P. Way & Establishment: Railway Organization
Session: 1 & 2

Q.A Fill in the blanks:-

01.01 The first public Railway was opened on for traffic in the world is…….

01.02 The first train of the world made its maidens journey between …… & …….. in UK.

01.03 In India first rain started on ……

01.04 First train on Indian Track ran between ……. & ……. Stations.

01.05 First train of India made its maiden journey for 21 miles in……

01.06 Indian Railway has about…….route Km**. ……**

01.07 Indian Railways has about ……..train per day.

01.08 Indian Railways have about …….stations.

01.09 There are about…….nos. employees are in Indian Railways

01.10 The responsibility of administration and management of Indian Railway lies on….

Q. B. Give the answer in one word.

01.11 Who is the over-all in charge of the Indian Railways?

01.12 Who is the administrative in charge of the Railway Board?

01.13 How many members are there in Railway Board?

01.14 Railway persons who work as a ex-officio secretaries

01.15 No. of Zonal Railways are

Q. C. Choose the correct answer:-

01.16 Railway Board works under overall supervision of:
(i) Prime Minister (ii) Chairman Railways Board
(iii) President of India (iv) Railway Minister

01.17 Zonal Head Quarters of ECR is-
(i) Mughalsarai (ii) Hazipur (iii) Bhubhaneshwar (iv) Jabalpur

01.18 No. of nominated production unit of Indian Railways-
(i) 11 (ii) 06 (iii) 07 (iv) 05

01.19 Headquarters of Integral coach Factory (ICF)-
(i) Prambur (ii) Kapurthala (iii) Patiala (iv) Chitranjan

01.20 No. of Divisions in Indian Railways are-
(i) 67 (ii) 72 (iii) 68 (iv) 64

01.21 Chitranjan Locomotive works (CLW) manufacturer-
(i) Diesel Engine (ii) Steam Engines (iii) Electric Engines (iv) TTM Engines

01.22 The first public railway in the world open on-
(i) 1825 (ii) 1853 (iii) 1836 (iv) 1842

01.23 Route Kilometer of Indian Railway in above-
(i) 66.221K (ii) 69.222Km (iii) 63.221Km (iv) 68.221

01.24 No. of Railway employee are Indian Railways-
(i) 17.71 lacs (ii) 14.41 lacs (iii) 9.91 lacs (iv) 13.41 lacs

01.25 Church gate is the headquarter of the-
(i) Central Railway (ii) Western Railway (iii) Sub-urban Railway (iv) Metro Railway

01.26 Who is the Zonal Chief of TMC organization-
(i) CE/TMC (ii) CTE (iii) Dy. CE/TMC (iv) Dy. CE/CPOH

Answer Sheet

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
01.01	**27th Sep.1825**	**01.08**	**7031**	**01.15**	**17**	**01.22**	**i**
01.02	**Stock land & Darlington**	**01.09**	**14,41,000**	**01.16**	**iv**	**01.23**	**iii**
01.03	**16th Apr.1953**	**01.10**	**Rly. Bd.**	**01.17**	**ii**	**01.24**	**ii**
01.04	**Bombay to Thana**	**01.11**	**Rly. Minister**	**01.18**	**ii**	**01.25**	**ii**
01.05	**1.25hrs**	**01.12**	**CRB**	**01.19**	**ii**	**01.26**	**i**
01.06	**63,221**	**01.13**	**Five**	**01.20**	**iii**		
01.07	**13000**	**01.14**	**Members**	**01.21**	**iii**		

P. Way & Establishment: Railway Organization Session: 3

Q.Tick the correct answer.

03.01 Track gauge is a minimum distance between-
(a) Inner face of rails (b) Outer faces of rails
(c) Centre of rails (d) Inner faces of wheels

03.02 The recommended gauge for Indian Railway which is widely used -
(a) Broad Gauge (b) Meter gauge (c) Narrow gauge (d) Standard gauge

03.03 The gauge distances for narrow gauge in -
(a) 1676 (b) 1673 (c) 610 (d) 762

03.04 "Standard Gauge" is widely used for -
(a) European Rlys. (b) Asian Rlys. (c) Malaysian Rlys. (d) World Rlys.

03.05 Total Nos. of important components/constituents of track are -
(a) Four. (b) Six. (c) Five (d) Three

03.06 M.S.S. of Rajdhani 'A' Route is -
(a) 160 Kmph (b) 180 Kmph (c) 130 Kmph (d) 165 Kmph

03.07 M.S.S. of 'C' Route is -
(a) 160 Kmph (b) 130 Kmph (c) 100 Kmph (d) Not Specified

03.08 M.S.S. of 'E' Route is -
(a) 100 Kmph (b) More than 100 Kmph (c) Less than 100 Kmph (d) None

03.09 Grand Trunk route is specified -
(a) 'A' Route (b) 'B' Route (c) 'C' Route (d) 'D' Route

03.10 Characteristics of a good track is -
(a) All parameters should be very correct.
(b) Efficient Drainage should be there
(c) Lateral & Longitudinal stability should be there
(d) All above characteristics should be there.

Answer Sheet

Q. No.	Ans.	Q. No.	Ans.
03.01	**a**	**03.06**	**a**
03.02	**a**	**03.07**	**d**
03.03	**d**	**03.08**	**c**
03.04	**d**	**03.09**	**a**
03.05	**c**	**03.10**	**d**

P. Way & Establishment: Railway Organization
Session: 4 Formations

Q. A Tick (√) the correct answer

1) Track is laid on
   a) Formation b) Ballast c) Sleeper d) Earth.

2) Formation of track is
   a) Natural Land b) Prepared Ballast Layer c) Prepared flat surface d) None.

3) Formation is generally prepared on
   a) Embankment b) Hills c) Tunnels d) Bridges

4) Formation made by extra earth work is known as
   a) Bridge b) Cutting c) Embankment d) Culvert.

5) Excavation of existing ground for formation is known as
   a) Tunnel b) Drainage c) Embankment d) Cutting.

6) Recommended width of formation on BG Double line-embankment.
   a) 6.10 meter b)10.21 meter c) 10.28 meter d) 8.23 meter

7) On embankment slope is kept-
   a) 1:1 b) 1½:1 c) 2:1 d) 3:1

8) Drainage of track /Track Drainage means
   a) Collection of water b) Disposal of water c) Interception of water d) All above

9) Catch water Drains are found at formation of
   a) Bridges b) Tunnels c) Cuttings d) Embankments

10. Match the following

a) Borrow Pit	a) Yield formation
b) Side drains	b) Formation
c) Blanketing	c) Embankment
d) Prepared surface	d) Cutting

11. Unballasted portion of formation known as
    a) Water way b) Path way c) Cess d) Side drain

12. Recommended track distances for new track is
    a) 4725 b) 5000 c) 5150 d) 5300

13. Cess provides to track
    a) Path way b) Water way or Drainage c) Stability to track d) Working space for Gang

ANSWER SHEET

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**A**	**4**	**c**	**7**	**c**	**10**	**a**	**13**	**c**
2	**C**	**5**	**d**	**8**	**d**	**11**	**c**		
3	**A**	**6**	**b**	**9**	**c**	**12**	**d**		

P. Way & Establishment: Railway Organization
Session: 5 & 6 Rails

Q. A Tick (√) the correct answer

1. Rails are
   a) Fabricated Steel Bar b)Rolled Steel Bar c) Casted Steel Bar d)Forged steel Bar

2. The fixed distance at which rails are placed is known as
   a) Guage Level b) Standard Guage c) Guage d) Guage Variation

3. The rails are placed end to end-to-give
   a) Continuous path b) Straight path c) Smooth path d) Leveled path

4. Rails serves to wheel
   a) Lateral Guide b)Vertical Guide c) Longitudinal Guide d) All above

5. Rail bears different stresses due to
   a) Moving Load b) Thermal Stresses c) Dead Load d) All above

6. Rails transmit the load coming from Moving train to
   a) Sleeper b) Ballast c) Formation d) To formation through sleeper and ballast.

