



University Previous Question Papers

R18

Code No: 154AG

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, April/May - 2023

BUILDING MATERIALS, CONSTRUCTION AND PLANNING

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

Note: i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

- 1.a) Why timber as building material is better than other available building material? [2]
- b) List out the characteristics of good tiles. [3]
- c) Write the purpose of Gypsum. [2]
- d) List out various types of cements and their properties. [3]
- e) What are the different types of floors? [2]
- f) What are different damp proofing and water proofing materials? [3]
- g) What is distempering? [2]
- h) Write the purpose of Scaffoldings. [3]
- i) List out the factors to be considered in selecting a good site for residential buildings. [2]
- j) Write the necessity of building bye-laws. [3]

PART – B

(50 Marks)

- 2.a) Explain with a neat sketch one method of burning bricks in a kiln.
 - b) Explain the field tests conducted on stones. [5+5]
- OR**
- 3.a) Explain any five types of tests conducted on bricks in the laboratory to ascertain their qualities.
 - b) Explain the structure of timber and its parts with neat sketch. [5+5]
- 4.a) Describe different constituents and their functions in ordinary Portland cement.
 - b) What is hydration of cement? What is initial and final setting time of cement? [4+6]
- OR**
- 5.a) What are admixtures and explain its types and mention their uses?
 - b) Write the dry and wet process in manufacture of cement. [5+5]
- 6.a) Summarize the classification of stairs and their requirements. Explain R.C.C. Staircase.
 - b) What are lintels, arches, and explain different types of floors and their uses? [5+5]
- OR**
- 7.a) Draw the Queen post truss and mention the parts.
 - b) What is Acoustics? Write the characteristics of Acoustics. [4+6]

- 8.a) Explain the brick masonry, stone masonry its types and bonds. [6+4]
b) Write about the classification of Lime.

OR

- 9.a) How distemper application is more economical as compare with other types of paint? [6+4]
b) What is shoring and Underpinning?

- 10.a) What is building planning? [3+7]
b) What are the principles of Building Planning?

OR

- 11.a) Briefly explain the principles of building bye-laws. [7+3]
b) Explain the classification of buildings.

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, March - 2022

BUILDING MATERIALS, CONSTRUCTION AND PLANNING

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) With the help of neat sketches, discuss the method of quarrying with hand tools.
- b) What are plastic emulsion paints and where are they used in building construction? How do you mix the commercial product at the site for paint work? [7+8]
- 2.a) What is decay in timber? How is it detected? How can be the timber guarded against its decay?
- b) What are the characteristics of clay for the manufacture of quality bricks? How does the composition of clay affect the quality of brick? [7+8]
- 3.a) Enumerate the functions of cement ingredients.
- b) Draw the flow diagram of burning and grinding operations involved in the manufacture of ordinary cement. [8+7]
- 4.a) Differentiate between chemical and mineral admixtures.
- b) Briefly explain about hydration of cement. [7+8]
- 5.a) What are the precautions to be taken in case of metal windows and aluminum windows.
- b) Explain briefly the functional requirements systems of ventilations. [8+7]
- 6.a) Describe about the ideal requirements of acoustic design.
- b) Explain briefly classification of fire-resistant materials. [7+8]
- 7.a) What are the different types of joints used in stone masonry? Explain with sketches flint rubble masonry.
- b) What are the rules to be observed to get a good bond and give a list of types of bonds in brickwork? [8+7]
- 8.a) What is the importance of open space requirements according to building bye-laws?
- b) Explain how orientation of building is done? And what are the factors influencing orientation of building? [7+8]

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R16

Code No: 133AE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year I Semester Examinations, April/May - 2023

BUILDING MATERIALS, CONSTRUCTION AND PLANNING

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

- Note:** i) Question paper consists of Part A, Part B.
 ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
 iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) What do you understand by frog? [2]
- b) Write the properties of good brick. [3]
- c) What are the ingredients of Portland cement? [2]
- d) What do you understand by the term soundness of cement? [3]
- e) What do you understand by the term fire hazards? [2]
- f) Give a list of different types of windows. [3]
- g) What do you understand by pointing? [2]
- h) What are the objectives of reinforced brick? [3]
- i) What are the principles of planning? [2]
- j) Classify different type of buildings as per bye-laws. [3]

