	d½ 1 ea 1200	289	?k½ 1963
240	x½ 7850 feeh	265	x½ 115 feeh	290	x½ 9
241	x½ 291	266	[k½ 160 feeh	291	d½ 22
242	[k½ 30	267	?k½ 180 fnu	292	?k½ 1976
243	[k½ 45 feeh	268	d½ 15	293	d½ 3
244	x½ 41 feeh	269	x½ 300	294	x½ 14 fl rEcj
245	x½ 175 feeh	270	?k½ dkbz l hek ugh	295	x½ 30
246	d½ 3 eh	271	[k½ efgyk jYos deþkj h	296	[k½ LVkd os fj Qk; j
247	?k½ 8 eh	272	?k½ 45 fnu	297	?k½ o'kz ea 1 ckj
248	[k½ 6 eh	273	d½ LkLi' ku	298	[k½ 4
249	?k½ 5 eh	274	[k½ MheM l Li' ku	299	x½ 3

250	x½ 2 1@2 o'kz	275	x½ fjokdy	300	[k½ 2 o'kz
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**\*\* mRrj "kV \*\***

lk' u l ĩ; k	mRrj	iz' u l ĩ; k	mRrj	lk' u l ĩ; k	mRrj
301	d½ 1 o'kz				
302	?k½ 20 ifr" kr				
303	d½ yv				
304	d½ 1 ifr" kr				
305	d½ 5 ifr" kr				
306	[k½ ts xM				
307	x½ 5 ifr" kr				
308	x½ 3				
309	d½ , cLVØV				
310	[k½ MhVVM				
311	x½ dElyh" ku				
312	[k½ 4				





































