

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (New) EXAMINATION – WINTER 2018

Subject Code:2130607

Date:14/12/2018

Subject Name:Building Construction

Time:10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

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

Q.1 (a) Select appropriate option

07

- i The process of filling hollow spaces of walls before plastering is
a) Peeling b) Blistering c) Hacking d) Dubbing out
- ii Which of the below is not a preliminary consideration for building foundation?
a) Ground water condition c) Soil organisms
b) Settlement control d) Bearing capacity of soil
- iii The type of bond provided, in brick for carrying load is
a) Zigzag bond b) English bond c) Flemish bond d) stretcher bond
- iv For pointing works ratio of mortar used is
a) 1: 6 to 1: 7 b) 1: 3 to 1: 4 c) 1:2 to 1: 3 d) 1: 1 to 1: 2
- v The roof having slope in all four directions is called
a) Gambrel roof b) Gable roof c) Hip roof d) Mansard roof
- vi A cavity wall is constructed to resist
a) Dampness b) Axial forces c) Wind loads d) Heat flow
- vii Terrazzo flooring comprises of
a) Chips, cement c) Chips, powder, cement
b) Chips, powder, concrete d) Chips, concrete

(b) Short questions

07

- i The vertical sides of door and window openings provided in a wall is known as _____
- ii In _____ bond brick masonry contains alternate courses of header and stretchers.
- iii The surface to which first coat of plaster is applied is _____
- iv The portion of wall on which the end of an arch rests is known as _____
- v A vertical member of a frame, which is employed to sub-divide a window or a door is known as _____
- vi The materials other than the basic ingredients of cement concrete added to the concrete mix before or during mixing to improve certain properties of concrete are known as _____.
- vii The angular steps in stair used to change direction are called _____

Q.2 (a) What do you understand by raft foundation? When can it be preferred?

03

(b) What type of defect may appear in painting work? Explain in brief.

04

(c) What can be the failures in foundation? Give suggestion to overcome these failures.

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OR

(c) Enlist various methods of sub surface investigation. Explain any two in brief with neat and clean sketches.

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Q.3	(a)	Compare brick masonry with stone masonry	03
	(b)	Explain water cement ration and workability of concrete.	04
	(c)	Describe methodology of cavity wall construction.	07
OR			
Q.3	(a)	Draw a detailed sketch of Dutch bond.	03
	(b)	Differentiate precast concrete with cast in situ concrete.	04
	(c)	Describe various brick arches with neat and clean sketches.	07
Q.4	(a)	Draw neat sketch of open newel half turn stair with quarter space landing.	03
	(b)	Define : 1) Nosing 2) Stair case 3) Transom 4) Style	04
	(c)	Give brief classification of doors. Explain any two with neat and clean sketch.	07
OR			
Q.4	(a)	Draw a detailed sketch of bay window.	03
	(b)	Explain any four types of hinges used for doors, windows and ventilators.	04
	(c)	Discuss the requirement of good stairs.	07
Q.5	(a)	What is scaffolding? Explain any two types of scaffolding.	03
	(b)	Explain various causes of dampness in a residential building.	04
	(c)	Explain the procedure of constructing terrazzo and timber flooring.	07
OR			
Q.5	(a)	Write down the principles of green buildings and discuss its concept.	03
	(b)	Enlist and explain various types of fire hazards.	04
	(c)	Explain king post truss and queen post truss with neat and clean sketch.	07
