



# INSTITUTE OF AERONAUTICAL ENGINEERING (Autonomous)

Dundigal, Hyderabad - 500 043

## CIVIL ENGINEERING

### Tutorial Question Bank

<b>Course Name</b>	:	<b>Building materials , construction &amp; planning</b>
<b>Course Code</b>	:	A40109
<b>Class</b>	:	II B. Tech II Semester
<b>Branch</b>	:	Civil Engineering
<b>Year</b>	:	2016 – 2017
<b>Course Faculty</b>	:	Ms.S Bhagyalaxmi, Assistant Professor, Civil Engineering Department

#### OBJECTIVES

To introduce students to the basic concepts which are used for construction purpose.

1. How the wood, cement, admixtures is used for buildings and construction process.
2. To develop the building walls and foundations and how they are useful for buildings.
3. In these mainly we know about building arches, roofs, doors, windows and ventilators and how they are given for buildings.
4. To develop the form work and finishing work which is used for buildings and to solve the defects of building properties which are able to know with material
5. Painting is also taken for a beautiful looking structure for the good manner.
6. These courses explain about the material which we want to use and how we want to use and how to give a good building for ma using purpose.

#### PART – A (Short Answer Questions)

S. No	Question	Blooms Taxonomy Level	Course Outcome
<b>UNIT - I</b>			
1	Define Seasoning of timber	Remembering	1,2,3
2	List out the defects in timber	Analyzing	1,2,3
3	Write down the characteristic properties of good stone?	Remembering	1,2,3
4	Describe properties of mild steel	Remembering	1,2,3
5	What are the uses of mild steel	Remembering	1,2,3
6	What are the paints commonly used in building construction?	Remembering	1,2,3
7	What are the different types of paints?	Remembering	1,2,3
8	What are the constituents of glass?	Understanding	1,2,3
9	What role does aluminum play in building construction?	Understanding	1,2,3
10	Write any four properties of clay products?	Remembering	1,2,3
11	What are the properties of glass?	Remembering	1,2,3

S. No	Question	Blooms Taxonomy Level	Course Outcome
12	State the points to be considered in selecting a site for the quarry	Remembering	1,2,3
13	State four advantages of mangalore tiles.	Remembering	1,2,3
14	What are the different types of glass?	Remembering	1,2,3
15	What is the chemical composition of Brick Earth?	Remembering	1,2,3
16	What are the properties and uses of First class bricks?	Remembering	1,2,3
17	What are the characteristic of good tiles?	Remembering	1,2,3
18	What are the advantages & disadvantages of clamp burning?	Remembering	1,2,3
19	What are Granite stones, write down its properties?	Remembering	1,2,3
20	What is dressing of stones?	Remembering	1,2,3
<b>UNIT – II</b>			
1	List out the ingredients of cement.	Understand	4
2	List out the various grades of cement in India.	Remembering	4
3	What do you mean by setting time of cement	Remembering	4
4	Enumerate various types of cement?	Understanding	4
5	What are admixtures?	Understanding	4
6	What are different types of admixtures.	Understand	4
7	State the need of soundness of cement.	Remembering	4
8	What are the properties of OPC	Remembering	4
9	Describe the role of admixtures.	Remembering	4
10	List harmful constituents in cement.	Remembering	4
11	State 4 important uses of rapid hardening cement.	Understanding	4
12	What is chemical admixtures	Remembering	4
13	What are the different types of chemical admixture?	Remembering	4
14	What are mineral admixtures?	Remembering	4
15	What are the different types of mineral admixtures ?	Remembering	4
16	What are the properties of cement?	Understand	4
17	List the various uses of cement.	Remembering	4
18	State different standard test of cement and its aim?	Remembering	4
19	What are the classification of cement?	Remembering	4
20	List out the uses of Portland pozzolana cement?	Remembering	4
<b>UNIT - III</b>			
1	Define arch .	Remembering	5,6
2	What are the components of an arch?	Analyzing	5,6
3	Define Span of an arch	Remembering	5,6
4	Define Rise of an arch.	Understanding	5,6
5	Define lintel.	Remembering	5,6
6	Write the classification of lintels .	Remembering	5,6
7	Explain about the types of roofs.	Remembering	5,6
8	What is damp proof coursing?	Understanding	5,6
9	What are the advantages of damp proof coursing?	Understanding	5,6
10	Define water distribution system	Analyzing	5,6

