Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (Civil Engineering) (Sem.–7)

REINFORCED EARTH AND GEOTEXTILES

Subject Code : BTCE-813

Paper ID : [A2967]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1) Write briefly :

a) Explain Geomembranes. Where are they Used?

b) What do you mean by Canal Liners and Vapour Barriers?

c) Discuss the reinforced Earth Construction with G.I. Sheets.

d) Write a note on "Covers for Reservoirs".

e) List the various functions performed by Geosynthetics.

f) Numerate different properties of Geogrids.

g) List the properties of Geomembranes.

h) What do you mean by Geotextiles? Numerate different Geotextiles.

i) List the major raw materials that are used for the manufacture of soil reinforcements.

j) Discuss the corrosion of Steel meshes Vis-a-Vis Degradation of Polymeric Reinforcements in Reinforced Soil structures.

SECTION-B

2) Explain the typical situations where Natural Geosynthetics can be employed.

3) Briefly explain the mechanism of mobilization of Reinforcement Strength in the Case of

   a) Geogrid.

   b) Geotextile.

   c) Metallic Strips.

4) Explain the major Raw materials that are used for the manufacture of soil Reinforcement

5) Briefly explain the various functions perform by Geosynthetics.

6) Explain with sketches the various modes of stability of Retaining Walls

SECTION-C

7) Discuss physical and mechanical properties of Geosynthetics under uniaxial loading.

8) How Geogrids are placed while reinforcing soil? Illustrate with the help of a neat sketch. Compare the performance of Geogrids and Steel as reinforcement.

9) Give the application of Geosynthetics in water resources projects quoting the case study on HIRAN DAM.