Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BPLAN - SEMESTER– I EXAMINATION – SUMMER 2015

Subject Code: BP1C3/1015503 **Date:04/06/2015**

Subject Name: Materials and Principles of Construction **Total Marks: 50**

Time: 02.30pm-04.30pm

Instructions:

1. **Attempt all questions.**
2. **Make suitable sketches wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1 (A) 1) The portion of a brick cut across the width, is called **06**

a) Bed
b) Half brick
c) Closer
d) Bat

2) Queen closer may be placed

a) in stretcher course
b) in header course
c) in header course next to first brick
d) in stretcher course next to first brick

3) Grillage foundation

a) Is constructed by rolled steel joists (R.S.J.) placed in single or double tier
b) Does not require deep cutting as the required base area with required pressure intensity is obtained at a shallow depth
c) All
d) Is light and economical

4) The loose pockets in soil mass can be bridged safely by providing a raft foundation provided the soft area is smaller than

a) One-third the column spacing
b) The column spacing
c) Three-fourth the column spacing
d) Half the column spacing

5) Stud(s) of a common wooden partition

a) Is the lower horizontal wooden member
b) Are the intermediate horizontal wooden members.
c) Is the upper horizontal wooden member
d) Are vertical wooden members

6) Black cotton soil is unsuitable for foundations because its

a) permeability is uncertain
b) particles are cohesive
c) bearing capacity is low
d) property to undergo a volumetric change due to variation of moisture content

	(B)	Define a) Flemish bond b) English bond	**04**
Q.2	**(A)**	Write about types of bricks.	**05**
	(B)	Detail Cement material.	**05**
		OR	
	(B)	Differentiate Header bond Stretcher bond.	**05**
Q.3	**(A)**	Use of Timbers as lintel and post.	**05**
	(B)	Use of Timbers as trusses.	**05**
		OR	
Q.3	**(A)**	Differentiate Load bearing and Frame structure.	**05**
	(B)	Why do we study of building materials ?	**05**
Q.4	**(A)**	Brief Foundations.	**10**
		OR	
Q.4	**(A)**	Describe in detail DPC.	**10**
Q.5	**(A)**	What are your observations of site visits.	**05**
	(B)	What are the needs of materials in planning ?	**05**
		OR	
Q.5	**(A)**	Draw typical cross section of Canal.	**05**
	(B)	Brief on networks.	**05**

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