

Hall Ticket Number:

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CE214 (R20)

B.TECH. DEGREE EXAMINATION, MARCH-2023

Semester III [Second Year] (Regular & Supplementary)

BUILDING MATERIALS AND CONSTRUCTION

Time: Three hours

Maximum Marks: 70

Answer Question No.1 compulsorily. (14 x 1 = 14)

Answer One Question from each unit. (4 x 14 = 56)

1. Answer the following:

- | | |
|---|-----|
| (a) What is the actual and standard size of a Conventional Brick? | CO1 |
| (b) Draw the cross section of an exogenous tree. | CO1 |
| (c) Classify timber according to its use. | CO1 |
| (d) List various steps in the manufacturing of bricks. | CO1 |
| (e) State the importance of glass as a building material. | CO1 |
| (f) Define thermoplastics. | CO2 |
| (g) What is distemping? | CO2 |
| (h) State various types of paints used for buildings. | CO2 |
| (i) Differentiate between reverberation and echo. | CO3 |
| (j) Draw the top view of a circular stair case. | CO3 |
| (k) State various component parts of a lift. | CO3 |
| (l) What is a Lintel? | CO4 |
| (m) Classify roofs according to the material used. | CO4 |
| (n) What is Scaffolding? | CO4 |

UNIT – I

2. (a) What are the various constituents of Brick-earth? Explain. (7M) CO1
- (b) What is seasoning of timber? Explain various seasoning techniques. (7M) CO1

(OR)

3. (a) State and explain various types of defects in timber. (8M) CO1
(b) Explain the classification of glass. (6M) CO1

UNIT – II

4. Classify plastics and explain various plastics and its properties. CO2

(OR)

5. (a) Differentiate between damp-proofing and water-proofing materials clearly stating their application. (8M) CO2
(b) Explain the following: (6M) CO2
(i) Reinforced plastics
(ii) Distemping

UNIT – III

6. Explain the following with a neat sketch: CO3
(i) English bond
(ii) Double Flemish bond
(iii) Header bond
(iv) Footer bond

(OR)

7. (a) State the importance of acoustics in interiors of a community hall and list out the materials used for reducing the acoustics in a building. (8M) CO3
(b) Differentiate between internal and external plastering of walls in a building. (6M) CO3

UNIT – IV

8. (a) Explain Madras terrace roof with a neat sketch. (8M) CO4
(b) What are the types of form works? Explain. (6M) CO4

(OR)

9. (a) Explain briefly the Pin method of underpinning? (6M) CO4
(b) Discuss the construction of an RCC roof and prefabricated roof. (8M) CO4

CE214 (R20)

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B.TECH. DEGREE EXAMINATION, JUNE-2023

Semester III [Second Year] (Supplementary)

BUILDING MATERIALS AND CONSTRUCTION

Time: Three hours

Maximum Marks: 70

Answer Question No.1 compulsorily. (14 x 1 = 14)

Answer One Question from each unit. (4 x 14 = 56)

1. Answer the following:

- | | |
|---|-----|
| (a) What are the constituents of glass? | CO1 |
| (b) What are the dimensions of standard size of clay brick? | CO1 |
| (c) Write the defects in timber. | CO1 |
| (d) What is meant by frog in brick work? | CO1 |
| (e) List out the paints commonly used for buildings. | CO2 |
| (f) Define varnish and distemper. | CO2 |
| (g) What are advantages of flat roof truss over slope roof truss? | CO2 |
| (h) What are the uses of damp proofing? | CO2 |
| (i) Differentiate between the plastering and pointing. | CO3 |
| (j) Write about sound isolation. | CO3 |
| (k) What is under pinning? | CO3 |
| (l) What are measurements of thread and riser in stair case? | CO4 |
| (m) What are the requirements of stair case in residential buildings? | CO4 |
| (n) What are the uses of scaffolding? | CO4 |

UNIT – I

2. (a) What are the uses of glass in buildings? List out the various types of buildings. (6M) CO1
- (b) Explain the process involved in manufacturing of glass. (8M) CO1

(OR)

3. (a) Describe the seasoning of timber. (7M) CO1
(b) Explain any one of test required for the quality of brick. (7M) CO1

UNIT – II

4. (a) How the plastics are classified? Explain them briefly. (8M) CO2
(b) What are the properties of plastics? and write its uses. (6M) CO2

(OR)