S. No	Question	Blooms Taxonomy Level	Course Outcome
11	Define acoustic design.	Analyzing	5,6
12	Explain about the characteristics of acoustic	Remembering	5,6
13	Classify among fire resistant materials	Remembering	5,6
14	Explain the following sanitary fittings with neat sketches i) Wash basins ii) Bath tub	Remembering	5,6
15	Define the following: i) Step ii) Riser iii) Thread iv) Noising	Remembering	5,6
16	Explain Plumbing services.	Remembering	5,6
17	What are the different types of foundation?	Remembering	5,6
18	Explain Shallow foundation	Understanding	5,6
19	Explain Deep foundation	Understanding	5,6
20	Explain classification of fire resisting materials	Understanding	5,6
<b>UNIT - IV</b>			
1	Write down the general requirements of mortars?	Remembering	7,8
2	What is brick masonry?	Remembering	7,8
3	What is stone masonry?	Remembering	7,8
4	What is concrete Block masonry	Remembering	7,8
5	Explain about the types of bonds in brick work	Remembering	7,8
6	Explain about tools used in brick masonry	Remembering	7,8
7	Define form work	Remembering	7,8
8	List any three reasons why concrete is used as a building material.	Remembering	7,8
9	State the principles of form work design	Understanding	7,8
10	Explain plastering	Remembering	7,8
11	What is the purpose of plastering	Remembering	7,8
12	Define pointing.	Remembering	7,8
13	Define the following: i) back ground      ii) blistering	Remembering	7,8
14	Define scaffolding	Remembering	7,8
15	Explain types of scaffolding	Remembering	7,8
16	What is under pinning	Remembering	7,8
17	What are the difference between plastering and pointing	Remembering	7,8
18	Define shuttering	Remembering	7,8
19	What are the different types of shuttering	Understand	7,8
20	What is ceiling.	Understand	7,8
<b>UNIT - V</b>			
1	Define building planning. State its significance.	Remembering	9,10
2	Write briefly the factors affecting building planning.	Analyzing	9,10
3	Write any four basic principles of building planning?	Understanding	9,10
4	What is orientation?	Remembering	9,10
5	state the factors affecting orientation	Remembering	9,10

6	What is a local authority?	Remembering	9,10
7	State the functions of local authority.	Remembering	9,10
8	Define floor area ratio	Remembering	9,10
9	Classify the building based on their occupancy	Remembering	9,10
10	Classify the building based on type on construction.	Remembering	9,10
11	Define open space	Analyzing	9,10
12	What are the points to be considered while selecting a site for any particular building?	Understanding	9,10
13	What are building bye laws	Remembering	9,10
14	Explain floor space index	Remembering	9,10
15	Explain residential building	Remembering	9,10
16	Explain assembly building	Remembering	9,10
17	Explain Industrial building	Remembering	9,10
18	Explain Storage building	Remembering	9,10
19	What are the plinth height requirement of a building	Remembering	9,10
20	What is the requirement of a good ventilation system?	Remembering	9,10

