

Course/Branch: B.E/CIVIL	Year / Semester : IV/VII	Format No.	NAC/TLP-07a.13
Subject Code : CE8702	Subject Name: RAILWAYS, AIRPORTS, DOCKS AND HARBOUR ENGINEERING	Rev. No.	02
Unit No : 2	Unit Name : RAILWAY CONSTRUCTION AND MAINTENANCE	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1.	For flat bottom sleepers, the maximum size of ballast is (A)50 mm (B)40 mm (C)33 mm (D)25 mm	LT1
2.	The nominal size of ballast used for points and crossings is (A)25 mm (B)40 mm (C)50 mm (D)10 mm	LT1
3.	The overall length of a turn out is the distance between the end of stock rail and (A)Heel of crossing (B)The actual nose of crossing (C)Throat of crossing (D)Toe of crossing	LT1
4.	Minimum packing space provided between two sleepers is between (A)20 to 25 cm (B)25 to 30 cm (C)30 to 35 cm (D)35 to 40 cm	LT1
5.	The gradient on which an additional engine is required to negotiate the gradient, is called (A) Momentum gradient (B) Pusher gradient (C) Ruling gradient (D) Steep gradient	LT1
6.	Heel divergence is (A) Always less than flange-way clearance (B) Equal to flange-way clearance (C) Always greater than flange-way clearance (D) Sometimes greater than flange-way clearance	LT2
7.	Anti-creep bearing plates are provided on (A)Bridges and approaches (B)Joints (C)Both (A) and (B) (D)None of the above	LT1
8.	Advantage of automatic signalling, is: (A) Increased safety	LT2

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	(B) Reduction in delays (C) Increase in track capacity (D) All the above	
9.	Which of the following mechanical devices is used to ensure that route cannot be changed while the train is on the point even after putting back the signal? (A) Detectors (B) Point lock (C) Lock bar (D) Stretcher bar	LT1
10.	If sleeper density is M + 7 for 13 m rails, the minimum depth of ballast under wooden sleepers (25 cm × 13 cm), is (A) 15 cm (B) 20 cm (C) 25 cm (D) 30 cm	L2
11.	The reception signal is i) outer signal ii) home signal iii) starter iv) advanced starter The correct answer is a) (i) and (ii) b) (ii) and (iii) c) (iii) and (iv) d) (i)and(iv)	LT1
12.	A mono-block sleeper has (A) Square section (B) Rectangular section (C) Trapezoidal section (D) Semi-circular section	LT1
13.	The weight of the rails depends upon (A) Gauge of the tracks (B) Speed of trains (C) Spacing of sleepers (D) All the above	LT1
14.	Rail section first designed on Indian railways, was (A) Double headed (B) Bull headed	LT1

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	(C) Flat footed (D) (a) and (b) simultaneously	
15.	Rails are bent to correct curvature if the degree of curve, is more than (A) 1° (B) 2° (C) 3° (D) 4°	LT1
16.	Stretcher bar is provided (A) To permit lateral movement of the tongue rail (B) To maintain the two tongue rails at the exact distance (C) To ensure exact gauge at the toe of the switch as well as the nose of crossing (D) To prevent any vertical movement between the wing rail and nose of crossing	LT1
17.	Composite sleeper index is the index of (A) Hardness and strength (B) Strength and toughness (C) Toughness and wear resistance (D) Wear resistance and hardness	LT1
18.	Due to battering action of wheels over the end of the rails, the rails get bent down and are deflected at ends. These rails are called (A) Roaring rails (B) Hogged rails (C) Corrugated rails (D) Buckled rails	LT2
19.	The main function of a fish plate is (A) To join the two rails together (B) To join rails with the sleeper (C) To allow rail to expand and contract freely (D) None of the above	LT1
20.	The purpose of providing fillet in a rail section is to (A) Increase the lateral strength (B) Increase the vertical stiffness (C) Avoid the stress concentration (D) Reduce the wear	LT2
21.	To prevent creep in rails, the steel sleepers are fixed with rails by clips, bolts and (A) One key (B) Two keys (C) Three keys (D) Four keys	LT1
22.	Flange-way clearance is the distance (A) Between the adjoining faces of the running rail and the check rail near the crossing	LT1

