



# 17308

15162

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) *All questions are compulsory.*
  - (2) *Answer each next main question on a new page.*
  - (3) *Illustrate your answers with neat sketches wherever necessary.*
  - (4) *Figures to the right indicate full marks.*
  - (5) *Assume suitable data, if necessary.*
  - (6) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*

**Marks**

1. A) Attempt **any six** of the following : **(6×2=12)**
- a) Define foundation. Give one purpose of it.
  - b) Give four components of door.
  - c) State any two purposes of plastering.
  - d) State two advantages of prefabrication.
  - e) Define masonry.
  - f) State the various means of vertical communication.
  - g) List any four component part of staircase.
  - h) State two causes of cracks in masonry work.
- B) Attempt **any two** of the following : **(4×2=8)**
- a) List any four components of super structure with their function.
  - b) Explain term “timbering and strutting” in excavation.
  - c) State four types of tools used for excavation with sketch of each.
2. Attempt **any four** of the following : **(4×4=16)**
- a) Draw a neat sketch of section of load bearing wall from foundation to parapet.
  - b) Explain four general design principles of earthquake resistant building.
  - c) What is meant by site clearance and give any four points to considered while preparing job layout ?
  - d) Draw a labeled sketch of :
    - i) Raft and
    - ii) Isolated Footing.
  - e) Suggest the suitable foundation with neat sketch for :
    - 1) Morshy land
    - 2) Black cotton soil.
  - f) What are the requirements of good stone masonry.

**P.T.O.**



3. Attempt **any four** of the following :

- a) Why English bond is Stronger than Flemish bond ? Give four reasons.
- b) Mention four types of doors and draw a sketch of any one.
- c) Explain doglegged stair with neat sketch.
- d) Explain the term :
  - 1) Mezzanine floor
  - 2) Tremix floors
  - 3) Dado
  - 4) Skirting.
- e) Explain King Post truss and Queen post truss with its suitability of each.
- f) Suggest a type of window for following building :
  - 1) Residential bungalow
  - 2) Cinema hall
  - 3) School
  - 4) Enclosed R.C.C. staircase.

4. Attempt **any four** of the following :

(4×4=16)

- a) In which situations where pitched roof is more suitable than flat roof give any four points.
- b) Describe method of application of paint on new-wooden surface.
- c) What is pointing ? Explain procedure of pointing.
- d) Write any four defects in plastering work and give remedies on it.
- e) Explain termite proofing with its necessity and importance.
- f) Draw the form work sketches for column and beam.

5. Attempt **any four** of the following :

(4×4=16)

- a) State any three causes of settlement of structure and remedial measures for it.
- b) State four uses of wire mesh and geosynthetics.
- c) Explain any four requirements of good foundation.
- d) Define 'Ready Mix Concrete' and enlist any four equipments for RMC.
- e) Distinguish between roller compacted concrete and high impact resisting concrete on four points.
- f) Write the procedure of vacuum dewatering concreting for construction of floors.

6. Attempt **any two** of the following :

(8×2=16)

- a) Distinguish between stone masonry and brick masonry.
  - b)
    - 1) Explain pile foundation and well foundation with neat sketches.
    - 2) Explain workability and W/C ratio of ready mix concrete.
  - c) Explain pre-tensioning and post-tensioning prestressed concrete.
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