5. (a) Write about the water proofing materials and their uses. (7M) CO2
(b) Differentiate between English bond and Flemish bond. (7M) CO2

UNIT – III

6. (a) Write the requirements of good stair case as per Indian standard codes. (7M) CO3
(b) Explain about the characteristics of acoustics materials. (7M) CO3

(OR)

7. (a) Explain briefly about the classification of brick work in buildings. (8M) CO3
(b) Explain the basic terminology used in lifts. (6M) CO3

UNIT – IV

8. (a) What are the different types of trusses? Explain about the king post truss with neat sketch. (8M) CO4
(b) Write a short note on Madras Terrace and Pre-fabricated roof. (6M) CO4

(OR)

9. (a) Write a short note on scaffolding and formwork. (8M) CO4
(b) What are the requirements of formwork for beams and columns? (6M) CO4

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CE214 (R20)

B.TECH. DEGREE EXAMINATION, DECEMBER-2023

Semester III [Second Year] (Regular & Supplementary)

BUILDING MATERIALS AND CONSTRUCTION

Time: Three hours

Maximum Marks: 70

Answer Question No.1 compulsorily. (14 x 1 = 14)

Answer One Question from each unit. (4 x 14 = 56)

1. Answer the following:

- | | |
|---|-----|
| (a) What are the constituents in bricks? | CO1 |
| (b) What are the dimensions of nominal size of brick? | CO1 |
| (c) Write the composition of glass. | CO1 |
| (d) Write about seasoning of timber. | CO1 |
| (e) What are the different types of plastics? | CO2 |
| (f) Define acoustic design. | CO2 |
| (g) Differentiate between distempering and white washing. | CO2 |
| (h) Define plastering. | CO3 |
| (i) Write the different types of trusses. | CO3 |
| (j) Define thread and riser in stair case. | CO3 |
| (k) Write about lintels. | CO3 |
| (l) Define scaffolding. | CO4 |
| (m) What are the building bye laws? | CO4 |
| (n) List out the types of shores. | CO4 |

UNIT – I

2. (a) Explain the process involved in manufacturing of bricks. (8M) CO1
- (b) Explain the characteristics of good bricks. (6M) CO1

(OR)

3. (a) Explain the various types of timber used in buildings. (7M) CO1
(b) What are the properties of glass and types of glass? (7M) CO1

UNIT – II

4. (a) Explain the various types of paints in buildings. (7M) CO2
(b) What are the required considerations for choosing the type of paint? (7M) CO2

(OR)

5. (a) Write about the fiber reinforced plastics. (6M) CO2
(b) Explain the process involved in fabrication of plastics. (8M) CO2

UNIT – III

6. Explain the methods of laying bricks and bonding of bricks. CO3

(OR)

7. (a) What are the different types of stair cases in residential buildings? (8M) CO3
(b) Explain about the various types of plastering in the building works. (6M) CO3

UNIT – IV

8. (a) What is meant by under pinning? Explain the pit method of under pinning. (7M) CO4
(b) What are the different types of floors? Explain any one of the type of floor and materials used in it. (7M) CO4

(OR)

9. (a) Differentiate between timber scaffolding and steel scaffolding. (6M) CO4
(b) What is meant by formwork? Describe the stages involved in construction of form work. (8M) CO4

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CE214 (R20)

B.TECH. DEGREE EXAMINATION, APRIL-2024

Semester III [Second Year] (Supplementary)

BUILDING MATERIALS AND CONSTRUCTION

Time: Three hours

Maximum Marks: 70

Answer Question No.1 compulsorily. (14 x 1 = 14)

Answer One Question from each unit. (4 x 14 = 56)

1. Answer the following:

- | | |
|---|-----|
| (a) What are the different test on bricks in the field? | CO1 |
| (b) Define seasoning of wood. | CO1 |
| (c) Define annealing of glass. | CO1 |
| (d) What is a monomer in plastic? | CO2 |
| (e) Define turpentine. | CO2 |
| (f) What is meant by Pointing? | CO2 |
| (g) Define cement mortar. | CO3 |
| (h) Define stair. | CO3 |
| (i) Define echo. | CO3 |
| (j) Explain the significance of lintels for a building? | CO4 |
| (k) Explain the term 'Braces' in scaffolding. | CO4 |
| (l) Define strut. | CO4 |
| (m) Define Purlin and explain the function of it. | CO4 |
| (n) How to store bricks and blocks on site? | CO4 |