7. The IRS standard of Rail is
   a) D H Rails b) B H Rails c) FF Rails d) All above.

8. Standard Length of Rail for BG track is
   a) 12 meter b) 26 meter c) 13 meters d) 13 feet.

9. Standard gap of rail fish plated joint is
   a) 06 mm b) 10 mm c) 05 mm d) None.

10. Max gap which can accommodated at the rail joint in normal condition
    a) 06 mm b) 15 mm c) 10 mm d) 16 mm

11. Heaviest Rail section which is in use as per IRS is
    a) 52 kg b) 90R c) 60 kg d) 62 kg

12. Weight of 4 meter 52 kg Rail section piece is
    a) 52 kg b) 240 kg c) 124 kg d) 208 kg

13. Selection for Rail section for any section is depend upon
    a) Heaviest axle load b) Heaviest moving load c) M.SS d) All above

14. Weight of 90 R rail is
    a) 90 kg per meter length b) 90 lbs per meter length
    c) 90 lbs per yard length d) 90 kg per yard length

15. Permanent rail closure of running time should not be less than
    a) 6.5 meter b) 6 meter c) 5.5 meter d) 4.5 meter

16. Permanent rail closure on bridge approach should not be less than
    a) 5.5 meter b) 11.0 meter c) 13 meter d) 9.0 meter

17. Height of 60 kg rails is
a) 172 mm b) 168 mm c) 156 mm d) 150 mm

18. Web thickness of 60 kg rail is
a) 15.5 mm b) 16.5 mm c) 16 mm d) 15 mm

19. Flange width of 52 kg rail is
a) 150 mm b) 156 mm c) d) 136 mm d) 140 mm

20. 110 UTS rails are designed for Rail section
a) 52 kg b) 60 kg c) 90 R d) All above

21. Actual weight of 60 kg rail section of one meter rail is
a) 60 kg b) 60.34 kg c) 60.84 kg d) 59.96 kg

22. Grade of 90 UTS rail is
a) 710 b) 880 c) 1080 d) 1280

23. UTS of Rail having grade 1080 is
a) 72 UTS b) 90 UTS c) 110 UTS d) 92 UTS

24. Stipulated service life of 60 kg - 90 UTS rail without rail grinding is
a) 350GMT b) 525 GMT c) 800 GMT d) 1050 GMT

25. Stipulated service life of 90 UTS rail is _____% higher than the 72 UTS
a) 25% b) 50% c) 75% d) 100%

26. Brand Mark on the rail Web shall be rolled at the interval of
a) 1.0 meter b) 1.5 meter c) 2.0 meter d) 2.5 meter

27. '→' of rolling mark of rail denotes
a) Laying Direction b) Rolling Direction c) Manufacture Process d) Standard of rail

28. Now a days rails are manufactured as per
a) British standard b) Revised British standard c) Indian railway standard d) SAE standard

ANSWERS

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**B**	**8**	**c**	**15**	**C**	**22**	**b**
2	**C**	**9**	**a**	**16**	**B**	**23**	**c**
3	**A**	**10**	**b**	**17**	**A**	**24**	**c**
4	**A**	**11**	**c**	**18**	**B**	**25**	**b**
5	**D**	**12**	**d**	**19**	**C**	**26**	**b**
6	**D**	**13**	**d**	**20**	**B**	**27**	**b**
7	**C**	**14**	**c**	**21**	**B**	**28**	**c**

P. Way & Establishment: Railway Organization
Session: 7 & 8 Sleeper

Q. A Tick (√) the correct answer

1. Function of sleeper is
   a) To hold rails b)To give even support to rail
   c) To transfer load to ballast d) All above

2. CST-9 is a type of
   a) Wooden sleeper b) Steel sleeper c) S. T sleeper d) None of these

3. Now a days we use concrete sleeper for trunk route is-
   a) Mono Block Pre tensioned b) Twin block post tensioned
   c) Twin birch pre tensioned d) Mono block post tensioned

4. Most suitable sleeper for LWR/CWR is-
   a) S.T. sleeper-with pandrol b) S.T. sleeper with keys
   c) CST-9 sleeper d) PRC sleeper

5. PRC sleeper provides to track
   a) Greater Strength b) Greater Stability c) Greater resistance to building d) All above

6. The longer service life sleeper is
   a) Wooden sleeper b) S.T. sleeper c) CST-9 d) PRC sleeper

7. Sleeper on which bitter packing is not suitable
   a) Flat bottom Wooden sleeper b) Hollow bottom -ST sleeper
   c) Hollow bottom CST-9 Flat d) Flat bottom PRC sleeper

8. For B.G Track-No of liners required with PRC sleeper
   a) 02 b) 01 c) 08 d) None of it

9. Length of PRC sleeper is
   a) 2750mm c) 2660mm c) 2550mm d)2600mm

10. Height at ends of BG-60 kg PRC sleeper
    a) 210mm b) 235mm c) 300mm d) 260mm

11. Weight of 60 kg BG PRC sleeper
    a) 270 Kg b) 280 Kg c) 286.5 Kg d) 282.5 Kg

12. No of inserts in PRC sleepers
    a) 02 No. b) 04No. c) 08 No. d) 06 No.

13. No of sleepers per standard rail length is known as
    a) Sleeper spacing b) Sleeper population c) Sleeper density d) Sleeper deposits

14. Sleeper density of a section not depends upon
    a) Type of load b) Type of sleepers c) MSS of section d) Axle load

15. Spacing at joint sleepers is kept
a) Closure b)Wider c) Equal to others d) Not specified

16. LWR/CWR sleeper density is defined as
a) No of sleeper per standard rail length. b) No of sleeper in whole length of LWR/CWR.
c) No of sleeper per km. length of LWR. d) No of sleeper in breathing length of LWR.

17. When sleeper spacing is kept 65 cm in LWR, the no of sleeper in each km will be
a) 1380 b) 1310 c) 1540 d) 1660

18. With 1660 sleeper in one km, sleeper spacing will be
a) 60cm b) 65cm c) 70cm d) 58cm

19. No of sleeper per standard length in BG track when sleeper density is (m+4)
a) 20nos b) 21nos c) 18nos d) 17nos

20. Gauge adjustment in PRC sleeper is done by
a) Pandrol clip b) Liners c) Rubber pad d) Inserts

21. Most suitable sleeper for machine making is
a) Wooden b) CST-9 d) Steel Trough d) PRC

ANSWERS

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**d**	**8**	**d**	**15**	**a**
2	**b**	**9**	**a**	**16**	**c**
3	**a**	**10**	**b**	**17**	**c**
4	**d**	**11**	**c**	**18**	**a**
5	**d**	**12**	**b**	**19**	**d**
6	**d**	**13**	**c**	**20**	**b**
7	**d**	**14**	**a**	**21**	**d**

P. Way & Establishment: Railway Organization
Session: 9 & 10 Fitting & Fastenings

Q. A Tick (√) the correct answer:

1) Example of rail to rail fastening is
   a) Pandrol clip b) Two way key c) Fish plate d) Nut & bolt

2) Joggled fish plate is used at
   a) Rail fracture b) For jointing two different sections rails
   c) At welded joints d) At glued joint

3) For jointing same section rail-we use
   a) Combination F/Plate b) Joggled F/Plate c) Long fish plate d) Ordinary F/Plate

4) Keys are classified as
   a) Elastic fastening b) Rail free fastenings c) Rigid Fastening d) Rail to rail fastening

5) Type of fastenings used at Girder Bridge
   a) Elastic fastenings b)Rigid fastenings c) Pandrol clip d) Rail free fastening

6) Word Toe-Deflection is related with
   a) Rigid fastenings b) Fish Plates c) Rail free fastenings d) Elastic fastenings

7) Elastic fastenings serves the purpose of
   a) Linkage of rail to sleeper b) Absorb shocks and vibrations
   c) To restrict creep d) All above

8) Most suitable fastening for modern high speed LWR/CWR Track is
   a) Rail screw b) Two way key c) ERC d) Long fish plate

9) It is assumed, the fits and forget type fastening is
   a) Key Two way b) Cotter Pin c) Screw Spike d) Pandrol Clip

10) Now a days normally we use Pandrol clip
   a) ERC - Mark b) ERC - Mark II c) ERC - Mark III d) ERC Mark IV

11) Toe load of ERC Mark III Pandrol
   a) 850-1100Kg. b) 700-900 Kg c) 1300-1500 Kg d) 1100-1300 Kg

12) 13.5 mm Toe deflection is for
   a) ERC - Mark I b) ERC - Mark II c) ERC - Mark III d) ERC Mark V

13) Material of Pandrol clip is
   a) High carbon sprig steel b) High carbon manganese steel
   c) High carbon silica steel d) Silico manganese spring steel

14) Rubber pad is an integral part of
   a) Rigid fastening b) Rail free fastening c) Elastic fastenings d) for all fastenings

15) Grooves of rubber pad kept along with rail length, The statement is
   a) True b) false c) None d) Not specified

16) Most suitable liners for Track Circuited Area are
   a) Metallic b) Composite c) GFN d) None

