

Civil
Subject:- Railways Bridges & Tunnels

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory $(10 \times 1 = 10)$

- 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
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. $(10 \times 1 = 10)$

- 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 abutements 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?
- 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)