PART – B**(50 Marks)**

- 2.a) Explain the laboratory tests to be conducted on stones.
- b) List the characteristics to be considered for selection of stones for various engineering works. [5+5]

OR

- 3.a) What are plastic emulsion paints and where are they used in building construction? How do you mix the commercial product at the site for paint work?
- b) How glass is classified? Give the chemical formula for each category. What are the properties of good glass? [5+5]

4. What do the terms stiffening, setting and hardening mean with respect to cement paste? Explain them. [10]

OR

- 5.a) Write a short note on Hydration of cement and Heat of hydration.
- b) Briefly explain about chemical admixtures and its uses. [5+5]

- 6.a) What are the causes of failure of foundation?
- b) Draw a neat sketch of spiral staircase and mention its important features. [5+5]

OR

- 7.a) Explain briefly the requirement of ventilation in residential buildings.
- b) Describe about the ideal requirements of acoustic design. [5+5]

R16

Code No: 133AE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year I Semester Examinations, August/September - 2022

BUILDING MATERIALS, CONSTRUCTION AND PLANNING

(Civil Engineering)

Time: 3 Hours

Max.Marks:75

Answer any five questions
All questions carry equal marks

- 1.a) What is the composition of earthen bricks? How bricks are manufactured?
- b) What is a stone? Compare the merits and demerits of stone masonry with brick masonry? [8+7]
- 2.a) Neatly draw the cross section of wood and explain its structure?
- b) What are various seasoning methods for wood? Evaluate their merits and demerits? [8+7]
- 3.a) What is an admixture? What are different types of admixtures?
- b) Compare and analyse the properties of fly ash, GGBS and silica fume as admixtures. [5+10]
4. What is 53 grade cement? Explain the procedure to determine the grade of cement in laboratory? [15]
- 5.a) With neat sketches, explain any two types of stair cases.
- b) Explore different plumbing services required in a high raise building. [8+7]
- 6.a) What is acoustics and why it is important in buildings ?
- b) What are the causes of dampness in a buildings and what are its effects? Explain the damp proof course treatment in buildings? [7+8]
- 7.a) What is reinforced brick masonry? When do you prefer it?
- b) Explain the need of cladding in buildings and discuss the basic cladding materials.
- c) Discuss different types form work and the materials used for form works. [5+5+5]
8. What do you understand by the term building by-laws? Discuss in detail the aspects it covers? [15]

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R18

Code No: 154AG

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester (Special) Examinations, January/February - 2021
BUILDING MATERIALS, CONSTRUCTION AND PLANNING
(Civil Engineering)

Time: 2 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

1. Discuss the structural requirements of Stones and Bricks. [15]
2. Draw the cross section showing the various defects in timber. Briefly discuss the various alternate materials for timber. [15]
3. Explain the hydration process of cement. What are the uses of mineral and chemical admixtures? [15]
4. What are requirements of a well planned roof? Draw a neat sketch of King post truss and describe the various components in it. [15]
5. What are the functional requirements of a good ventilating system? Discuss the various water distribution systems. [15]
6. What are the essential features of English bond and Flemish bond? Draw their Elevations and Plans for one brick thick wall. [15]
7. What are the various types of formwork? Discuss the essential requirements and standards of formwork. [15]
8. A residential building is to be planned for a family of four members. Draw the line diagram of the building and explain the principles of your planning. [15]

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R16

Code No: 133AE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech II Year I Semester Examinations, September - 2021

BUILDING MATERIALS, CONSTRUCTION AND PLANNING

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any five questions

All questions carry equal marks

1. Explain the classification of bricks with neat sketch. [15]
2. Explain the manufacturing process of aluminum. [15]
3. Explain the field tests on cement? Write the chemical composition of ordinary Portland cement. [15]
4. What are air entraining agents? How these air entraining agents help in improving performance of cement? [15]
5. What are different types of arches that are used for engineering construction? Describe any three types in detail with sketches. [15]
6. Define roof covering. What are various types in roof covering commonly used in India? Explain in detail. [15]
7. What is scaffolding? State the different types of scaffolding. Explain briefly with neat sketches. [15]
- 8.a) What are the classification of buildings based upon occupancy?
b) What are the factors affecting the building planning? [8+7]

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2021