Total No. of Questions – [5]

Total No. of Printed Pages: 02

G.R. No.	

U118-103 (BE-FF)

DECEMBER 2018 / BACKLOG EXAMINATION

F. Y. B. TECH. (COMMON) (SEMESTER - I)

COURSE NAME: Basic Civil Engineering. COURSE CODE: CV111173

(2017 PATTERN)

Time: [**2 Hours**] [Max. Marks: **50**]

Instructions to candidates:

1) **Answer Q.1 OR Q.2, Q.3 OR Q.4 and Q.5**
2) **Figures to the right indicate full marks.**
3) **Use of scientific calculator is allowed**
4) **Neat sketches/ diagrams must be drawn wherever necessary.**

Q.1 **(a)** Define: (i)harbour, and (ii)dock. Explain briefly any four factors considered for selection of site for a harbour. [6 marks]

(b) With sketches, state three differences each between:

(i) Bridge Superstructure – Bridge Substructure,

(ii) Suspension Bridge – Girder Bridge. [6 marks]

(c) Briefly explain the necessity of infrastructure engineering. [4 marks]

OR

Q.2 **(a)**State 3 advantages and 3 disadvantages of each of the following:

(i) Bullet Train, and **(ii)**Intelligent Transportation System. [6 marks]

(b) Briefly explain six factors for selecting suitable site for an airport. [6 marks]

(c) Write 8 components of an intelligent transportation system. [4 marks]

Q.3 **(a)**Briefly explain four components (i.e. Works or Units in it) of a typical water supply system with the help of neat schematic diagram. [6 marks]

(b) State four ill-effects of air pollution on human beings. Suggest four control measures to reduce air pollution. [4 marks]

(c) Write a note on 'Noise Pollution'. [4 marks]

OR

Q4 **(a)**What is meant by 'Rain-Water Harvesting' and 'Roof-Top Rain-Water Harvesting'? Draw neat sketch of Roof-Top Rain-Water Harvesting. State four advantages. [6 marks]

(b) Draw neat labelled diagram of:

(i) Gravity dam, and **(ii)**Earthen dam. [4 marks]

(c) What is meant by 'e-wastes'? List various e-wastes and their sources. [4 marks]

Q.5 Attempt following multiple choice questions.

a) Which of the following is ***not relevant*** term for construction management? [2]
(i)Surveying & Planning (ii)Environmental Engineering
(iii)Concrete Technology (iv)Public Private Partnership

b) .....is ***the least relevant term*** in Transportation Engineering. [2]
(i)Design of curves (ii)Ports & Harbours
(iii)Location of stations (iv)Flyovers

c) Knowledge of Environmental Engineering is required for ..... [1]
(i)Foundation design (ii)Water purification plant
(iii)Bridge design (iv)Design of a dam

d) ..... are used for construction of compound wall. [2]
(i)Stones (ii)Bricks
(iii)Neither A nor B (iv)Both A and B

e) Mild steel bar with yield strength of 200 N/mm^2 is designated as ..... [2]
(i)MS 200 (ii) MSB 200 (iii)ST 200 (iv)Fe 200

f) ..... is generally **not** used for flooring. [1]
(i)Concrete (ii)Timber (iii)Brick (iv)Stone

g) If there is an elevated ground between two end stations of a survey line, ... is necessary for measuring length of line. [2]
(i)Reciprocal Leveling (ii)Reciprocal Ranging
(iii)Planimetry (iv)Hand Signaling

h) Identify ***CORRECT*** statement with respect to 'swing offset'. [2]
(i)It is an oblique offset (ii)It is a perpendicular offset
(iii)It is extremely accurate (iv)It is more than 40 m length

i) If HI = 203.300 m and RL of a point is 200 m; staff reading on that point must be ..... [1]
(i)3.3 m (ii)403.3 m (iii)103.3 m (iv)None of these

j) Which of the following is ***NOT*** a component of smart city? [2]
(i)Privacy (ii)Quality power supply
(iii)Environmental Sustainability (iv)IT connectivity

k) For plot of size 10 mx14 m if permissible FSI is 0.9; total allowable built up area will be ..... [2]
(i)126 m^2 (ii)155.56 m^2 (iii)140 m^2 (iv)None of these

l) Which of the following is NOT considered with respect to Privacy as a planning principle? [1]
(i)Use of creepers, trees/plants (ii)Positioning of doors
(iii)L: B ratio for room 1.2 to 1.5 (iv) Louvered windows

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