ANSWERS

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**C**	**4**	**c**	**7**	**d**	**10**	**c**	**13**	**d**	**16**	**c**
2	**C**	**5**	**d**	**8**	**c**	**11**	**a**	**14**	**c**		
3	**D**	**6**	**d**	**9**	**d**	**12**	**c**	**15**	**a**		

P. Way & Establishment: Railway Organization
Session: 11 Ballast

Q. A Tick (√) the correct answer

1. The ballast is spreaded in layer under and around the
   a) Rail b) Sleeper c) Fastenings d) Formation

2. Formation receives load through the
   a) Rails b) Sleeper c) Ballast d) Wheels

3. Ballast provides to track
   a) Stability b)Elasticity c) Drainage d) All above

4. The effective media to maintain x-level of track is
   a) Rails b) Track machines c) Ballast d) None of it

5. The ballast should have the shape of
   a) Cubical b) Cylindrical c) Elliptical d) Round

6. The physical property of ballast should not be
   a) Hard b) Durable c) Having sharp edges d) Porous

7. The effective elasticity of track is received from
   a) Elastic fastenings b) Metallic rail c) Reinforced sleepers d) Clean cushion ballast

8. As per 1RS - the material of ballast is recommended
   a) Brick b) Moorum c) Broken stone d) Granite chips

9. Wrong nomination of ballast (as it is classified in position wise) is
   a) Shoulder Ballast b) Cushion Ballast c) Crib Ballast d) Top Ballast

10. Ballast in between two sleepers is classified as
    a) Shoulder Ballast b) Crib Ballast c) Cushion Ballast d) None of it

11. Lateral stability of track is provided by
    a) Cushion Ballast b) Crib Ballast c) Sleeprs d) None of it

12. The maintainability of X-level of track is received from
    a) Cushion Ballast b) Shoulder Ballast c) Crib Ballast d) All above

13. Recommended Ballast Cushion for A Route is
    a) 150 mm b) 250 mm c) 300 mm d) 400 mm

14. Recommended Ballast Cushion for new laying is
    a) 350mm b) 250mm c) 300mm d) 400mm

15. Minimum depth of ballast Cushion in SWR
    a) 350 mm b) 300mm c) 250mm d) 200mm

16. Minimum depth of Ballast Cushion in LWR track
    a) 350 mm b) 300mm c) 250mm d) 200 mm

17. Heaping of shoulder ballast is done in LWR track by
a) 100mm b) 150mm c) 200mm d) 50mm

18. Heaping of shoulder ballast in approach of level X ing is done to improve
a) Longitudinal Stability b) Lateral Stability c) Re-silence d) Running

19. Width of shoulder ballast in straight LWR track is kept
a) 250m. b) 300m. c) 350m. d) 500m.

20. Width of shoulder ballast in outer side of sharp curve in LWR/CWR track is kept
a) 350mm b) 400mm c) 500mm d) 600mm

21. Standard size of ballast recommonded for Indian Railways
a) 80mm b) 40mm c) 32mm d) 65mm

22. Slope of shoulder Ballast is kept in double line B G Track
a) 1:1 b) 2:1 c) 1½:1 d) 2½:1

23. Distribution of load on ballast generally takes place at the angle
a) 30 º b) 60 º c) 40 º d) 45º

ANSWERS

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**b**	**7**	**d**	**13**	**c**	**19**	**c**
2	**c**	**8**	**c**	**14**	**a**	**20**	**c**
3	**d**	**9**	**d**	**15**	**d**	**21**	**d**
4	**c**	**10**	**b**	**16**	**c**	**22**	**b**
5	**a**	**11**	**d**	**17**	**a**	**23**	**d**
6	**d**	**12**	**a**	**18**	**b**		

P. Way & Establishment: Railway Organization
Session: 12, 13, 14, 15, 16 & 17 Point and Xing

Q. A Tick (√) the correct answer

1. Turn outs are necessary in track for
   a) Smooth and safe running of vehicle
   b) To avoid hills and river
   c) To avoid buckling and fracture of rail
   d) To give path to trains coming from both sides in single line track

2. Tapered movable rail of point and Xing is known as
   a) Splice rail b) Point rail c) Tongue rail d) Stock rail

3. The rear end of tongue rail is connected with the
   a) Stock rail b) Stock joint c) Lead rail d) Running rail

4. The rail known as switch rail
   a) Point rail b) Splice rail c) Stock rail d) Tongue rail

5. Tongue rail housed in the
   a) Stock rail b) Lead rail c) Check rail d) Point rail

6. Lay out of point and xing starts from
   a) Toe of switch b)Heel of switch c) Back of xing d) Stock joint

7. Switch is the identified as
   a. A pair of stock rail b) One stock and one tongue rail
   c) A pair of tongue rail d) Two stock and two tongue rail

8. A point is consists of
   a) A pair of tongue rail b) A pair of stock rail
   c) A pair of tongue and a pair of stock rail d) One tongue and one stock rail

9. Heel of switch (HOS) always falls on heel Block The statement is
   a) True b) false

10. In case of 'Loose Heel Switches' the tongue rail joints with lead rail at
    a) Heel of switches b) Behind the HOS c) Before the HOS d) None of it

11. Length of tongue rail is usually longer, in case of the
    a) Lose Heel Switches b) Fixed Heel Switches c) Straight switches d) None of it

12. Heel Divergence is minimum distance at HOS between
    a) Stock Rail and Tongue Rail b) Gauge lines of stock and tongue rail
    b) Running rail gauge line and check rail d) Nose rails and wing rails

13. Switch Angle is angle between (in close position)
    a) Tongue rail and stock rails b) Gauge lines of tongue and stock rails at ATS
    c) Gauge lines of tongue and stock rails at TTS d) Point rail and spice rail

14. In case of curved switches –'Switch Angle is known as
a) Switch Angle b) Point Angle d) Xing Angle d) Entry Angle

15. Entry Angle in comparison to switch angle is always
a) Equal b) Sharper c) Flatter d) Considered Equal for all practical purposes

16. Throw of switches is a distance between
a) Tongue rail and stock rail at ATS in open condition
b) Tongue rail and stock rail at TTS in open condition
c) Tongue rail and stock rail at ATS in close position
d) Tongue rail and stock rail at HOS in open position

17. Maximum recommended value of 'Throw of switch' in BG-l in12 switches is
a) 95mm b) 100mm c) 115mm d) 98mm

18. Point of intersection of Gauge –lines of Tongue rail and stock rail in closed position is known as
a) ATS b) TTS c)HOS d)Point of entry

19. Thickness of tongue rail at ATS is
a) 00mm b) 06mm c) equal to web thickness d) None of it

20. Crossing Angle is angle subjected between the
a) Two converging wing rails at throat of crossing b) Two gauge lines of xing
c) Between wing rail and splice rail d) All statements are true

21. Thickness of nose of Xing at TNC is
a) Zero b) Equal to web thickness of rail section
c) 06mm d) Half of the head width of rail section

22. Thickness of nose of Xing (ANC) in case of BG 1 in 12, 60 kg crossing is
a) 15.5mm b) 16.5m c)16mm d) 17.5mm

23. Distance between ANC to TNC in 1in 12- 52 kg crossing is
a) 198 mm b) 186 mm c) 132mm d) 140mm

24. The point at which minimum distance between converging wing rails are found is known as
a) Nose of crossing b) Mouth of crossing c) Throat of crossing d) Bach of crossing

25. Crossing Number is the
a) Tangent value of Xing Angle b) Tangent value of switch Angle
c)Tangent value of Entry Angle d) Co-tangent value of Xing Angle

26. Initially when Railway came to existence the switches used for diverting traffic
a) Stubs type b) Split type c) Under cut type d) Over riding type

27. For Indian Railway , the standard switches are
a) Over riding type split b) Under cut type split c) Stub switches d) None of it

28. In over-riding switches, the gauge from ATS to TTS is kept
a) Exact (0-0) b) Tight (0 to -6) c) Slack (0 to +6 mm) d) No standard given

29. Switch Length in comparison to the longest wheel base of a trolley should be
a) Equal b) Shorter c) Longer d) Not specified

30. The full rail –section of stock rail is found in the
a) Stub switches b) Split undercut switches c) Split –over riding switches d) None of it

32. The left and right tongue rail is not inter changeable in case of
a) 1 in 8½ straight switches b) 1 in 8½ curved switches
c) 1in 8½-under cut switches d) Statement is wrong

