

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE –
RAIGAD – 402 103**

End Semester Examination-May – 2018

Branch: M. Arch. (General)

Semester: II

Subject- Low Cost Building Material and Construction

Marks: 80

Subject Code-MAR10200003

Date: 11 /05 /2018

Time: 3 Hrs.

- Instructions:** 1] Questions No. 1 is compulsory and Attempt any FOUR from Question No. 2 to Question No. 6.
2] Figures / structures to the right indicate full marks.
3] Assume suitable data, if necessary.
4] Neat diagrams must be drawn wherever necessary.

Q. No. 1 Answer in single sentence / filling the blanks / match the columns / Define **[20]**
[COMPULSORY QUESTION]

i A _____ is the curve assumed by a freely suspended chain or flexible cable under the action of gravity.

- a) Catenary
- b) Dome
- c) Vault
- d) Arch

ii _____ are characterized by a thrust whose intensity and angle may disturb the stability of the whole.

- a) Terracotta Floors
- b) Arches and vaults
- c) Wattle and Daub
- d) None of above

iii Write list of materials used for ferro concrete / Ferrocement (Any four)

iv What are the advantages of a rat-trap bond? (any two)

v A _____ material is one that: Does not deplete non-renewable (natural) resources and has no adverse impact on the environment when used.

- a) Traditional
- b) Structural
- c) Sustainable
- d) None of above

Attempt any FOUR of the following. (Long Questions)

- Q. No. 2** Write a short note on [15]
1) Use of Bamboo as alternative construction material in line with following pointer
a) General note
b) Selection criteria for structural bamboo
2) Advantage and disadvantage of Bamboo construction technique
3) At least 2 construction detail with supporting sketch
- Q. No. 3** Discuss any Two of construction technology developed by CBRI with supporting sketches. [15]
a) Precast RCC Channel Unit
b) Precast Reinforced Concrete Plank and Joist Scheme for Roof/Floor
c) Prefabricated Brick Panel System for Roof/Floor
- Q. No. 4** Write a note on CPM and PERT. [15]
- Q. No. 5** Write Short note on (Any two) [15]
1) Light Gauge Steel structure (LGS)
2) Rammed earth construction technique
3) Arch Vault & dome (AVD)
- Q. No. 6** What is pre fabrication? What are advantages and disadvantages of pre fabrication? Explain its application and at least 2 construction details with supporting sketch. [15]

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