

3E1134	Roll No. _____	Total No of Pages: 3
	3E1134 B. Tech. III - Sem. (Main / Back) Exam, Dec. 2019 PCC Civil Engineering 3CE4-07 Building Material & Construction	

Time: 3 Hours

Maximum Marks: 120

Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL

2. NIL

PART - A

(Answer should be given up to 25 words only)

[10×2=20]

All questions are compulsory

- Q.1 What is the role of fly ash in concrete?
- Q.2 What do you understand by seasoning of timber?
- Q.3 Differentiate between mild steel and HYSD bars.
- Q.4 Write the name of different types of bond use in brick work.
- Q.5 Write any two comparison between stone and brick masonry.

- ~~Q.6~~ Explain relative merits and demerits of Flemish bond.
- ~~Q.7~~ Differentiate between arches and lintels.
- ~~Q.8~~ Write down causes of dampness.
- ~~Q.9~~ What is load bearing structure use in building construction?
- ~~Q.10~~ What do you understand by light weight concrete blocks?

PART – B

(Analytical/Problem solving questions)

[5×8=40]

Attempt any five questions

- Q.1 Enlist of various laboratory tests performed on stone. Explain any four in detail.
- ~~Q.2~~ Explain the role of fly ash in manufacturing of bricks and cement.
- Q.3 State and discuss different methods of seasoning of timber.
- ~~Q.4~~ Explain causes of failure of foundation and their remedial measures.
- Q.5 Describe the various construction features of shell roof.
- ~~Q.6~~ Explain types and methods of shoring and underpinning.
- ~~Q.7~~ Explain various types of paints and varnish and their application in detail.

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions)

[4×15=60]

Attempt any four questions

- ~~Q.1~~ What are various standard test performed on bricks? Explain any four with their procedure. <http://www.rtuonline.com>

Q.2 What is mortar? Briefly describe lime and cement mortar. State the role of sand in mortar.

Q.3 Explain different types of stone masonry. Also describe their relative merits and demerits

Q.4 Explain the requirements of good staircase. Describe the constructions details and suitability of different types of stairs.

Q.5 Explain the following-

(a) Flat slab and their application

(b) Methods and material for damp proofing

(c) Purpose and use of partition wall

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3E1134	Roll No. <u>41110</u>	Total No of Pages: 3
	3E1134 B. Tech. III - Sem. (Main) Exam., Dec. - 2018 Civil Engineering 3CE4 – 07 Building Material & Construction	

Time: 3 Hours

Maximum Marks: 120

Instructions to Candidates:

Attempt all ten questions from Part A, selecting five questions from Part B and four questions from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL

2. NIL

PART – A

(Answer should be given up to 25 words only)

[10×2=20]

All questions are compulsory

Q.1 What is the role of gypsum in manufacturing of cement?

Q.2 What do you understand by tread and rise?

Q.3 Enumerate the different name of foundation.

Q.4 Explain the uses of partition wall.

Q.5 Classify the different types of staircase.

[3E1134]

Page 1 of 3

[5060]

- Q.6 What is the meaning of consistency?
- Q.7 Explain relative merits and demerits of English bond.
- Q.8 Write down the properties of steel.
- Q.9 Explain the terms intrados and extrados in arch.
- Q.10 List out the name of materials which are used for damp proofing.

PART – B

(Analytical/Problem solving questions)

[5×8=40]

Attempt any five questions

- Q.1 Explain various test to be conducted on bricks.
- Q.2 What do you understand by seasoning of timber? Explain various methods of seasoning? <http://www.rtuonline.com>
- Q.3 Differentiate between king post roof truss and queen post roof truss with neat sketch.
- Q.4 Describe the types of stairs case and their suitability.
- Q.5 With the help of neat sketches describes underpinning.
- Q.6 Distinguish clearly between a lintel and an arch. Explain with sketch RCC lintel.
- Q.7 What are the different causes of dampness in building?

PART - C

(Descriptive/Analytical/Problem Solving/Design Questions) [4×15=60]

Attempt any four questions

- Q.1 What are the objectives of joints? Discuss in brief construction & expansion joints with neat sketch.
- Q.2 Explain the term foundation. Enumerate various types of building foundation.
- Q.3 Describe the types of roof covering material with construction details.
- Q.4 Discuss the load bearing and framed structure of construction in detail.
- Q.5 Explain the following:-
- (a) Anti termite treatment
 - (b) Fire resistance construction
 - (c) Layout of foundation plan

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3E1452	Roll No. : _____	Total Printed Pages : 3
	<div style="border: 1px solid black; padding: 5px; display: inline-block;">3E1452</div>	
	B. Tech. (Sem. III) (Main) Examination, December - 2017 Civil Engg. 3CE2 Building Material & Construction	

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 24

Attempt any five questions, selecting one question from each unit. All Questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.

Use of following supporting material is permitted during examination.