33. In case of obtuse Xing the crossing angle is
a) 90 º c) Shorter than 90 º c) Greater than 90º d) 45º

34.In Indian Railways – for all T/outs and normal X-over – the crossing is used
a) Square crossing b) Acute Xing c) Obtuse Sing d) Diamond Xing

35. The prescribed Xing for high speed and heavy traffic density routes is
a) Built up xing b) Cast Steel Xing
c) Cast Manganese steel Xing d) Medium Manganese steel Xing

36. The CMS Xing have
a) One nose piece and two wing rails b) One point rail, one splice rail and two wing rails
c) One nose piece, two wing rails, Xing blocks with fasteners d) No loose parts

37. The built up Xing is manufactured by
a) Molding process b) Casting process c) Fabricating process d) Die-cutting process

38. Very little maintenance is required in case of
a) Diamond Xing b) Built up Xing c) Acute Xing d) CMS Xing

39. The Anti wear capacity is more in case of
a) Built up Xing b) CMS Xing c) Square Xing d) Diamond Xing

40. The service life of CMS Xing in comparison to built up Xing is assumed
a) Equal b) Two times c) Three times d) Four Times

41. The max check rail clearance in turn out is kept
a) 44mm b) 48mm c) 51mm d) 57mm

42. End Flare / tapered machining in check rail is provided
a) To avoid hitting of nose of Xing b) To avoid hitting of check rail by new wheel
c) To avoid hitting of check rail by old wheel d) For smooth entry of wheel in check rail

43. Check rails are provided in T/outs to
a) Protect Toe of switches b) Protect nose of Xing against wear
c) Protect nose Xing against hitting of wheel flange d) Avoid sudden load falling on nose

44. Level of crossing nose at ANC is kept in comparison to level of wing rail
a) Equal b) High by 06 mm c) Low by 06mm d) None of it

45. Ramp in nose of xing is provided for a distance upto from ANC
a) 100mm b) 90mm d) 90cm d) 100cm

46. The Diamond is consists of
a) Two obtuse xings b) Two Acute xings
c) One obtuse and one acute xing d) Two obtuse and two acute xing

47. The Diamond xings shall not be flatter than
a) 1in 8½ b) 1 in 12 c) 1 in 16 d) 1 in 20

48. The height of check rail of obtuse crossing is kept high by providing steel strip on it by
a) 20mm b) 16mm c) 25mm d) 12mm

49. A Diamond with double slip lay out arrangement is consists of
a) 4 sets of switches b) 8 sets of switches c) 2 sets of switches d) 06 sets of switches

50. A 'Lay out' which connects two through tracks is called
a) Diamond b) X-over c) Scissor X-over d) Gauntleted Track

51. When two X-overs intersects each other, the layout is formed
a) Diamond X-over b) Emergency X-over's c) Scissors X-over d) Straight X-over's

52. A scissors X-over is consists of
a) Two set diamond and four T/outs b) One set diamond and four T/outs
c) One set diamond and two T/outs d) Two set diamond and four T/outs

53. A scissors X-over's lay out consists
a) Two acute xing b) four acute xings c) 06 acute xing d) Eight acute xing

54. When two tracks are passed on same formation and sleepers, the lay out is known is
a) Diamond b) Gauntletted track c) X-over d) latter track

55. For temporary diversion on two parallel Bridges having different track gauges the lay out is used
a) Triangle b) Scissors c) Ladder track d) Gauntletted track

56. Nos. of parallel track is merged in or take off from lay out, is
a) Main line b) Branch line c) Gathering line d) All of it

57. Substitute of Turn Table is
a) Turn table only b) Triangle c) Zig zag lay out d) Curve

58. Rly. Board restricted the use of T/out in passenger running line
a) 1 in 8½ b) 1 in 12 c) 1 in 16 d) 1 in 20

59. Speed restriction shall be imposed in passenger train entry platforms where 1 in 8½ T/outs is existing, by
a) 15kmph b) 30kmph c) 20kmph d) No restriction

60. No gradient shall be provided in approach of T/out upto
a) 30meter b) 100meter c) 50meter d) 60meter

61. In Fan shape T/out one set of sleepers can be used for
a) For both left and right T/outs b) For both 52kg and 60Kg rails
c) For all above (a&b) d) None is valued

62. In case of fan shape turnout, the position of lead sleepers is kept at angle from perpendicular
a) $\theta/2$ b) at θ c) No angle d) at 2θ
(θ – angle between M/L and tangent of lead curve)

63. In fan shape T/out laying – mark RE is kept always
a) In right hand side b) Different in left and right T/out
c) In any direction d) In always left hand side

64. In triangle lay out, nos of T/outs is used
a. 04 sets b) 06 sets c) 03 sets d) 01 sets

ANSWERS

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**d**	**14**	**d**	**27**	**a**	**40**	**b**	**53**	**b**
2	**c**	**15**	**c**	**28**	**c**	**41**	**c**	**54**	**d**
3	**c**	**16**	**a**	**29**	**c**	**42**	**c**	**55**	**c**
4	**d**	**17**	**c**	**30**	**c**	**43**	**c**	**56**	**b**
5	**a**	**18**	**b**	**31**	**b**	**44**	**b**	**57**	**a**
6	**d**	**19**	**b**	**32**	**c**	**45**	**d**	**58**	**a**
7	**c**	**20**	**b**	**33**	**b**	**46**	**a**	**59**	**a**
8	**c**	**21**	**b**	**34**	**c**	**47**	**c**	**60**	**c**
9	**a**	**22**	**b**	**35**	**d**	**48**	**a**	**61**	**a**
10	**a**	**23**	**b**	**36**	**c**	**49**	**b**	**62**	**a**
11	**b**	**24**	**c**	**37**	**d**	**50**	**c**	**63**	**c**
12	**b**	**25**	**d**	**38**	**b**	**51**	**b**		
13	**c**	**26**	**a**	**39**	**d**	**52**	**c**		

P. Way & Establishment: Railway Organization

Session: 20 & 21 Welding of Rail

Q.A Tick (√) the correct answer

1. The rail joint having _____ permanent vertical bend of rail at end, is known as
   a) High joint b) Low joint c) Hogged joint d) Battered joint

2. Glued joint is provided in
   a) Electrified area b) Track circuited area c) LWR/CWR track only d) At station area only

3. The maintenance cost of LWR/CWR track in comparison to fish plated track is
   a) Equal b) higher by 50% c) Lower by about 50% d) Lower by about 25%

4. In comparison to fish plated track, the fuel consumption in LWR/CWR track is
   a) Equal d) Increased c) Decreased d) Slightly high

5. Life of components of rolling stock as well as track components is reduced on
   a) Fish plated track b) Welded track c) LWR track d) SWR track

6. Noise pollution of a running train is effectively controlled by
   a) Using leaf spring in rolling stock b) Using coil spring in rolling stock
   c) Using welded track for running d) Using heavy rail section in track

7. Chances of stoppage is very less in
   a) Fish plated track b) Point and Xing c) CWR track d) SWR track

8. For welding of rails at site the technology adopted is
   a) Gas Welding b) Electric Arc Welding c) Flash Butt Weld d) Aluminum Thermit Welding

9. The electric current allowed for flash butt weld is
   a) 5 volt 3500ampere b) 500volt 35ampere c) 2500 volt 15ampere d) 20volt 2500ampere

10. During flash butt welding – the temperature raised up to
    a) 2450ºC to 2500ºC b) 1000ºC to 1500º c) 3500 º to 3600 º d) 3000 ºC

11. In AT weld - temperature after chemical reaction of portion raised upto
    a) 2450º C b) 3500 º C c) 3000 º C d) 2800 º C

12. After chemical reaction of portion – the residual is separated in form of
    a) Aluminums oxide b) Ferrous oxide c) Aluminoferous oxide d) None of it

13. Now a days – technology for AT weld is normally in use
    a) 50mm gap weld b) 25mm gap weld c) 12mm gap weld d) 06 mm gap weld

14. In AT weld – pre heating of rail is done for
    a) Use of low quantity of portion b) For normalizing of rail
    c) To avoid cracks etc. in joint d)To anneal the rail

ANSWERS

Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.	Q. No.	Ans.
1	**a**	**4**	**c**	**7**	**c**	**10**	**B**	**13**	**b**
2	**b**	**5**	**a**	**8**	**d**	**11**	**A**	**14**	**c**
3	**c**	**6**	**c**	**9**	**a**	**12**	**A**		

P. Way & Establishment: Railway Organization
Session: 22, 23, 24, 25, 26, 27 & 28 Welded Track – LWR/CWR/SWR

Q.A Tick (√) the correct answer

1. Due to temperature variation the central part of LWR track observes
   a) Expansion during summer b) Contraction during winter
   c) Expansion and contraction both d) No longitudinal movement

