**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

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|  | **2BT3105** | Roll No. | Total Printed Pages: 2 |
| **2BT3105** |  |
| B. Tech. II Year III- Semester (Main/Back) End Semester Examination, November 2022  **(CV & Dip. CV)** | |
| **BCVECV3111 / DCVECV3104 :** **Building Material & Construction** | | | |

# Time: **3Hours**. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **NIL** **2.NIL**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | (a) Give a brief account of the mode of origin and consolidation of igneous magma. How are igneous rock classified?  (b) What are the properties of first class brick? | **(2x3)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | (a) How would you identify limestone, sandstone, granite & Gypsum?  (b) What are the constituents of good brick earth? | **(2x3)** | **Understand** |
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|  |  | **OR** |  |  |
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| **Q.2** | **(a)** | (a) Describe briefly the tests to which bricks may be put before using them for engineering purposes.  (b) What is a frog? State its importance in clay bricks. | **(2x3)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Name the three geological classes into which rocks can be divided. Describe the process of their formation. What are the important building stones which are derived from these rocks? | **(6)** | **Understand** |
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|  |  | **UNIT-II (CO2)** |  |  |
|  |  |  |  |  |
| **Q.3** | **(a)** | Explain the terms:  (a) Poor Lime (b) Fat Lime (c) Hydraulic Lime (d) Quick Lime | **(2x4)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | What is the difference between soft wood and hard wood? | **(4)** | **Understand** |
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|  |  | **OR** |  |  |
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| **Q.4** | **(a)** | Briefly describe hardening of lime. How is hydrate hardening of lime different from hydrosilicate hardening? | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | What are the various tests performed to test the suitability of timber? Describe in detail the tests performed to determine moisture content of timber. | **(6)** | **Understand** |
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|  |  | **UNIT-III (CO3)** |  |  |
|  |  |  |  |  |
| **Q.5** | **(a)** | Discuss in details about manufacturing process of cement with figure. | **(8)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Discuss the basic principle of stone masonry work. | **(4)** | **Understand** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
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| **Q.6** | **(a)** | What are different types of bond in brick masonry? Explain any three. | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | (1) How do you calculate workability of concrete?  (2) Which factors affect workability of concrete? | **(2x3)** | **Understand, Apply** |
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|  |  | **UNIT-IV (CO4)** |  |  |
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| **Q.7** | **(a)** | Explain the classification of building on the basis of type of construction. | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | Explain the purpose of foundation and classify different types of foundation. | **(6)** | **Understand, Apply** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
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| **Q.8** | **(a)** | Explain the various building component, their function and requirement? | **(6)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | (1)What is difference between plastering and pointing?  (2) What is the purpose of pointing? | **(2x3)** | **Understand** |
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|  |  | **UNITV (CO5)** |  |  |
|  |  |  |  |  |
| **Q.9** | **(a)** | (1) What is the function of arches?  (2) How are arches built?  (3) What is the function of lintel? | **(2x3)** | **Understand, Apply** |
|  |  |  |  |  |
|  | **(b)** | (1) What is the most common type of door?  (2) Why should doors and windows be strong and well fitted?  (3) Which is the best anti termite treatment? | **(2x3)** | **Understand, Apply** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.10** | **(a)** | (1) What is the difference between arc and arch?  (2) What is soffit in arch?  (3) Why is lintel necessary in a building? | **(2x3)** | **Understand** |
|  |  |  |  |  |
|  | **(b)** | (1) What is the difference between arch and lintels?  (2) Why are doors and windows important in a house?  (3) How do you treat termites in a wall? | **(2x3)** | **Understand, Apply** |