Seat No:_____ Enrollment No: _____

# GUJARAT TECHNOLOGICAL UNIVERSITY

## BArch- SEMESTER– 1 EXAMINATION – SUMMER 2016

**SUBJECT CODE: 1015004** **Date: 30/05/2016**
**SUBJECT NAME: STRUCTURE-1**
**TIME: 02.30PM – 04.30PM** **TOTAL MARKS: 50**

**INTRSTUCTIONS:**

1. **All questions are compulsory.**
2. **Figures on right indicated full marks.**
3. **Use of calculators in Allowed.**

**Question 1** **(total marks 8)**

**(a) Describe and Four types of Mechanical Properties of a Solids; significant to building materials. (8)**

**Question 2** **(total marks 12)**

**(a) Classify the following either as LIVE LOAD or as DEAD LOAD. (8)**

**1. A dining table 2. Lizard on a wall 3. R.C.C Lintel 4. A window shutter.**
**5. A Refrigerator 6. Smoke Chimney 7. The Librarian 8. Spiral Staircase**

**(b) Explain the following with help of a simple sketch.**

**1) Membrane Structure 2) Pneumatic Structure 3) Load bearing Structure (4)**
**4) Framed Structure**

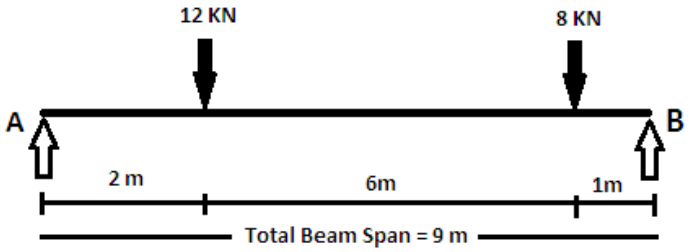
**Question 3** **(total marks 10)**

**(a) Find a resultant between two equal forces P where the resultant is equal to zero. (5)**
**(b) Write a short note on importance of Structures in field of Architecture (5)**

**Question 4** **(total marks 20)**

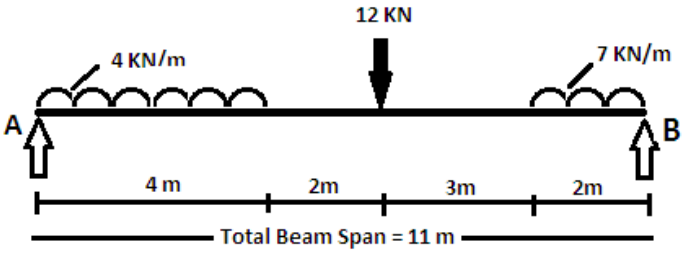
**Find reactions at the two supports of a simply supported beam with given loading conditions below.**

(a)




(10 marks)

(b)




(10 marks)

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