

**B.TECH. SEM -I (CHEMICAL/ CIVIL/ ELECTRICAL/
MECHANICAL/ PRODUCTION/ COMPUTER/ INFO. TECH./
ELECTRONICS / BIO MEDICAL / E & TC) 2014 COURSE (CBCS)
: SUMMER - 2018**

SUBJECT: FUNDAMENTALS OF CIVIL ENGINEERING

Day: **Wednesday**
Date: **23/05/2018**

S-2018-2206

Time: **10.00 AM TO 01.00 PM**
Max Marks. 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data, if necessary.
- 4) Draw neat diagram **WHEREVER** necessary.

- Q.1** a) State the role of civil engineering in various construction activities. (05)
b) Enlist any five materials used in construction and give use of each material. (05)

OR

- Q.1** a) Compare load bearing and framed structure. (05)
b) State five floor material and state advantages of each material. (05)

- Q.2** List and define axes of dumpy level? With neat sketch state the relation between the axes of Dumpy level. (10)

OR

- Q.2** The following readings were taken with a dumpy level and 4m levelling staff at every 30m, 1.300, 1.700, 1.900, 0.970, 1.800, 2.300, 2.670, 1.890, 2.405, 2.626, 1.972, 2.325. The instrument was shifted after 3rd, 7th and 10th reading. The RL of the first point was 250.50 m Calculate the RLS of all other points by HI method and apply usual check. (10)

- Q.3** a) Comment "Privacy is the important principle of planning in residential building". (05)
b) State any five factors affecting orientation of building. (05)

OR

- Q.3** a) What is necessity of planning of building? (05)
b) What is meant by Eco – friendly structures? List any five eco – friendly materials used in construction. (05)

- Q.4** a) State any five functions of foundation. (10)
b) List the type of foundation and state suitability if each.

OR

- Q.4** a) State any five causes and effects of earth quakes. (05)
b) With neat sketch define the term related to earth quakes (05)
i) Seismograph ii) Focus
iii) Epicenter iv) Isoseismic lines

- Q.5** Draw a layout of water treatment plant and state function of each unit. (10)

OR

- Q.5** List methods of irrigation and state their merits and demerits (10)

- Q.6** State types of roads and write their suitability. (10)

OR

- Q.6** Draw neat sketch of section of railway track and state function of five components of railway track. (10)