

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.** **07**
- OR**
- (c) Enlist various methods of sub surface investigation. Explain any two in brief with neat and clean sketches.** **07**

- 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**
