Q.28 Define Inverter T beams. Why sometimes inverted T-Beams are provided?

Q.29 What do you mean by development length?

Q.30 What is difference between one way slab and two way slab?

Q.31 Define columns. What are different types of columns?

Q.32 Differentiate between single reinforced section and doubly reinforced section.

Q.33 What are recommendations regarding reinforcement in columns?

Q.34 Differentiate between pre tensioning method and post tensioning method.

Q.35 Write the functions of longitudinal and transverse rein forcement.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

Q.36 Define pre-stressing. What are methods of pre-stressing? Advantages and disadvantages of pre stressed concrete?

Q.37 Write design step for on way slab in LSM.

Q.38 A short axial column 425x400 is to carry axial load of 1000KN. Find the area of longitudinal reinforcement. Use M20 grade of concrete and Fe415 steel. Use L.S.M.

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5th Sem., Branch : Arch.
Subject : Reinforced Cement Concrete (RCC)

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 Unit weight of R.C.C. in KN/m^3 is

a) 21 b) 22
c) 25 d) 26

Q.2 The reinforcement in R.C.C. takes

a) Tensile Stresses b) Compressive Stresses
c) Shear Stresses d) Torsional Stresses

Q.3 The modular ratio (m) is given by

a) $280/3\sigma_{st}$ b) $280/2\sigma_{cbc}$
c) $280/3\sigma_{cbc}$ d) $280/2\sigma_{st}$

Q.4 This method is referred to as 'deterministic'.

a) WSM b) LSM
c) Both of these d) None of these

Q.5 The portion of the slab which acts with the T-Bean is called

a) Flange b) Web
c) Column d) None of the above

Q.6 Doubly reinforced beams are provided when

a) Loads are eccentric

b) Beam dimensions are restricted

c) Beam is continuous

d) All of the above

Q.7 Partial safety factor of steel is-

a) 1.10 b) 1.15

c) 1.20 d) 1.25

Q.8 Maximum area os tensile reinforcement shall not exceed

a) 1% b) 2%

c) 3% d) 4%

Q.9 Shear reinforcement is provided to resist

a) Diagonal torsion b) Diagonal bending

c) Diagonal compression d) Diagonal tension

Q.10 In an under reinforced beam section

a) Steel is fully stressed b) Concrete is fully stressed

c) Both A & B d) None of these

Section-B

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

Q.11 R.C.C. stands of Reinforced cement concrete.

Q.12 Working stress methods is based on the linear (Elastic Theory).

Q.13 LSM stands for Limit State Method.

Q.14 P.C.C. Stands for Plain Cement Concrete.

Q.15 One bag of cement weighs 50 kg. (True/False)

Q.16 Limit state method is also knows as modular method. (False)

Q.17 Both mild steel and HYSD bars behave as an elastic material. (False)

Q.18 The neutral axis is situate = d at the centre of gravity of the section. (True)

Q.19 IN cantilever beam, the main rein for cement is provided below the neutral axis. (False)

Q.20 In RCC compression is found only in steel. (False)

Section-C

Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. (12x5=60)

Q.21 What is HYSD and what are advantages of HYSD.

Q.22 Why steel is used as the reinforcement material?

Q.23 Discuss the various types of loads coming over the structure.

Q.24 Write the assumptions in the theory of simple bending for R.C.C. beams.

Q25 What is difference between under and over reinforcement?

Q.26 Differentiate between working stress methods and limit stress method.

Q.27 What is difference between T-Beamns and L-Beams?