**PART – B (Long Answer Questions)**

S. No	Question	Blooms Taxonomy Level	Course Outcome
<b>UNIT – I</b>			
1	What are the operations involved in manufacturing of bricks?	Creating	1,2,3
2	Differentiate between exogenous trees and endogenous trees	Understanding	1,2,3
3	Explain the manufacturing process of aluminum.	Creating	1,2,3
4	Explain the classification of bricks With neat sketch.	Remembering	1,2,3
5	What do you Understand about the dressing of stones and explain the	Analyzing	1,2,3
6	Explain in brief about the alternative materials for wood.	Understanding	1,2,3
7	Describe the geological classification of rocks. Give example of each	Remembering	1,2,3
8	Describe various types of paints and their suitability or use?	Creating	1,2,3
9	What are the various methods of quarrying of stones? Explain each method briefly.	Remembering	1,2,3
10	Explain in detail the process of manufacturing of glass?	Understanding	1,2,3
11	Explain classification of bricks based on field practice	Understanding	1,2,3
12	What test are to be made on bricks explain any three of them	Creating	1,2,3
13	Explain about characteristics of good bricks	Understanding	1,2,3
14	What are the geological classification of rocks explain	Remembering	1,2,3
15	Explain about seasoning of timber and objects of seasoning of timber	Creating	1,2,3
16	What are the properties of glass and types of glasses?	Remembering	1,2,3
17	What are the special types of glass, explain	Remembering	1,2,3
18	What are the constituents of paints explain	Remembering	1,2,3
19	What are the physical classification of rocks	Remembering	1,2,3
20	What are the chemical classification of rocks	Understanding	1,2,3

<b>UNIT – II</b>			
1	Explain briefly about the tests conducted on cement to find its properties	Remembering	4
2	Describe in briefly any type of manufacture of cement with the help of flow diagram.	Remembering	4
3	Explain about different mineral admixtures	Remembering	4
4	Explain the field tests on cement? Write the chemical composition of ordinary Portland cement.	Creating	4
5	Explain why gypsum is added during the manufacture of cement?	Understanding	4
6	What are air entraining agents? How these air entraining agents help in improving performance of cement?	Remembering	4
7	Differentiate between the following: a) Initial setting time and final setting time b) Clinker and nodules	Understanding	4
8	What do you Understand by the term setting and hardening of cement? What chemical reaction takes place during the process of setting?	Remembering	4
9	Explain about different chemical admixtures	Remembering	4
10	Write short notes on: a) Soundness test of cement b) Tensile strength test of cement	Remembering	4
11	What are the composition of Portland cement	Remembering	4
12	Explain about functions of admixtures.	Creating	4
13	Explain the classification of admixtures	Creating	4
14	Explain about hydration of cement	Understanding	4
15	Explain physical properties of Portland cement	Remembering	4
16	Explain about Portland pozzolona cement	Understand	4
17	Explain about high volume fly ash Portland cement	Remembering	4
18	What are the precautions taken for shortage of cement	Remembering	4
19	Explain about special purpose of cements of the following a) Rapid hardening Portland cement b) Low heat Portland cement	Creating	4
20	Explain about a) White Portland cement b) Colored portland cement c) Hydrophobic cement d) Air -entering Cement	Remembering	4
<b>UNIT - III</b>			
1	What are different types of arches that are used for engineering construction? Describe any three types in detail with sketches.	Understanding	5,6
2	a) How are new foundations constructed near old excising structures? b) Discuss about the combined footings?	Remembering	5,6
3	a) State briefly the requirement of good stair. b) State the various types of stairs through flow diagrams.	Remembering	5,6
4	Define roof covering? What are various types in roof covering commonly, used in India? Explain in detail.	Remembering	5,6
5	Define the term foundation? Explain in detail various types of building foundations.	Remembering	5,6

