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Roll No. ....

**TCE-101**

**B. TECH. (FIRST SEMESTER)  
END SEMESTER**

**EXAMINATION, Jan., 2023**

**BASICS OF CIVIL ENGINEERING**

**Time : Three Hours**

**Maximum Marks : 100**

**Note :** (i) All questions are compulsory.

(ii) Answer any *two* sub-questions among  
(a), (b) and (c) in each main question.

(iii) Total marks in each main question are  
**twenty.**

(iv) Each sub-question carries 10 marks.

1. (a) Briefly give scope of Disciplines of Civil  
Engineering. (CO1)

(b) What is Civil Engineering ? Explain the  
various scope for a career in Civil  
Engineering. (CO1)

**P. T. O.**

(2)

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- (c) What are the various civil engineering activities in Infrastructure development ? Also give the importance of Civil Engineering. (CO1)
2. (a) Write short notes on the following : (CO2)
- (i) Total Station
  - (ii) GPS
  - (iii) Lidar
- (b) Write the difference between Prismatic Compass and Surveyor Compass. (CO2)
- (c) Convert the following Bearings : (CO2)
- (i)  $132^{\circ}25'$
  - (ii)  $318^{\circ}24'$
  - (iii)  $S\ 20^{\circ}25'W$
  - (iv)  $N\ 22^{\circ}80'W$
  - (v)  $270^{\circ}$
3. (a) What are the requirements and properties of good building stones ? (CO3)
- (b) What is R.C.C. ? Briefly write on desirable properties and uses of concrete. (CO3)

(3)

- (c) Write a short note on prestressed concrete and explain the methods of prestressing. (CO3)
4. (a) Explain the various principles of planning of residential and public buildings. (CO4)
- (b) What are building bye-laws ? Give the objectives of bye-laws. (CO4)
- (c) What are the types of drawings ? (CO4)
5. (a) What are traffic signs. What are the functions and importance of traffic signs ? (CO5)
- (b) Explain the methods of treatment of raw water. (CO5)
- (c) Define Air Pollution, Control of Air Pollution and Effects of Air. (CO5)

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