



DAP-161001010402

Seat No. _____

B. Architecture End of Term (Sem. IV)

Examination

May - 2022

Building Material & Construction- IV

Time : 2 Hours]

[Total Marks : 50

Instructions : Support your answer with necessary example &/or sketch, wherever necessary.

- 1 Explain the following with neat sketches : (any **four**) **20**
 - (a) Explain the importance of Steel as Reinforcement bar in RCC
 - (b) Pile foundation
 - (c) Draw isolated pad footing with plinth beam for frame structure and give necessary details
 - (d) The difference between Precast and Cast in Situ Concrete Construction
 - (e) RCC Retaining wall and Shear wall
 - (f) Draw formwork detail for sunken slab
- 2 Draw the detail of stair having waist slab or folded plate for 3mt height. **10**
- 3 Choose correct answer for following questions : **10**
 - (a) Workability is a property of concrete by which concrete can be _____ properly (Mixed/Transport/Placed/Compacted)

- (b) Curing is required for _____.
(To continue hydration/To break hydration/To break gel to water ratio)
- (c) pH of water used for concrete should be _____.
(More than 6/less than 6/exact 5)
- (d) C₃S Responsible for _____ Strength.
(Initial/Final)
- (e) If we add extra water in concrete then it will increase _____. (w/c ratio/Bleeding/Workability/All of it)
- (f) Cement should be used before _____. (1 month / 3 month / 12 month)
- (g) _____ is used in cement to increase the initial setting time (Lime / Silica / Alumina / Gypsum)
- (h) Water is _____ ingredient in concrete. (Inactive / Active / Neutral / Inert)
- (i) Proportion of M20 grade concrete is _____ (1:4:8: / 1:2:4: / 1:1.5:3 / 1:3:6)
- (j) Minimum cover require in RCC Colum is _____ (10 mm / 15 mm / 25 mm)

4 Answer the following in short : (any **five**)

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- (a) Define bleeding.
- (b) Define workability.
- (c) What is the purpose of compaction?
- (d) Explain shortly the importance of curing.
- (e) Explain any two concrete grade with its proportions.
- (f) Role of Fine aggregate and Coarse aggregate in concrete.
- (g) Explain the importance of Cover in RCC.