UNIT – I

2. (a) What do you understand about qualities of good bricks? (7M) CO1
- (b) Explain the defects caused due to seasoning. (7M) CO1

(OR)

3. (a) Explain about the different processes of drying of bricks and its importance. (7M) CO1
- (b) Explain the general properties of glass. (7M) CO1

UNIT – II

4. (a) Analyze the objects of painting and point out the characteristics of an ideal paint. (7M) CO2
(b) What are the objectives of distemping and mention the properties distempers. (7M) CO2

(OR)

5. (a) Explain the general properties of plastics. (7M) CO2
(b) What do you understand about plastics classification and how are they classified. (7M) CO2

UNIT – III

6. (a) Explain the comparison between English bond and Flemish bond. (7M) CO3
(b) State the objectives of plastering. (7M) CO3

(OR)

7. (a) Analyze the conditions of good acoustics for an auditorium. (7M) CO3
(b) Analyze the terms in stairs (i) Baluster (ii) Flight (iii) Head room (iv) Going (v) Nosing (vi) Tread (vii) Pitch. (7M) CO3

UNIT – IV

8. (a) Explain the construction of Terrazzo flooring. (7M) CO4
(b) Draw a neat sketch of king post roof truss made of timber in detail and name its various part. (7M) CO4

(OR)

9. (a) Define under pinning and mention some of the situations which demand underpinning. (7M) CO4
(b) Define scaffolding and what are the different types of scaffoldings? (7M) CO4

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CE214 (R20)

B.TECH. DEGREE EXAMINATION, DECEMBER-2024

Semester III [Second Year] (Regular & Supplementary)

BUILDING MATERIALS AND CONSTRUCTION

Time: Three hours

Maximum Marks: 70

Answer Question No.1 compulsorily. (14 x 1 = 14)

Answer One Question from each unit. (4 x 14 = 56)

1. Answer the following:

- | | |
|---|-----|
| (a) What is the importance of 'Frog' on brick? | CO1 |
| (b) Define soft woods. | CO1 |
| (c) Differentiate between soft-glass and hard-glass. | CO1 |
| (d) What is meant by reinforced plastics? | CO2 |
| (e) Differentiate between base and vehicle. | CO2 |
| (f) What is meant by Pointing? | CO2 |
| (g) Analyse the importance of plastering. | CO3 |
| (h) Define nosing in stairs. | CO3 |
| (i) What do understand by sound isolation? | CO3 |
| (j) Explain the significance of vaults in a building. | CO4 |
| (k) Explain the term 'Guard Rail' in scaffolding. | CO4 |
| (l) Define underpinning. | CO4 |
| (m) Explain the importance of coping in brick work. | CO4 |
| (n) How to store cement on site? | CO4 |

UNIT – I

2. (a) Explain the constituents to be present in the earth for making good quality of bricks. (7M) CO1
- (b) What do you understand by decay of timber and state its causes? (7M) CO1

(OR)

3. (a) What do you understand about the qualities of a good timber? (7M) CO1
(b) Explain the process of manufacturing of glass. (7M) CO1

UNIT – II

4. (a) What are the ingredients of an oil borne paint and analyze each of them? (7M) CO2
(b) Describe any two methods of water proofing of R.C.C. flat roofs. (7M) CO2

(OR)

5. (a) Explain the processes involved in fabrication of plastic articles. (7M) CO2
(b) Evaluate the typical uses of plastics in building construction. (7M) CO2

UNIT – III

6. (a) Explain the terms in brick masonry (i) header course (ii) closer (iii) king closer (iv) Queen closer (v) bull nose (vi) bevelled closer (vii) bat. (7M) CO3
(b) Discuss the specifications for plastering with cement mortar. (7M) CO3

(OR)

7. (a) Discuss reverberation. (7M) CO3
(b) Explain about Dog-legged stairs and Geometrical stairs. (7M) CO3

UNIT – IV

8. (a) Explain the construction of Mosaic flooring. (7M) CO4
(b) Define the terms (i) Principle rafter (ii) Purlin (iii) wall plate (iv) hip rafter (v) eaves (vi) pitch of the roof (vii) tie beam. (7M) CO4

(OR)

9. (a) Define scaffolding and explain the different parts of a scaffolding. (7M) CO4
(b) What is shoring and write short notes on dead shores? (7M) CO4

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