6	What do you Understanding by a) Ventilation b) Air conditioning Explain the necessity of each of them?	Remembering	5,6
7	Write a short note on: a) Storage tanks b) Water requirements of building c) Materials for service pipe	Apply, Create	5,6
8	What is acoustics? State various types of sound absorbing materials according to mode of their performance.	Apply, Create	5,6
9	Explain the various types of fire protection systems in detail.	Understanding	5,6
10	Describe briefly the functional requirements of a ventilation system.	Understanding	5,6
11	What are the classification of Lintel explain.	Understanding	5,6
12	Classification of arches based on shape	Understanding	5,6
13	Describe various types of bricks arches	Remembering	5,6
14	Write short notes on the following a) Flat arch b) Releving arch c) Bull's arch d) Elliptical arch	Understanding	5,6
15	Discuss various cases of load transmitted to lintel from the wall supported by it	Understanding	5,6
16	Explain about classification of stairs with figure	Understanding	5,6
17	Explain about different materials of stairs	Understanding	5,6
18	Explain about bricks lintel, steel lintel , RCC lintel.	Understanding	5,6
19	Classification of linted based on materials and work manship.	Understanding	5,6
20	What is linted? State its functions?	Understanding	5,6
<b>UNIT - IV</b>			
1	What is brick masonry? State and explain briefly the various classifications of brick masonry.	Understanding	7,8
2	Describe the ashlar stone masonry and state its uses in construction of structures.	Remembering	7,8
3	Define the terms in masonry: 1) Header, 2) Stretcher, 3) Course, 4) Quion, 5) Facing, 6) queen closer, 7) King closer, 8) Jams	Understanding	7,8
4	What is Reinforced concrete cement (R.C.C) and explain its importance in construction of structures.	Remembering	7,8
5	State and explain briefly the various types of plastering along with their suitability in the building works.	Understanding	7,8
6	What is scaffolding. State different types of scaffolding. Explain briefly with neat sketches.	Remembering	7,8
7	What is form work? What are the stages involved in construction of form work? Explain briefly.	Understanding	7,8
8	What is underpinning of structure .explain the methods of underpinning?	Remembering	7,8
9	State and explain the methods of determining the bearing capacity of soils?	Understanding	7,8
10	Mention the objectives of providing painting and plastering to the proposed surface.	Remembering	7,8
11	Draw a typical sketch for the form work of a) Rectangular column b) Octogonal column	Understanding	7,8

12	State and explain principles of form work	Remembering	7,8
13	Describe how do u provide form work for a stair case	Understanding	7,8
14	Explain about ttpes of bonds in brick mansoory works	Remembering	7,8
15	Explain about horizontal reinforcement brick mansoory with figure	Understanding	7,8
16	Explain about vertical reinforcement brick mansoory with figure	Understanding	7,8
17	Explain objects of pointing and types of pointing	Understanding	7,8
18	Explain method of white washing	Applying	7,8
19	What are the types of plastering and their stability for different works	Applying	7,8
20	Explain about: i) Pointing ii) Types of pointing iii) Objects of pointing	Applying	7,8
<b>UNIT – V</b>			
1	State and explain the various basic principles of building planning?	Understanding	9,10
2	What is meant by orientation and state the factors affecting the orientation of building?	Understanding	9,10
3	Explain briefly the practical considerations in building planning?	Understanding	9,10
4	What are the factors to be considered while selecting site for any	Applying	9,10
5	Explain the significance of building planning and scope of building	Applying	9,10
6	Explain the various types of classification of building.	Understanding	9,10
7	Explain various principles underlying building bye-laws.	Understanding	9,10
8	Explain briefly the following principles in planning the building:	Applying	9,10
9	Explain briefly the factors affecting building planning	Applying	9,10
10	Explain the following terms : i) Floor area ratio ii) Floor space index	Applying	9,10
11	What are the principles of plastering of building explain any four of them.	Understanding	9,10
12	What are the classification of buildings based upon occupancy	Remembering	9,10
13	What are the classification of building based on type of construction	Analyzing	9,10
14	What are the minimum open spaces requirements for building	Understanding	9,10
15	What are the requirements for bathrooms and water-close ts	Understanding	9,10
16	Explain briefly factors affecting building planning.	Analyzing	9,10
17	Write short notes on : i) Open Space ii) Area of lintels	Understanding	9,10
18	What are the factors affecting the building planning	Understanding	9,10
19	What are the requirements for submission of drawing for issue of permission for construction?	Analyzing	9,10
20	Explain about i) Service plan ii) Specification for submission of drawing for issue of permission for construction.	Understanding	9,10