

Seat No. : \_\_\_\_\_

**NO-101**

**December-2015**

**B.Sc., Sem.-III**

**Core Course-201 : Bio-Technology**

**Time : 3 Hours]**

**[Max. Marks : 70**

1. Answer the following : (Any **Two**) **14**
  - (A) Discuss the unique features of the Earth and give its celestial importance.
  - (B) Describe the chemical composition of the Earth parts Crust, Mantle and Core.
  - (C) Explain the process of formation of soil.
  - (D) Describe structural subdivisions of Indian subcontinent along with its characteristics.
  
2. Answer the following : (Any **Two**) **14**
  - (A) Discuss the distribution of mineral resources within the Earth.
  - (B) Explain formation and geochemical features of Igneous rocks.
  - (C) Explain formation and geochemical features of Sedimentary rocks.
  - (D) Discuss Magnetic Gravitational fields of the Earth.
  
3. Answer the following : (Any **Two**) **14**
  - (A) List exogenic forces involved in Earth dynamics and explain any one in detail.
  - (B) Describe Earth dynamics caused by Earthquake and Volcanic activities.
  - (C) What is plate tectonic theory ? Explain its role in Earth dynamics with suitable diagram.
  - (D) What are geo-hazards ? Explain natural and man-made causes of it.
  
4. Answer the following : (Any **Two**) **14**
  - (A) Discuss the role of Tectonic and Hydrological factors in geochemical cycling of elements.
  - (B) Explain process of Photosynthesis and give its role biochemical cycling.
  - (C) Define fermentation and discuss its biochemical reactions.
  - (D) Write a note on biodegradation explaining microorganisms involved and reactions.

5. Answer the following :

14

- (1) What is Mohorowick boundry ?
  - (2) What are seismic waves ?
  - (3) List types of fossils.
  - (4) Name four geological formations found in India.
  - (5) What is erosion ?
  - (6) Why glaciers are powerful factor for erosion ?
  - (7) What is erosion by attrition ?
  - (8) What is the depth of Earth crust ?
  - (9) List means for remediation of geo-hazards.
  - (10) What are Active Faults ?
  - (11) Which earthquake zone have been assigned in Gujarat ?
  - (12) What is Pyrotactic flow ?
  - (13) Name two bacteria fixing atmospheric nitrogen.
  - (14) Name the biological factor playing major role in elemental cycling.
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