

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.ARCH. – SEMESTER– I EXAMINATION – SUMMER 2019

Subject Code:1015003

Date:30/05/2019

Subject Name: Building Construction - I

Time:10:30 AM TO 01:30 PM

Total Marks:40

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks
4. Use any suitable scale for drafting if not mentioned
5. Support your answers with neatly drawn and labeled sketches wherever necessary

Q1 Sketch to any suitable scale a typical wall section through a load bearing structure showing complete details from foundation, through window opening, to top of parapet. Label and dimension all the parts clearly using the correct terminology.

(08 marks)

Q2 Write short notes on any four of the following:

- | | |
|---------------------------------|------------------------|
| a) Wattle and Daub construction | b) Function of plinth |
| c) Through stone | d) V and Channel Joint |
| e) Function of slab | f) Pointing |

(08 marks)

Q3 a) What do you understand by bond? Why is bond necessary in good brickwork?

(02 marks)

b) What is the purpose of coping? Sketch any two types of coping.

(02 marks)

c) Draft to any suitable scale Cross Junction for one and a half brick thick wall in English Bond. Show alternate courses in Plan and Elevation up to six courses.

(04 marks)

OR

d) Draft to any suitable scale Stopped End and L-Junction for one brick thick wall in Double Flemish Bond. Show alternate courses in Plan and Elevation up to six courses.

(04 marks)

Q4 Explain with the help of neatly drawn and labeled sketches any two of the following:

- a) Ashlar masonry built-to-courses
- b) Random Rubble masonry
- c) Rammed Earth construction

(08 marks)

Q5 a) Define with the help of neatly drawn and labeled sketches:

- | | |
|-------------------|-------------------|
| i) King closer | ii) Half bat |
| iii) Queen closer | iv) Brick-on-edge |

(04 marks)

b) What are the qualities of good timber? Draw any two joints used commonly in timber construction.

(04 marks)

OR

c) What are the different types of load acting on a building? Explain.

(04 marks)