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	(B) Between the gauge faces of the stock rail and the tongue rail (C) Through which the tongue rail moves laterally at the toe of the switch (D) None of the above	
23.	Which of the following types of sleepers is preferred on joints? (A) CST-9 sleeper (B) Steel trough sleeper (C) Wooden sleeper (D) Concrete sleeper	LT2
24.	Pandrol clips cannot be used with (A) Wooden sleepers (B) Concrete sleepers (C) CST-9 sleepers (D) Steel trough sleepers	LT1
25.	The standard dimensions of a wooden sleeper for M.G. railway track are (A) 2.74 m × 25 cm × 13 cm (B) 1.83 m × 20 cm × 11 cm (C) 1.52 m × 15 cm × 10 cm (D) 1.75 m × 20 cm × 12 cm	LT1
26.	For providing the required tilt of rails, adazing of wooden sleepers, is done for (A) Bull headed rails (B) Double headed rails (C) Flat footed rails (D) Any type of rails	LT2
27.	To avoid the damage of nose of crossing, the wing rails are ramped so that nose of crossing remains at a lower level by (A) 3 mm (B) 4 mm (C) 5 mm (D) 6 mm	LT1
28.	If n is length of a rail in metres, the number of sleepers per rail length generally varies from (A) n to (n + 2) (B) (n + 2) to (n + 4) (C) (n + 3) to (n + 6) (D) (n + 4) to (n + 5)	LT2
29.	The place where a railway line and a road cross each other at the same level, is known as (A) Cross over (B) Railway junction (C) Road junction (D) Level crossing	LT1

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30.	Yellow light-hand signal indicates (A) Stop (B) Proceed (C) Proceed cautiously (D) None of the above	LT1
31.	If the stock rails are B.H. rails, the type of switch generally provided, is (A) Articulated (B) Undercut (C) Over riding (D) Straight cut	LT1
32.	The object of providing a point lock is (A) To ensure that each switch is correctly set (B) To ensure that the point may not be operated while the train is on it (C) To detect any obstruction between and tongue rail (D) None of the above	LT2
33.	The grade compensation on B.G. tracks on Indian Railways, is (A) 0.02 % (B) 0.03 % (C) 0.04 % (D) 0.05 %	LT1
34.	Minimum composite sleeper index for wooden sleepers used in cross-overs, is (A) 1152 (B) 1252 (C) 1352 (D) 1452	LT1
35.	Number of keys used in CST-9 sleeper is (A) 2 (B) 3 (C) 4 (D) None of the above	LT2
36.	When semaphore and warner are installed on the same post, then the stop indication is given when (A) Both arms are horizontal (B) Semaphore arm lowered but warner arm horizontal (C) Both semaphore and warner arms lowered (D) None of the above	LT1
37.	Gauge is the distance between a) center to center of rails b) running faces of rails c) outer faces of rails	LT2

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	d) none of the above	
38.	Minimum gradient in station yards is generally limited to (A) 1 in 1000 (B) 1 in 750 (C) 1 in 500 (D) Zero	LT1
39.	Coning of wheels is provided (A) To check lateral movement of wheels (B) To avoid damage to inner faces of rails (C) To avoid discomfort to passengers (D) All the above	LT1
40.	Bearing plates are used to fix (A) Flat footed rails to the wooden sleepers (B) Double headed rails to the wooden sleepers (C) Bull headed rails to the wooden sleepers (D) Flat footed rails to the cast iron sleepers	LT1
41.	On B.G. tracks the distance of outer signal from station limit is kept (A) 510 m (B) 520 m (C) 530 m (D) 540 m	LT1
42.	At a rail joint, the ends of adjoining rails, are connected with a pair of fish plates and (A) 2 fish bolts (B) 4 fish bolts (C) 6 fish bolts (D) 8 fish bolts	
43.	In a shunting signal if the red band is inclined at 45° it indicates (A) Stop (B) Proceed (C) Proceed cautiously (D) None of the above	
44.	The main advantage of a cement concrete sleeper, is: (A) Its heavy weight which improves the track modulus (B) Its capacity to maintain gauge (C) Its suitability for track circuiting (D) All the above	
45.	For developing thinly populated areas, the correct choice of gauge is (A) Broad Gauge (B) Meter Gauge (C) Narrow Gauge (D) Any of the above	

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46.	The main function of sleepers, is (A) To support rails (B) To hold rails at correct gauge (C) To distribute load from the rails to ballast (D) All the above	LT1
47.	Which of the following methods of designation of crossing is mostly used in India? a. center line method b. right angle method c. isosceles angle method d. none of the above	LT1
48.	The shape of transition curve used by Indian Railways is a) cubic parabola b) spiral c) sine curve d) lemniscate of Bernoulli	LT2
49.	The type of bearing plate used in all joints and on curves to give better bearing area to the rails is a) flat mild steel bearing plate b) mild steel canted bearing plate c) cast iron anti creep bearing plate d) none of the above	LT1
50.	The standard width of ballast for B.G. Track in Indian Railways, is kept (A) 3.35 m (B) 3.53 m (C) 2.35 m (D) 2.53 m	LT1