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

WINTER - 2017

SUBJECT: FUNDAMENTALS OF CIVIL ENGINERRING

Day: **Tuesday** Time **10.00 AM TO 01.00 PM**

Date: **16/01/2018** **W-2017-1998** 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 State role of civil engineer in other disciplines of engineering. **(10)**

OR

Q.1 Explain composite structure with neat sketch. **(10)**

Q.2 Draw a neat sketch of prismatic compass. List any five parts prismatic compass and state its function. **(10)**

OR

Q.2 Following bearing were observed while running a closed traverse in the clock wise direction. **(10)**

Line	Fore bearing	Back bearing
PQ	$280^0 30$	$100^0 30$
QR	30^0	210^0
RS	150^0	330^0
ST	195^0	15^0

Calculate the Included angle check their sum, if error is there correct them.

Q.3 **a)** State any five necessity of Building bye laws. **(05)**

b) State any five factors considered in site selection for residential building. **(05)**

OR

Q.3 **a)** State principles of building planning and explain any one with neat sketch. **(05)**

b) What is mean by Eco friendly structures and intelligent building. **(05)**

Q.4 **a)** State causes of failure of foundation. **(05)**

b) State function of foundation. **(05)**

OR

Q.4 Give guidelines for earthquake resistant design for building. **(10)**

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

OR

Q.5 Give the classification of irrigation canal. **(10)**

Q.6 Draw neat sketch of bridge showing all the components and state functions of each component. **(10)**

OR

Q.6 Draw cross – section of road in cutting showing all components. **(10)**