1. _____ Nil 2. _____ Nil

UNIT - I

- 1 (a) Explain the engineering characteristics of a good building stone. 8
- (b) What are different tools required in the process of blasting and explain the process of blasting with neat sketches. 8

OR

- 1 (a) Write a short note on different types of tiles. 8
- (b) Explain the operation of preparation of clay for the manufacture of bricks. 8

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UNIT - II

- 2 (a) Write short notes on any **two** of the following :
- (i) Consistency test of cement
 - (ii) Tensile strength of cement
 - (iii) Blaine's Air Permeability test on cement
- 4+4**
- (b) Explain the different types of lime and mention any five differences between fat lime and hydraulic lime.
- 8**

OR

- 2 (a) Write brief notes on :
- (i) Bulking of sand
 - (ii) Function of sand in Mortar
- 4+4**
- (b) Explain the burning process of cement with neat sketches.
- 8**

UNIT - III

- 3 (a) What is 'plastic' and how are they classified and what are the civil engineering uses of plastic ? <http://www.rtuonline.com>
- 12**
- (b) Write down the general properties of glass.
- 4**

OR

- 3 (a) Write short notes on any **two** of the following :
- (i) Classification of glass.
 - (ii) Different types of varnish
 - (iii) Precast concrete
- 4+4**
- (b) What is the objective of seasoning of wood and explain the different methods of artificial seasoning of wood.
- 8**

UNIT - IV

- 4 (a) State the basic requirements that a building should satisfy for performing its basic function. 12
- (b) Write down any four differences between load bearing construction and framed structure construction. 4

OR

- 4 (a) What is the bearing capacity of soil ? Explain the various methods of improving the bearing capacity of soil. 10
- (b) State conditions suitable for the following type of foundation :
- (i) Well foundation
 - (ii) Pier foundation

3+3

UNIT - V

- 5 (a) What is the significance of bonding in brickwork ? Explain the four differences between English bond, Double Flemish bond and Single Flemish bond with neat sketches. <http://www.rtuonline.com> 8
- (b) Classify different types of Rubble masonry and describe in brief the construction of wall with coursed square rubble and dry rubble masonry. 8

OR

- 5 (a) State the objective of plastering and name the various types of plasters and mention the requirement of good plaster. 6
- (b) Write brief notes on any two of the following :
- (i) Concrete partition wall
 - (ii) Glass block partition wall
 - (iii) Different types of pointing.

5+5

3E1622	Roll No. _____	[Total No. of Pages : 2]
	<div style="border: 1px solid black; display: inline-block; padding: 2px 10px;">3E1622</div> B.Tech. III Semester (Main/Back) Examination Dec. - 2016 Civil Engg. 3CE2A Civil Engg. Materials	

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 26

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)

Unit - I

1. a) What are the tests to which a stone should be subjected before it is selected for Building purposes. (8)
- b) Write about the material of quarrying by Blasting. (8)

OR

1. a) Describe briefly geological classification of building stone (Rocks). Give examples of two building stones falling in each geological group of rocks. (8)
- b) What are the different methods used in dressing of building stones. (8)

Unit - II

2. a) Explain different types of tiles with neat sketch. (8)
- b) Write down the use of fly - Ash in manufacturing of bricks & cement. (8)

OR

2. a) Explain with the help of neat sketches, construction & working of Allahabad kiln for burning of bricks. (8)
- b) Discuss the classification of bricks in detail. (8)

Unit - III

3. What is portland cement? Explain manufacturing method of portland cement by dry process. (16)

OR

3. a) Write a short note on slaking of lime. (8)
b) Compare Fat lime and hydraulic lime. (8)

Unit - IV

4. a) Explain the bulking of sand & method to determine bulking of sand. (8)
b) Describe in detail the process of preparing a lime mortar for use in different situations in a building. rtuonline.com (8)

OR

4. Describe the various types of defects in Timber with the help of neat sketches.(16)

Unit - V

5. a) Write a short note on supplementary cementitious materials. (8)
b) Write about energy used in transportation & construction process. (8)

OR

5. a) Explain different types & use of Asbestos. (8)
b) Write in detail about types & uses of glass. (8)



3E1622

3E1622

B.Tech. (Sem.III) (Main/Back) Examination, 2015
Civil Engineering
3CE2 Civil Engineering Materials

Time : 3 Hours

Total Marks : 80
Min. Passing Marks : 26

Instructions to Candidates :

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

UNIT - I

- 1. (a) Explain durability and Impact values tests on stones. (8)
- (b) Write about sandstone and limestone. (8)

OR

- 1. (a) Explain dressing of stones. (8)
- (b) Write about Gneiss and Marble. (8)

UNIT - II

- 2. (a) Explain various tests to be conducted on bricks. (8)
- (b) Write about the burning process for manufacturing of bricks. (8)

OR

- 2. (a) Write about various types of tiles. (8)
- (b) Explain the standard tests on tiles. (8)

UNIT - III

- 3. Explain the various standard tests on cements with figure. (16)

OR

- 3. Explain the classification and manufacturing process of lime. (16)

UNIT - IV

- 4. (a) Explain the various types of plastering and painting. (8)
- (b) Discuss methods of seasoning of wood. (8)

OR

- 4. (a) Explain ply woods and fiber boards. (8)
- (b) Write about various types of paints and varnishes. (8)

UNIT - V

- 5. (a) Explain stones and stabilized blocks. (8)
- (b) Write about energy used in transportation and construction process. (8)

OR

- 5. (a) Write in detail about types and uses of glass. (8)
- (b) Explain building materials from industrial wastes. (8)

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