Roll No _____

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SINDH BOARD OF TECHNICAL EDUCATION KARACHI

DIPLOMA OF ASSOCIATE ENGINEER 3rd YEAR

MODEL PAPER FOR

ANNUAL EXAMINATION 2021

Technologies: CIVIL

SUBJECT: CT-364 CONCRETE TECHNOLOGY AND RCC DESIGN

SECTION "A" OBJECTIVE

TIME: 40 Minutes
MAX. MARKS: 75

Instructions:

- Attempt all questions.
- All questions carry equal marks.
- Question paper must be returned back to invigilator within the scheduled time.

Q1. (a) Fill in the blanks **Max Marks 40**

1. Initial setting time of ordinary port Land cement should not be less than _____ minutes

2. _____ appartus is used to determine initial and final setting time of the cement,

3. The minimum size of coarse aggregate is _____mm.

4. RCC stands for _____.

5. Slump cone is used to measure _____ of concrete.

6. Best shape of aggregate for good workability is _____.

7. Work ability of concrete is directly proportional to_____.

8. Volume of the one bag of cement is measure_____cft.

9. Workability of concrete _____ with the addition of water.

10. Concrete which does not contain fine aggregate is called _____ concrete.

11. In Plastic state concrete is also known as _____ concrete.

12. There is no need of hook in case of _____ steel.

13. Steel used in ordinary R.C.C works is _____.

14. A concrete in which steel bars are used is called as _____.

15 Algebraic sum of vertical forces at any section of a beam is known as _____.

16. Shear reinforcement are also called as _____.

17. Tensile strength of concrete as compared to its compressive strength is as _____.

18. Maximum spacing of distribution bars is kept as _____.

19. A slab supported by columns without beams is called_____.

20. In two way slab lower layer of steel is provided always along the _____ span.

Q1. (b) Encircle "T" for True and "F" False. Max Marks 20

1. Plain cement concrete is strong in tension (True / False).

2. Vicat apparatus is used to perform soundness test (True / False).

3. Cause of bulking of sound is surface dampness (True / False).

4. Slump cone is used to measure workability (True / False).

5. Low water cement ratio decreases the workability (True / False).

6. Specific gravity of water is 2.67 (True / False).

7. Mass of one bag of ordinary Portland cement is 50 Kg (True / False).

8. Rate of shrinkage of concrete is early stage is high (True / False).

9. Admixture used to increase the setting time of cement is retarder (True / False).

10. Separation of ingredients of fresh concrete is called segregation (True / False).

Q1. (c) Multiple Choice questions **Max Marks 15**

1. Stirrups are used in.
(a) Beam (b) Slab (c) Columns

2. Squeezing out water from the surface of fresh concrete is termed as.
(a) Bleeding (b) Segregation (c) Creep

3. Admixture used to increase the setting time of cement is.
(a) Acceleraor (b) Reducer (c) Retarder

4. Cement used for mass concrete is
(a) Quick setting (b) Low heat cement (c) High alumina

5. Specific gravity of port land cement is
(a) 3.7 (b) 2.4 (c) 4.5

6. Algebraic sum of vertical forces at any section of a beam is
(a) Shear force (b) Shear stress (c) Shear reinforcement

7. Maximum load that a member can bear its life is
(a) Ultimate Load (b) Safe load (c) curtain load

8. Which of the following has no measuring units.
(a) Stress (b) Strain (c) force

9. Shear stress is taken 1/10 of-
(a) compressive stress (b) Tensile stress (c) Bond stress

10. Factor of Safety for concrete strength taken in ordinary design is
(a) 3 (b) 4 (c) 5

11. Stirrups are provided to check.
(a) Tension (b) compression (c) shear

12. No extra reinforcement is required for
(a) Beam (b) Slab (c) Columns

13. Anchor bars are provided in the beam to.
(a) Resists shear (b) Hold Stirrups (c) Resists tension

14. With of Slab considered in design is
(a) 1000 mm (b) 100 mm (c) 10 mm

15. Maximum Spacing of distribution bars of slab is.
(a) 5d (b) 3d (c) 3a

Signature of Candidate	Seal of Examination Centre	Signature of Invigilator

Roll No _____

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DIPLOMA OF ASSOCIATE ENGINEER 3rd YEAR

MODEL PAPER FOR

ANNUAL EXAMINATION 2019

Technologies: CIVIL

SUBJECT: CT-364 CONCRETE TECHNOLOGY AND RCC DESIGN

SECTION "B" & "C"

TIME: 2.40 HOURS **MAX. MARKS: 75**

Section "B" **(Short Answer Questions)** **Max. Marks: 45**

Q2: Attempt any Six questions from the following. All questions carry equal marks.

1. Enlist the steps of concreting under water.

2. Define lateral ties used in columns.p

3. Enlist types of cement.

4. Describe freezing and thawing.

5. State slump test.

6. Differentiate between RCC and PCC.

7. Define one way slab and two way slab

8. Define RCC

Section "C" (Descriptive Answer Questions) Max. Marks: 16

Q3: Attempt any Two questions from the following. All questions carry equal marks.

Q1. Design an RB roof slab of a room 5ft x 10ft the live load on the roof may be assumed to be 30lb/sft.

OR

Define Stair spanning horizontally

Q2. Name important methods of mix design and explain one of them in detail

OR

Define water cement ratio explain relation between water cement ratio and strength of concrete.

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