2. Minimum length of LWR in BG track is recognized as
   a) 250meter b) 450 meter c) 500meter d) 1 km

3. Normally track length greater from one block section is known as-
   a) LWR b) CWR c) SWR d) None of it

4. Normally max length of BG track functions as SWR
   a) 200meter b) 39 meter c) 13 meter d) 01 kilometer

5. De – stressing work carried out in the
   a) Fish plated track b) SWR track c) LWR track d) None of it

6. Max. length permitted for CWR track is
   a) One kilometer b) 200 meter c) 250meter d) Not specified

7. Normally it has practice to lay SWR track by
   a) Three rail panels (39 meter) b) Five rail panel(65 meter)
   c) Six rail panels (78 meter) d) Two rail panels (26 meter)

8. In breathing length the longitudinal movement observes in
   a) Through out its length b) Only in central part of it
   c) Only at ends of it d) Statement is wrong

9. SEJ is installed at both
   a) Ends of SWR b) Ends of curve c) Ends of LWR d) Ends of track circuited area

10. SEJ permits expansion/Contraction of
    a) LWR b) CWR c) SWR d) Breathing length

11. Buffer rails are substitute of
    a) Stock rail b) Tongue rail c) Glued joint d) SEJ

12. Rail temperature is the temperature of
    a) Rail surrounding area b) Rails at site
    c) Railsin approved shed d) Rails of level crossing

13. Rail temperature is always equal to ambient temperature. The statement is
    a) True b)false c) Partially correct d) None of it

14. Indian rail track is divided in temperature zones
    a) Two b) Three c) Four d) Five

15. Max range of temperature in zone IV
    a) 61º C - 70 º C b) 71 º C - 76 º C c) 51 º C - 60 º d) 73 ºC - 79 ºC

16. De – stressing operation in LWR/CWR is carried out
    a) To avoid buckling of track b) To avoid rail fractures
    c) To avoid frequent setting of SEJ gap d) To secure stress free condition of rail panel

17. For 52 kg rails, - range of de-stressing temperature will be
    a) tm to (tm+5) ºC b) (tm+5) to (tm+10) ºC
    c) tm to (tm+10) ºC d) (tm+10) to (tm+20) ºC

18. De – stressing operation with tensor is carried out when
    a) 'tp' will equal to 'to' b) tp will higher to 'to'
    c) to will higher to tp d) to will higher to tm
    Where 'tp' is prevailing temperature
    'to' is stress free temperature
    'tm' is mean rail temperature

19. Hot weather patrolling is carried out when temperature exceeds more than
    a) (td+10) º C b) (tm+10) ºC c) (tm+20) ºC d) (td+20) ºC

20. After using mechanized compacter, the consolidation work of LWR/CWR BG track completed only after passage of
    a) 50000 Gross tones traffic or 2 days which is earlier b) 500000 Gross tone traffic
    c) 50000 million tones traffic d) 30 GMT. (Gross million tone) traffic

21. LWR/CWR shall not be laid on curve sharper than
    a) Radius 500 meter b) Radius 440 meter c) Radius 875 meter d) Radius 600 meter

22. LWR/CWR shall not be laid on reverse curve sharper than
    a) Radius500 meter b) Radius 440 meter c) Radius 875 meter d) Radius 1500 meter

23. Width of shoulder ballast on reverse curve of LWR/CWR track – sharper than 1500 meter radius will be
    a) 500mm b) 350mm c) 600mm d) 400mm

24. The steepest permitted gradient of LWR/CWR is
    a) 1:80 b)1:100 c)1:360 d) 1:720

25. Min. radius of vertical curve in LWR/CWR track if BG 'A' route
    a) 2500meter b) 3000meter c) 3500meter d) 4000meter

26. For high speed route – LWR/CWR preferably will laid on
    a) PRC sleeper with elastic fastening b) Steel sleeper with keys
    c) CST – sleeper with keys d) Woolen sleeper with pandrol clip

27. Continuity of LWR/CWR through level crossing is
    a) Permitted without any restriction
    b) Not permitted
    c) Permitted but it should not be situated in breathing length
    d) Permitted but SEJ should not be situated on it

28. LWR/CWR can be continued through
    a) Fish plated joint b) Switch expansion joint(SEJ) c) Glued joint d) All above joints

29. Standard Gap of SEJ shall be kept at distressing temperature for 60 kg rails
    a) 60mm b) 40mm c) 50mm d) 35mm
30. Min. sleeper density (no. of sleeper / km) in LWR/CWR BG track on PRC sleeper is recommended
    a) 1310 b) 1540 c) 1660 d) 1760
31. Normal breathing length of 60 kg rails in PRC sleeper track – in zone IV sleeper density 1660
    a) 60mm b) 68mm c) 79mm d) 82mm
32. Normal breathing length for 52 kg rail in zone IV with PRC sleeper – sleeper density 1540
    a) 68mm b) 64mm c) 71mm d) 60mm
33. Regular track maintenance work of LWR/CWR territory shall be confined will before the temperature
    a) td b) (td+5) ºC c) (td+20) ºC d) (td+10) ºC

34. While working with T.T. machine in LWR track on PRC sleeper– lifting is restricted to
    a) 25mm b) 40mm c) 50mm d) 45mm

35. While working with TT m/cs in LWR/CWR track on Steel sleepers, lifting is restricted to
    a) 25mm b) 30mm c) 40mm d) 50mm

36. Speed Restriction to be imposed up to consolidation period when rail temperature after maintenance work more than (td+20) ºC
    a) 20kmph b) 30kmph c). 50kmph d) 75kmph

37. While working in summer with manual maintenance in LWR/CWR – no of sleeper to be opened not more than
    a) 20Nos. b) 30 Nos. c) 40 Nos. d) 50 Nos.

38. Work restricted to carry out in summer in LWR/CWR territory
a) Lifting work b) Tamping work c) Casual sleeper renewal d) Rubber pad renewal

39. For deep screening work in LWR/CWR section with BCM on curve upto 3º, max. limit of temperature is
    a) tdºC b) (td +10) ºC c) (td+5) ºC d) (td+20) ºC
40. No BCM working is allowed in LWR/CWR territory for curve sharper than 3º,when rail temp. goes beyond
    a) td ºC b) (td+5) ºC c) (td+10) ºC d) (td+20) ºC
41. Longest length of LWR/CWR under normal Indian conditions is standardized
    a) ½ block section b) One block section c)5 km d) more than one block section

ANSWER

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

P. Way & Establishment: Railway Organization
Session: 30 & 31 Track Renewals

Q.A Tick (√) the correct answer:

1. Track renewal work is carried out when
   a) Track mutual becomes worn out b) Axle load has to increase
   c) MSS of section has to increase d) None of above is wrong

2. Casual renewal is the part of
   a) Normal maintenance b) Renewal programme
   c) Scattered renewal c) Pick up slacks

3. Scattered renewal work is the part of
   a) Normal maintenance b) Renewal programme c) Casual renewal d) CTR

4. For scattered renewal no. of sleepers/rail length of a gang beat per year is as bellow
   a) 10 sleepers or 25 rail length b) 10 rail length or 250 sleepers
   c) 100 sleepers or 8 rail length d) Not specified

5. CTR work consists of
   a) Renewal of All track components
   b) Renewal of all track components plus requipment of ballast
   c) Renewal of all track components plus requipment of ballast up to correct people
   d) Renewal of rails sleepers, fittings, and fastenings

6. Primary renewal work is carried out by
   a) Second serviceable components b) New components
   c) Good quality released components d) With new and serviceable release components both

7. Which one is not correct among following with statement-
   Renewal work is proposed-
   a) On basis of safety consideration b) On basis of economical consideration
   c) On basis of rail fracture d) On basis of budget availability

8. Which one is not correct with statement among followings-
   RR work shall be proposed-
   a) On basis of rail fracture b) On basis of buckling
   c) On basis of USFD results d) On basis of wear

9. Max. limit of vertical wear in 60 kg rails is
   a) 8.00mm b) 12.00mm c) 13.00 mm d)15.00mm

10. On 'B' route, Max. value of lateral wear of rail on curved track is
    a) 06mm b) 08mm c) 10mm d) 12mm

11. %age (percentage)less in weight in 52 kg rails is
    a) 6% b) 5% c) 4.2% d) 3.25%

12. Service life of 90 UTS rails in composition to 72 UTS is
    a) half b) equal c) 1.5times d) 2times
13. Service life of 60 kg 90 UTS rails is assumed
    a) 800GMT b) 550GMT c) 525GMT d) 725 GMT

