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Civil

Subject:- Railways Bridges & Tunnels

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The main function of fish plate is (CO10)
a) To join the two rails together
b) To join the rails with the sleepers
c) To allow rail to expand and contract freely
d) None of these
- Q.2 The place where a railway line and a road cross each other at same level is known as (CO11)
a) Cross over b) Railway junction
c) Road junction d) Level crossing
- Q.3 Type of foundation used for shorts and bridges (CO13)
a) Circular b) Dumb well
c) Rectangular d) Twin circular
- Q.4 The component of bridge which transmit load to soil below is (CO13)
a) Curb b) Bottom plug
c) Steining d) Well cap
- Q.5 The abutments constructed inside the banks prior to formation of embankment of approaches are (CO14)
a) Box abutments b) Buried abutments

- c) tee abutments d) Arch abutments
- Q.6 Splayed wing walls are constructed at (CO14)
a) 30 degree b) 45 degree
c) 60 degree d) 90 degree
- Q.7 The piles which rest on hard strata and act as column to bear the load of structure are (CO15)
a) Friction pile b) Timber pile
c) Bearing pile d) Composite pile
- Q.8 Minimum depth of well foundation is (CO15)
a) 1 D b) 1.20 D
c) 1.50D d) 1.33 D
- Q.9 The maintenance work which is carried out regularly on the basis of regular inspection is (CO18)
a) Special maintenance b) Routine maintenance
c) None of these d) Both of these
- Q.10 The tunnels commonly used in subways or as navigation tunnels are (CO10)
a) Segmental shape b) Horse shoe shape
c) Egg shape d) Rectangular shape

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 The tractive resistance of the track should be _____ (CO3)
- Q.12 The maintenance cost of bull headed rail is ____ (CO5)
- Q.13 _____ is the best material for performing the function of a blast in a track (CO8)
- Q.14 A culvert has a span usually less than _____ (CO13)

- Q.15 Permanent Bridges are also known as _____ bridges (CO14)
- Q.16 The wall of a foundation well is known as ____ (CO15)
- Q.17 The weight of a cellular pier is _____ as compared to solid pier (CO16)
- Q.18 The wing walls constructed at 90 degree to the abutments are called _____ (CO16)
- Q.19 The part of upkeeping the bridge components in best serviceable order for a long period is called _____ (CO18)
- Q.20 Routine inspection aims to look after the _____ of structure at regular intervals.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Write the various functions of railways? (CO1)
- Q.22 What are the main informations gathered in traffic survey? (CO2)
- Q.23 What are the requirements of an ideal permanent way? (CO3)
- Q.24 Write the advantages and disadvantages of flat footed rails? (CO6)
- Q.25 Write down the various type of sleepers explain them briefly? (CO7)
- Q.26 Define turnouts what are the various component parts of turnout explain their functions? (CO9)
- Q.27 What are the various advantages of good track maintenance? (CO10)

- Q.28 Briefly explain the various type of stations. Also write there purpose? (CO12)
- Q.29 What are the various difference between a bridge and convert? (CO14)
- Q.30 What are various components of bridge. Explain briefly? (CO14)
- Q.31 Define pile foundation also write down the various type of piles according to material used? (CO15)
- Q.32 Define wing walls also write their functions?(CO16)
- Q.33 Define bearing also write the purpose of providing bearing in a bridge? (CO17)
- Q.34 What are the various points which are inspected for the maintenance of a bridge? (CO18)
- Q.35 Explain the permanent drainage system in tunnels along with diagram? (CO21)

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 Briefly explain the uniformity of a gauge. Write the various factors affecting the selection of a gauge? (CO4)
- Q.37 Give the classification of bridges according to material used? (CO14)
- Q.38 What are the various type of investigations to be done before starting the tunnel work explain them briefly? (CO20)
- (**Note:** Course outcome/CO is for office use only)