Q.26 Explain working stress method.
Q.27 Define modular ratio.
Q.28 Explain with a neat sketch what is neutral axis.
Q.29 Explain why bars are bent up.
Q.30 Define effective covers.
Q.31 Define moment of resistance.
Q.32 Explain pre stress concrete.
Q.33 Define lever arm.
Q.34 Explain types of beam sections.
Q.35 Explain shear stresses in RCC beams.

SECTION-D

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

Q.36 Write design steps for two way RCC slab.

Q.37 An RCC beam 300x450 mm (effective) is reinforced with 6-25 mm dia longitudinal tensile steel bars. It is subjected to a shear force of 150 KN. Find whether shear reinforcement is required for this beam using M20 grade concrete and fe 415 steel.

Q.38 A short column 300x450 is reinforced with 6-20 mm dia bars. Find the ultimate load carrying capacity of the column if the minimum eccentricity is less than 0.5 times the lateral dimension. The material used a sM20 grade concrete and HYSD Fe 415 grade reinforcement.

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5th Sem / Branch : Architecture
Sub. : Reinforced Cement Concrete (RCC)

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 One bag of cement measuring weight
a) 30kg b) 40kg
c) 50kg d) 60kg

Q.2 The weight of RCC is
a) 25000 N/m3 b) 20000N/m3
c) 28000 N/m3 d) 30000 N/m3

Q.3 HYSD bars are also known as
a) Tor steel b) Mild steel
c) Stainless steel d) High strength steel

Q.4 RBC stands for
a) Real brick concrete
b) Reinforced brick concrete
c) Reliable brick concrete
d) None

Q.5 The reinforcement in RCC takes

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

Q.6 The Axis where stresses are zero in RCC beam is called
a) Neutral axis b) Normal axis
c) Natural axis d) None

Q.7 In singly reinforced beam the steel reinforcement is provided in only
a) Compressive zone b) Tensile zone
c) Both A and B d) None

Q.8 Cracks in beam can be prevented by providing
a) Shear reinforcement
b) Sliding reinforcement
c) tensile reinforcement
d) compressive reinforcement

Q.9 In a doubly reinforcement beam compression is taken by
a) Steel and concrete b) Steel
c) Concrete d) None

Q.10 The portion of the 'T' beam below the slab is called
a) Web b) Bottom
c) Underside d) Underneath

SECTION-B

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

Q.11 RCC slabs are classified into _____ types.

Q.12 Main reinforcement is provided parallel to the _____ span.

Q.13 Distribution steel is provided in slab to protect against temperature and _____ .

Q.14 The two way slab is more _____ than one way slab.

Q.15 In one way slab bending takes place along the _____ span.

Q.16 The reinforcing steel bars are also known as _____ .

Q.17 _____ bars are preferred over mild steel bars.

Q.18 Plain cement concrete posses _____ compressive strength.

Q.19 Steel is high strength material as compared to _____.

Q.20 The steel used in the form of bars to reinforce the concrete is called_____ .

SECTION-C

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

Q.21 Give five characteristics of reinforcing material.

Q.22 Explain the purpose of providing reinforcement.

Q.23 Define different grades of concrete.

Q.24 Define properties of mild steel bars.

Q.25 Define RCC.