14. On major bridges – RR work becomes due only after passing of the
    a) GMT – equal to service life b) - half of the stipulated GMT
    c) ¾ of the stipulated GMT d) Only after wear beyond limit

15. Pre – matured renewals may be carried out in
    a) CTR work b) TBTR work c) TWR work d) planned way renewal work

16. TSR work will due if the wooden sleepers are damaged more than
    a) 50% b) 30% c) 40% d) 60%

17. Which one is not used for work
    a) TRT b) PQRS c) CSM d) T- 28

ANSWERS:

1	d	6	b	11	a	16	b
2	b	7	d	12	c	17	c
3	a	8	b	13	a		
4	b	9	c	14	b		
5	c	10	b	15	d		

P. Way & Establishment: Railway Organization
Session: 32,33,34,35 & 36
Regular Track Maintenance

Q.A Tick (√) the correct answer

1. The track should be maintained in mechanized system by
   a) Conventional system b) Through padding c) 3 – tier system d) Need base system

2. The work which is not covered in regular track maintenance
   a) Through packing b) Overhauling c) Deep Screening d) Planned way renewals

3. The frequency of through packing operation is
   a) Once in a year b) Once in 06 month c) Once in two years d) Not defined

4. In through packing there are
   a) Six operations b) Seven operations c) Eight operations d) Five operation

5. In through packing it is essential to
   a) Carry out all operations b) To carry out packing two times
   c) To maintain cess d) To carry out the operations in sequence

6. In through packing – opening of crib ballast bellow the bottom of sleeper is
   a) 2″ b) 4″ c) 1″ d) Upto bottom of sleepers

7. In through packing – the work of lining shall be done
   a) After packing b) Before sleeper squaring/spacing
   c) Before gauging and packing d) After gauging

8. In overhauling work – the screening of ballast is carried out
   a) For shoulder ballast b) For crib ballast
   c) For cushion ballast d) For crib and shoulder ballast

9. Frequency of overhauling work is
   a) Four year b) 10 year c) 01year d) 06year

10. For complete maintenance work of overhauling, it is essential to carry out following work after screening of ballast
    a) Deep screening b) Through packing c) Picking up slacks d) Need base packing

11. Main purpose of overhauling work
    a) Is to improve drainage
    b) Is to improve lateral stability of track
    c) Is to make available clean ballast for packing
    d) Is to improve riding comfort for passengers

12. The work of deep screening – (Manually) normally carried out once in a
    a) 3 – 4 years b) 10 – 12 years c) 01 year d) 7 – 8 years

13. Frequency of deep screening work by BCM is normally
    a) 3 – 4 years b) 10 – 12 years c)5 – 6 years d) Not specified

14. In deep screening work – the screening work is carried out for
    a) Cushion ballast b) Crib and shoulder ballast
    c) Shoulder and cushion ballast c) Entire ballast section

15. Manual deep screening work is always carried out
    a) Without caution b) 15kmph caution
    c) 30 km caution d) caution may be imposed – not necessary

16. Work of deep screening on PRC sleepers followed with TTM - is carried out with causing of-
    a) 15 kmph b) 30kmph c) 50kmph d) 40kmph

17. Deep screening work followed by TTM and DTS is normal carried out at the speed restriction of-
    a) 15kmph b)30kmph c)50kmph d) 40kmph

18. Generally normal sectional speed (mts) is gained after Deep screening – with manual packing and stabilization
    a) 10days b) 21days c)15days d) 12days

19. Generally normal sectional speed (mts) is gained after Deep screening – with machine packing and stabilization
    a) 10days b) 21days c) 15days d) 12days

20. In overhauling work – the crib ballast is screened upto
    a) 2″ bellow from bottom of sleeper b) 4″ bellow from bottom of sleepers
    c) 6″bellow from bottom of sleepers d) 3″bellow from bottom of sleepers

21. The work “picking up slacks” is carried out
    a) To ensure whole gang length is in safe for passage if trains
    b) To ensure correct alignment
    c) To ensure correct levelling in whole gang length
    d) To avoid reporting of bad riding in section

P. Way & Establishment: Railway Organization
Maintenance of Track in Track Circuited and Electrified Area

Q.A Tick on correct answers

1. Track circuit is an electrical circuit which forms
   a) Through the track b) Through the rail
   c) Through the wires along with the rails d) Through the glued joint

2. Main purpose of track circuiting is
   a) For ignition colour lighting signals
   b) b) To increase the efficiency of signals
   c) To reduce the signaling failure
   d) To indicate presence or absence of train in a particular portion of track

3. When track will occupied the relay will
   a) Energized b)De – energized c) Neutral d)Balancing

4. In track circuited area, it is prohibited to
   a. Touch both rails by any conductor/tools b) touching of two sleepers by any tools
   c) Touching of rail with sleepers by any tools d) Touching of fish bulbs with fish plate

5. In track circuited area we should use
   a) Metallic gauge b) Non – metallic gauge c) Insulated gauge d) Aluminum gauge

6. In track circuited area – ballast should kept bellow – from rail bottom – minimum – by
   a) 25mm b) 40mm c) 50mm d) 62mm

7. In track circuited area – drainage of track is kept will efficient to avoid
   a) Loose packing b) Pumping c) Capping of ballast d) Over flooding of track

8. Which one is not the traction bend
   a) Longitudinal rail bond b)Cross bond c)Structure bond d) Insulated bond

9. No part of tree should be nearer to traction wire by
   a) 2mtr b) 4mtr c)5mtr d) 6mtr

10. In electrified area, the work of RR shall be carried out only after
    a) Traffic block b) OHE block c) Traffic block with OHE stiff d) All above

11. In electrified Area – Crane working is allowed only after
    a) Traffic Block b) Permit to work c) both above d) No need of any

12. Which one is not the traction bond
    a) Longitudinal bond b) Lateral bond c) Cross bond d) Structure bond

13. No work shall be done within a distance of _____ from the live parts of over
    a) one meter (1.0mt) b) two meter (2.0m) c) 2.5 meter d) 3.0 meter

ANSWER:

1	B	5	C	9	B	13	
2	D	6	C	10			
3	B	7	D	11	B		
4	A	8	D	12			

P. Way & Establishment: Railway Organization
Session: 37 and 38 Engineering Restrictions and Indicators

Q.A Tick (√) the correct answers

1. Which one is not engineering indicator
   a) Caution Indicator b) Speed Indicator c) Stop Indicator d) Whistle Indicator

2. Which indicator cushions the driver to get ready to reduce the speed
   a) Caution Indicator b) Speed Indicator c) Stop Indicator d) Termination Indicator

3. Name of Indicator which indicated to driver to reduce the spend as indicated
   a) Caution Indicator b) Speed Indicator c) Stop Indicator d) Termination Indicator

4. Which indicator indicates to driver to stop the train
   a) Caution Indicator b) Speed Indicator c) Stop Indicator d) Termination Indicator

5. Which indicator indicates to driver to resume normal speed
   a) Caution Indicator b) Speed Indicator c) Stop Indicator d) Termination Indicator

6. The permanent speed restriction indicators are
   a) Same as normal Indicators b) Entirely different from normal Indicator
   c) Some are same and some are different d) All statements are wrong

7. When we have to stop the train, we provide the caution indicator at a distance of
   a) 600meter b) 800meter c) 1200meter d) None of it

8. When we have to reduce speed only of train, the caution indicator will be provide at a distance of
   a) 600meter b) 800meter c) 1000meter d) 1200meter

9. All the distances for providing indicators shall be measured from
   a) Danger side b) Telephonic pole of danger side
   c) Nearer OHE mask of danger side d) After 30 meter from danger side

10. Name the indicator which one end is pointed and another end is fishtailed
    a) Speed indicator b) Stop indicator c) Termination indicator d) Caution indicator

11. In case of stop dead – the caution indicator is provided for more distance against speed restriction because
    a) More breaking is required
    b) For safety consideration
    c) To avoid delay in case of speed restriction
    d) To avoid un – necessary pressure on brake – shoes

12. For clear straight view of driver, normally height of indicators are kept from rail level is
    a) 1.5 meter b) 2.0 meter c)2.5 meter d) 1.75 meter

13. Caution Board is painted with
    a) Yellow colour b) White and black colour
    c) Yellow and black colour d) Yellow – white black colour

14. The temporary indicators are lighted during night
    a) Essentially b) May be – not necessary c) Not required d) Statement is wrong

