

GOVERNMENT ENGINEERING COLLEGE, DAHOD
CIVIL ENGINEERING DEPARTMENT
BE-II 3RD SEMESTER
BUILDING CONSTRUCTION (3130607)

ASSIGNMENT NO. 1

SUB SURFACE INVESTIGATION

1. What are the purposes of sub-soil exploration?
2. Enlist the methods of site exploration Explain in brief, following methods of site exploration: (i) Auger boring, (ii) Wash boring.
3. Explain the purposes of sub-surface investigations and discuss wash boring in detail
4. Explain seismic refraction method with sketch.
5. Write various factors affecting the selection of site exploration method.
6. What are the different types of boring methods? Explain each in brief with neat sketches.

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ASSIGNMENT NO. 2

SHALLOW FOUNDATION

1. What are the causes of failure of foundation? What remedial measures would you adopt?
2. What are the problems of foundations on black cotton soils? Describe their preventive measures.
3. Explain with sketch Under-reamed pile foundation.
4. When do you suggest:
 - a. Combined footing
 - b. Strap footing
 - c. Raft foundation
5. State that which type of foundation is suitable for black cotton soil?
6. Explain steel grillage foundation with all details.
7. Explain with sketch Plate Load Bearing Test.

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ASSIGNMENT NO. 3

MASONARY CONSTRUCTION

1. Define the following terms with figure
(a) King closer (b) Queen closer (c) Frog (d) Jambs (e) Reveals (f) Throating (g) Copping
(h) Quoin (i) springing points (j) centering
2. What is bond in brick masonry? What is its significance? What are the rules for bonding?
3. Describe with neat sketch different types of rubble masonry.
4. Give a point wise comparison of brick and stone masonry.
5. Explain with sketches the details of cavity wall at the following locations:
a) Foundation level, b) Parapet level c) At openings
6. Classify the stone masonry and describe the ashlar masonry in detail with figures.
7. Differentiate between English bond and Flemish bond
8. Explain the reinforced brick lintel with sketch.
9. Distinguish between lintel & arch. Draw a neat sketch of an arch and showon it various technical terms used in its construction.
10. What is composite masonry? Write various types of it. Explain any one in detail.
11. Explain with sketch: a) R.C.C. Lintel b) Semicircular brick arch
12. What is cavity wall? Write advantages of cavity walls. What precautions to be taken during cavity wall construction?
13. Explain relieving arch and horse shoe arch. Discuss different causes of failures of arches.
14. Classify and explain various types of arches based on material and workmanship.

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ASSIGNMENT NO. 4

PLAIN AND REINFORCED CONCRETE CONSTRUCTION

1. Explain the methods of mixing, placing, compacting and curing concrete.
2. What is importance of reinforcement in concrete? Describe the various types of reinforcement used in reinforced concrete.
3. Describe the ingredients of reinforced cement concrete and explain the function of each ingredient.
4. What are the functions of water in concrete mix? Describe the properties of water which are necessary to be used to get good concrete.
5. What is water- cement ratio ? How it affects on strength and workability of concrete?

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ASSIGNMENT NO. 5

DOORS AND WINDOWS

1. What factors should consider for selecting type, shape and size, location and number of windows?
2. Explain Venetian door and Collapsible steel door.
3. Enlist types of doors. Write size of doors of residential buildings. Sketch solid core flush door.
4. Sketch casement window and label various components of window on it.
5. What are the points to be kept in view, while locating doors in a room? Explain with sketches : (a) Revolving Door (2) Dormer window
6. Discuss flush door and collapsible steel door in detail.
7. Write short note on (a) Paneled doors and Glazed doors (b) Skylight window and Lantern light windows

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ASSIGNMENT NO. 6

STAIRS AND STAIRCASES

1. Write short note on Escalator with sketch.
2. Explain with the help of sketches the following terms: (i) winders (ii) nosing (iii) landing
3. State and explain the circumstances under which the following types of stairs can be provided : (i) half turn geometrical stair (ii) dog-legged stair (iii) Open Well Stair
4. Explain with sketches the following type of stairs.
5. a) Open Well Stair b) Half & Quarter turn stairs c) Bifurcated Stairs d) Spiral Stairs
e) Dog legged stair
6. Draw single flight staircase and label various components of stair on it. Also sketch various types of steps with their names.
7. State requirements of a good stair case in brief and explain continuous stairs

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ASSIGNMENT NO. 7

FLOORING

1. Explain essential requirements of floor and describe tiled flooring.
2. Explain with the help of sketch the method of constructing timber flooring.
3. Explain in brief the factors that affect the selection of a floor finish.
4. Describe the following with neat sketches & mention the situations under which they are used. a) Reinforced brick flooring b) Ribbed Floor
5. Explain cement concrete flooring with advantages and disadvantages of it.
6. Enumerate various types of materials used for construction of floor base and flooring. Explain factors that affect the selection of flooring materials.
7. Draw a neat sketch of jack arch floor of bricks. Explain its method of construction.
8. Classify different types of timber floors and explain each in brief with help of sketches.

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ASSIGNMENT NO. 8

ROOF AND ROOF COVERING

1. What are the essential requirements of a good roof? Compare merits & demerits of flat & pitched roof
2. Define the following terms in relation to roof
3. Span (2) Rise of a roof (3) Ridge (4) Eaves (5) Gable (6) Purlins (7) Common rafter
4. Explain the factors affecting the selection of types of roof covering.
5. Enlist various materials used in roof covering.
6. Compare Steel roof trusses and Timber roof trusses
7. What are the various types of flat terraced roofing? Explain lime concrete terracing with tile.

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ASSIGNMENT NO. 9

WALL FINISHES

1. What is difference between plastering and pointing ?
2. Explain various types of pointings with sketches.
3. What are the basic characteristics of an ideal paint ?
4. What are the objects of plastering? Describe in brief: (i) Cement Plastering (ii) Acoustical Plaster.
5. Define mortar. Describe lime mortar and cement mortar used for plastering

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ASSIGNMENT NO. 10

TEMPORARY WORKS

1. What does it mean by shoring? Enlist the types of shores and describe in brief any one.
2. Explain Pit method for the under-pinning.
3. What do you understand by under-pinning? When do you require it? Explain with sketches its method.
4. Write a note on needle scaffolding and dead shores.
5. What is meant by scaffolding? Discuss the essential requirements of it.

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ASSIGNMENT NO. 11

SPECIAL TREATMENT

1. Explain anti – termite treatment with details.
2. Briefly explain: (i) Thermal Insulation of exposed walls, (ii) Post-construction anti-termite treatment.
3. Describe damp proofing treatment for the following (a) Foundation (b) Floor (c) Parapet
4. What is sound insulation? What are the various effective measures adopted to achieve sound insulation in a building.
5. State the general principles that should be observed for providing damp proofing (DPC)
6. Discuss in brief various types of thermal insulating materials.
7. Explain common acoustical defects and suggest remedial measures.
8. Describe common acoustical defects in auditorium and write recommended remedies.
9. Explain fire resisting properties of common building materials.