PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2018 - 19Examination

Semester: 6   Date: 04/05/2019
Subject Code: 03104354   Time: 10:30am to 1:00pm
Subject Name: Transportation Engineering- II   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions -(All are compulsory)   **(15)**
   Fill in the blanks.   **5**

1. If the radius of curve is 160 m for BG, what will be the design speed according to empirical formula _____
2. _____ are used for holding the rails to the wooden sleepers.
3. Number of classification of airport according to ICAO _____
4. If the degree of curve is 50 what will be the radius of curvature _____

5. Maximum width and height to which rolling stock can be built and loaded is known as _____

B) One word answer.   **5**

1. Write down any method which is used for tunneling in hard rock?
2. What is full form of IRCTC?
3. How much maximum length of port basin?
4. What is full form of ICAO?
5. What is aflux?

C) Multiple Choice Questions.   **5**

1. Maximum permissible limit for degree of curve in case of Narrow gauge for Indian condition is
(a) 10° (b) 15° (c) 16° (d) 40°
 2. Pick up the incorrect statement from the following
 (a) Fish plates fit the underside of the rail head
 (b) Fish plates fit the top of the rail foot
 (c) Fish plates fit the web of the rail section
 (d) Cross sectional area of fish plates, is normally the same as that of the rail section.

3. First passenger train in India ran between?
   (a) Mumbai To Varanasi   (b) Mumbai to Thane   (c) Kolkata to Delhi   (d) Amritsar to Chennai
4. Which one of the following is not a NaturalHarbour?
    (a) Kandla Port   (b) Mumbai Port   (c) Marmagoa Port   (d) Cochin Port
5. What is the length for medium span
    (a) 0-6 m   (b) 6-30 m   (c) 30-100 m   (d) 50-100 m

Q.2 Answer the following questions. (Attempt any three)   **(15)**

A) What is permanent way? Explain with neat sketch the different components of railway track.
B) Describe various component of harbour with diagram.
C) Write a short note on:
 (a) Economic Span (b) Corrugation and Roaring of Rail (c)Sleeper density (d) Afflux
 (e) Ballast
D) Write down comparison between open cut and tunnel.

Q.3 A) (1) Enlist the various ports of India. Explain in detail any two ports. **(07)**
(2) Explain the various classification of harbour.

B) Write down the classification of bridges. **(08)**
<center>**OR**</center>
B) (1) What is airport capacity? Explain the various factors affecting the airport capacity. **(08)**
(2) What are the advantages and disadvantages of air transport?

Q.4 A) Enlist the different methods of tunneling in soft soil. Explain any three methods in detail. **(07)**
<center>**OR**</center>
A) Explain the different types of sleepers used in Indian Railways. **(07)**

B)(1) Write short notes on: **(08)**
(a) Coning of wheels (b) Negative super elevation

(2) From a layout of B.G. yard, 8^0 curve branches off from a 4^0 main curve in an opposite direction. If speed is restricted to 28 kmph on branch line and permissible cant deficiency is 7.62cm. Determine the speed restriction on main line.