15. Permanent speed restrictions are lightened essentially during
    a) Night b) Day time c) When visibility is not clear d) Statement is wrong

16. Indicators posts are pointed with 300 bond by
    a) Yellow white b) Black and white c) Black and yellow d) Red and white

17. Number of lights/lamps are de – lighted as caution border
    a) One b) Two c) Three d) None

18. Distance between speed indicator and point of commencement (danger side) is
    a) 15 meter b) 20 meter c) d)30 meter d) Nil

19. Shape of speed board is
    a) Rectangle b) Triangle c) Circle d) Square

20. Colour of speed board is
    a) White base - red figure b) White base - black figure
    c) Yellow base – black figure d) Black base – yellow figure

21. Shape of stop indicator is
    a) Triangle b) Rectangle c) Circle d) Fish- tailed

22. In night – two red lights are lightened on board
    a) Stop board b) Speed board c) Caution board d) Termination board

23. Termination board – shape is
    a) Rectangle b) Circle c) Triangle d) Fish – tailed

24. Distance of termination brand from danger side is –
    a) Longest train of section b) 1.0 km c) 610 meter d) 1/L km

25. Which one is odd
    a) T board b) T/P board c)T/G board d)T/W board

26. Whistle board (W/L) – for level crossing is provided at a distance of
    a) 600meter b) 500meter c) 300meter d) 800 meter

27. Shunting limit board has
    a) Yellow – black bands b) Yellow – black cross
    c) Yellow – black rectangles d) Yellow – blood strips

28. Engg. works named short deviation work involves
    a) At least one night in between b) At least few nights in between
    c) No night in between d) many nights in between

29. Detonators are an
    a) Audio signals b) Video signals c) Audio video signals d) Nothing in above

30. Banner flags are used for protection of track- during
a) Engg. works b) Short duration works c) Long duration works d) Rail renewals

31. Emergency protection of track is carried out when
a) Traffic dept not knowing about danger b) Driver is not knowing about danger
b) Traffic dept/driver has no notice about danger d) During rail fracture

32. During emergency protection – three detonators are placed at a distance of
a) 600meter b) 800meter c) 1000meter d) 1200meter

33. Distance between two detonators is always kept
a) 5meter b) 10meter c) 12meter d) 15meter

34. Safe distance for detonator blasting
a) 40meter b) 30meter c) 45meter d) 50 meter

35. Work of TTM is carried out under
a) Emergency protection b) Protection of short duration work protection
c) Protection of long duration work d) No protection

36. On stationary patrol – man is required for round the clock in case of the
a) Emergency protection
b) Protection during short duration work
c) Protection during long - duration which when only speed restriction is required
d) Protection during long duration work when train has to stop and move with 10kmph

37. Danger signal for night is
a) H.S Red flag b) H.S Red lamp c) Fugue d) Detonator

38. The cautions are declared – as permanent caution when
a) MPS of location is less than MSS b) When bridge is declared weak
c) When super elevation on curve is not sufficient d)When it reflected in working time table

ANSWER:

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

P. Way & Establishment: Railway Organization
Session: 39, 40, 41, 42, 43 and 44 Curves

Q .1 Tick (√) mark on correct answer

1. Curves are provided in railway track at every
   a) Change of alignment only b) Change of gradient only
   c) Change of alignment and gradient d) Change of track structure

2. Any part of circumference of a circle is known as
   a) Arc b) tangent c)off- set d) Versine

3. Straight line – joining any two points of the circumference is known as
   a) Chord b) Versine c) Off – set d) Tangent

4. Perpendicular distance from centre of chord to 'arc' provided on it is known as
   a) Offset b) Versine c) Tangent d)short chord

5. Degree of curve is angle sustaineded by Arc at centre of length
   a) 30meter b) 35meter c) 29.5meter d) 30.5meter

6. Max. limit of curve permitted for BG Track is
   a) 10º b) 16 º c) 40 º d) 4 º

7. Radius of 1 º curve is
   a) 1740 meter b) 1750 meter c) 875 meter d) 3500meter

8. Curve having radius 3500 meter – will be of
   a) 2 º b) 1½ º c) 1 º d) ½ º

9. Value of degree of curve for radius of – 1000meter
   a) . 2 º b) 1.75 º c) 1.5 º d) 1.25 º

10. Radius of 1½ ºcurve is
    a) 583.33 b) 1166.11 c) 3500 d) 875

11. Which is wrong statement
    Curves are provided – to track
    a) To avoid rivers and hills b)To avoid tunnels and bridges
    c) To connect important cities with main line d) To avoid point and xing in track

12. The curve which is provided in vertical plane is known as
    a) Horizontal curve b) Circular curve c) Reverse curve d) Vertical curve

13. Radius of simple circular curve
    a) Remains same from one end to another b) Varies from place to place
    c) Combination of more than two radius d) Two radius of opposite centre curves

14. When two curves joint together in such a way so that they make a contrary flexure – is known as
    a) Compound curve b) Transition curve c) Reverse curve d) Vertical curve

15. Curve having varying radius is known as
    a) Simple curve b) Compound curve c) Reserve curve d) Transition curve

16. On high speed route – it is necessary to provide at both ends of simple circular curve
    a) Transition curve b) Super elevation c) Cant excess d) Cant deficiency

17. Gain is observed on curve in
    a) Outer rail b) Inner rail c) Mid rail d) Check rail

18. While moving on a curve – path , leading wheel of vehicle – reacts with
    a) Inner rail b) Outer rail c) Mid rail d) Check rail

19. The force which is activated on curve is known as
    a) Flange force b) Raise force c) Centrifugal force d) Gravitational force

20. The centrifugal force is counter – balanced by
    a) Super elevation b) Transitioning
    c) Frictional force d) Gravitational force (Weight of vehicle)

21. In curve track – which rail is raised high
    a) Inner rail b) Outer rail c) Check rail d) None

22. The amount by which outer rail is raised high – in comparison to inner rail – is called
    a) Cant b) Cant excess c) Cant Deficiency d) Cant gradient

23. Which one is not advantage of providing super elevation
    a) To counter balance the centrifugal force
    b) Chances of derailment are reducing
    c) Wear of inner rail de - creased
    d) Load of vehicles distributes equally on both rail

24. Max. value of super elevation on BG 'A' route without permission of C.E.
    a) 140mm b) 160mm c) 165mm d) 185mm

25. Super elevation on a particular curve and on a particular speed by formula is known as
    a) Balanced super elevation b) Equilibrium super elevation
    c) Dynamic super elevation d) Maximum super elevation

26. Cant deficiency observed when
    a) Trains runs on more than equilibrium speed
    b) Trains runs on equilibrium speed
    c) Trains runs on less than equilibrium speed
    d) Train runs on any speed

27. Difference between super elevation required for MPS and actual super elevation provided is known as
    a) Cant excess b) Cant c) Cant deficiency d) Dynamic cant

28. Max. value of cant deficiency on BG high speed route
    a) 75mm b) 100mm c) 50mm d) 38mm

29. Max. value of cant excess is permitted on BG route
    a) 75mm b) 100mm c) 50mm d) 38mm

30. Adverse effect of cant deficiency is
    a) Wear of inner rail is increased
    b) Chances of off – loading of outer wheel
    c) Wear in outer wheel flange is increased
    d) Chances for displacement of consignment in side of wagon increases
31. Max. permissible speed of curve does not depend on
    a) Radius of curve b) Actual cant c) Cant deficiency d) Type of loco – motive

32. Max. sanction speed of section (MSS) is approved by
    a) PCE b) GM c) DRM d) CRS

33. Max. speed of a particular train permitted to run in a particular section is called
    a) Booked speed b) Max. sanction speed of section (MSS)
    c) Max. permissible speed (MSS) d) Max. running speed

34. Max. value of rate of exchange of radical acceleration for passenger comfort is
    a) 0.350 mt/sec²/feet b) 0.035 mt/sec²/feet c) 0.305 mt/sec²/feet d)3.05 mt/sec²/feet

35. Transition curve is provided in track for
    a) Safety of passenger b) Comfort to passenger
    c) Gaining and take – off the super elevation gradually d) For all above

36. Gradient in track can be expressed in
    a) Rise or fall in a particular length b) percentage c) all above d) None of it

37. The steepest gradient which can be provided in a section depending upon type of load and locomotive is called
    a) Gentle gradient b) Pusher gradient c) Momentum gradient d) Ruling gradient

38. In which gradient – extra engine is required for hauling the load.
    a) Rising of gradient b) Pusher gradient c) Momentum gradient d) Ruling gradient

