

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code:2X15003

Date:01/06/2019

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 Draft to any suitable scale a typical wall section through an RCC 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 Explain with the help of neatly drawn and labeled sketches any two of the following:
a) How are the loads acting on a building transferred to the soil?
b) What are the main classifications of stone and what are the broad uses of each type?
c) What are the qualities of good timber used in construction? **(08 marks)**

Q3 a) Briefly describe how bricks are manufactured. **(02 marks)**
b) What do you understand by bond? Why is bond necessary in good brickwork? **(02 marks)**
c) Draft to any suitable scale Stopped End and T-Junction in Double Flemish 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 in English Bond. Show alternate courses in Plan and Elevation up to six courses. **(04 marks)**

Q4 Write short notes on any two of the following:
a) Adobe Construction
b) Rammed Earth construction
c) Wattle and Daub construction
d) Typical joints in Bamboo construction. **(08 marks)**

Q5 Explain with the help of neatly drawn and labeled sketches:
a) Bonded
b) Dowel joint
c) Cramped joint
d) V and Channel joint **(04 marks)**
e) Sketch in any suitable scale plan, elevation and section of a typical compound wall in Random Rubble Built-to-Courses masonry. **(04 marks)**
OR
f) Sketch in any suitable scale plan, elevation and section of a wall using Ashlar Uncoursed masonry. **(04 marks)**