39. In momentum gradient, a short length is
    a) Steeper than ruling gradient b) Equal to ruling gradient
    c) Flattened than the ruling gradient d) All above statements are wrong

40. The grade compensation is necessary at the location where
    a) A horizontal curve is situated on a vertical curve
    b) A horizontal curve is situated on a ruling gradient
    c) A horizontal curve is situated on a momentum gradient
    d) A horizontal curve is situated on a pusher gradient

41. The rate by which the grade compensation is provided in BG track is
    a) 0.04% b) 0.03% c) 0.02% d) 0.01%

42. Vertical curves are provided to remove the _____ from track
    a) Sag b) Summit c) Sag and summit d) Stresses

43. Minimum radius vertical curve permitted for BG track is
    a) 4000 meter b) 3000 meter c) 2500 meter d) 2000 meter
44. Max. value of super elevation on normal speed BG route permitted with approval of CE is
    a) 140mm b) 165mm c) 160mm d) 185mm

45. On high speed route max. equilibrium speed for curve up to 20 is considered as
a) ¾m of MSS b) 75 kmph c) 100 kmph d) Equal to MSS

46. Max. rate of change of cant and cant deficiency on high speed route is acceptable
a) 38mm/sec b) 40 mm/sec c) 50 mm/sec d) 55 mm/sec

47. Even in extreme case – on high speed route the rate of change of cant and cant deficiency on MPS cannot be exceeded more than
a) 35 mm/sec b) 40 mm/sec c) 50 mm/sec d) 55 mm/sec

48. In case of high speed- for all theoretical purposes, gauge is considered in BG is
a) 1673mm b) 1676mm c) 1680 mm d) 1750 mm

49. Extra clearances are provided on curve due to
a) Lurch b)Sway c) Lean d) All above

50. Negative super elevation observed where a T/ out exit from curve main line – in
a) Similar flexure – out b) Similar flexure – in c) Contrary flexure d) Straight direction

51. Max. value of negative super elevation in BG track permitted
a) 145mm b) 165mm c) -50mm d) 185mm

52. On sharp curve, check rail is provided with
a) Inner rail – inner side b) Outer rail – outer side c) Inner rail – outer side d) Rail Inner side

53. Limit on degree of curve for providing check rails in BG
a) 4 º b) 6 º c) 8 º d) 10º

54. Gauges on sharp (more than 4 º) is kept
a) Tight b) Slack c) Exact d) No guide lines in manual

55. Minimum clearance of check rail on curve
a) 40mm b) 44mm c) 48mm d) 51mm

56. Which rail of curve is lubricated to avoid wear
a) Inner rail b) Outer rail c) Both rail d) Check rail

ANSWER:

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

P. Way & Establishment: Railway Organization
Session: 45 Track Parameters and Service Tolerance

Tick (√) on correct answer:--

1. Difference between the longitudinal level over fix base is known as
   a) Gauge b) X – level c) Unevenness d) Twist

2. Un-evenness is measured normally over the base of
   a) 3.5 meter b) 3.6 meter c) 7.5 meter d) 7.2meter

3. Un- evenness is measured in only
   a) Left rail b) Right rail c) Left and right rail separately d) Both rails together

4. Gauge of track is
   a) Min. distances between two parallel lines b) Max. distance between two parallel lines
   c) Vertical distance two gauge lines of track d) All are true

5. The relative difference in the level of two rails top at a same point (vertically to another rail) – is known as
   a) Twist b) Gauge c) X – level d) Longitudinal level

6. Rate of change of cross levels per unit length is known as
   a) Twist b) Cross level difference c) Unevenness d) All above

7. Twist is denoted in forms of
   a) mm b) mm per meter c) mm per 3.5 meter d) mm per sleeper

8. Alignment is measured on the base chord length of
   a) 7.5 meter b) 15 meter c) 19 meter d) 3.5 meter

9. On high speed, alignment is measured on the base of
   a) 7.5 meter b) 10 meter c) 12 meter d) 15 meter

10. The versine variation is known as the
    a) Degree of curve b) Mis alignment c) Angularity of track d) None of above

11. Safety and riding comfort – both depends upon the –
    a) Track geometry b) Standard of maintenance c) Above of both d) None of it

12. The limits by which a track parameters an permitted to vary is known as
    a) Track modules b) Track tolerance c) Track maintainability d)Track size

13. The tolerance – after crossing of its limits, the train running is declared unsafe, is known as
    a) Safety tolerance b) Service tolerance c) Maintenance tolerance d) Index tolerance

14. During services, the limit is which track parameters are allowed to increase or decrease, is known as
    a) Index tolerance b) Maintenance tolerance c) Safety tolerance d) Service tolerance
15. The work of maintenance shall be started just to nearing the
    a) Safety tolerance b) Service tolerance c) Maintenance tolerance d) Index tolerance

16. Gauge limit under service tolerance in 1 R is
a) (-3) to (+6) b) (-3) to (+3) c) 0 to (-3) d) ±2

17. On straight track – limit of alignment under service tolerance – is – (on 3.5 mm chord)
a) ± 3 b) ± 1 c) ± 2 d)± 00

18. The tolerance which is achieved just after the maintenance work is
a) Index tolerance b) New track tolerance c) Service tolerance d) Maintenance tolerance

19. The maintenance tolerance does not depend upon
a) Track structure b) Quality of tools c) Maintenance standard d) Type of vehicle

20. Limit of un – eveness on 3.5 mm chord – when the maintenance work is carried out by Heavy track tampers – is –
a) ±1m b. ±2m c. ± 3m d. ±00 m

21. As per new track tolerance – limit of gauge for curve having radius less than 350 mtrs is
a) 0 to +5mm b) slack up to +10mm c) slack up to +13mm d) slack up to +16mm

22. As per new track tolerance limit of x level cm every 4th sleeper should not be more than
a) ±1mm b) ±2mm c) ± 3mm d) ±4 mm

23. As per new track tolerance limit of versine variation of curves having radius more than 600meter is
a) ±2mm b) ±5mm c) ± 7mm d).±4 mm

ANSWER:

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

P. Way & Establishment: Railway Organization
Session: 47 Different Schedules, Standard Dimensions Loading Gauge and ODC

QA. Tick (√) the correct answer

1. The present SOD is revised in the year-
a) 1973 b) 1994 c) 2004 d) 2007

2. Which statement is not correct
In the revised SOD of 2004
a) FPS unit is included b) FPS unit is deleted
c) Have only two schedules d) Have only MKS units

3. Any deviation in new work has to be granted by
a) CE/CTE/PC b) ROSO c) CRS/CCRS d) DSE/DRM

4. Loading gauge represents
a) Max. height and width of rolling stock b) Max. value of track gauge under load
b) Max. value of wheel gauge under load c)Max. height of loaded consignment

5. In IR – max height of rolling stock is prescribed as per loading gauge is
a) 4565 mm b) 3250mm c) 5000 mm d) 4250 mm

6. When dimension of consignment exceeds more than standard moving dimension, the consignment is known as
a) Heavy consignment b) Gauge consignment
c) Non standard consignment d) Over dimensional consignment

7. In 'A' class ODC – following statement is wrong
a) It runs in day and night both b) It runs in 30 kmph
b) It not clearance is 150 mm and above d) While running – it is escorted by Engg. Officials

8. 'B' class ODC
a) Runs only in day b) Runs in day and night both
c) Have gross clearance less than 150 m d) Runs only after the sanction of CRB

9. 'C' class ODC
a) Runs in day and night both b) MSS of it – is 25 kmph
c) Sanctioning auth only – sr DEN/ Dy CE – Engg d) Runs under guard supervision

10. 'C' class CDC is escorted by
a) TXR, JE - - Way b) TXR, T1, OHE staff
c) TXR, JE- pay, guard , JE traction d) TXR , JE – P way , T. 1 and JE – traction

11. Min. c/c distance for two tracks in new laying up to 50 curve is
a) 4265 mm b) 4725mm c) 5100mm d) 5300mm

12. Min radius of curve is
a) 500meter b) 450 meter c) 200 meter d) 175 meter

13. Max. c/c distance in two track in yards (existing)

a) 4250m b) 4725m c) 4000m d) 4545m

14. Max. height of passenger high level platform from R/L is

a) 840 m b) 800m c) 760 m d) 700 m

ANSWER:

1	**C**	**5**	**A**	**9**	**B**	**13**	**A**
2	**A**	**6**	**D**	**10**	**D**	**14**	**A**
3	**C**	**7**	**D**	**11**	**D**		
4	**A**	**8**	**A**	**12**	**D**		