

19P148

(Pages: 2)

Name:

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(CUCSS PG)

CC19P GEL1 C01 – PHYSICAL GEOLOGY AND GEOMORPHOLOGY

(Applied Geology)

(2019 Admission Regular)

Time: Three Hours

Maximum: 30 Weightage

PART A (Short answer type)

Answer any *four* questions. Each question carries 2 weightage.

1. Explain Geoid.
2. Compare chondrites and achondrites.
3. Elucidate the formation of beach face.
4. For a particle of mass 'm' resting on a slope, discuss the component of force promoting downslope movement.
5. Geothermal Gradient.
6. Explain the absence of soil cover on lunar landscape.
7. Wetlands.

(4 x 2= 8 Weightage)

PART B (Short essay type)

Answer any *four* questions. Each question carries 3 weightage.

8. Models of landscape evolution.
9. Assess the significance of O, A, E and B horizons of soil profile.
10. Discuss:
 - a) Hydraulic radius.
 - b) Volumetric continuity equation.
 - c) Super critical flow.
11. Examine the genesis of Mesa and Scarp topography.
12. Evaluate the formation of swash and backwash.
13. Analyse the sources of heat in the interior of Earth.
14. Compare between debris and mud flows.

(4 x 3 = 12 Weightage)

PART C (Essay type)

Answer any *two* questions. Each question carries 5 weightage.

15. Appraise the roles of
 - a) components of gravity
 - b) water content
 - c) angle of repose on mass movements.
16. Evaluate the concepts of Circularity ratio, Form factor and Elongation ratio. Discuss Horton's laws of stream numbers and lengths.
17. Analyse the seismicity of Himalayan region without significant volcanism, Hawaiian volcanism afar from plate boundaries and Japanese islands with intense earth quakes and volcanism.
18. Examine the reasons for
 - a) generally solid nature of mantle below asthenosphere.
 - b) advantages of Richter Scale over Mercalli intensity scale.

(2 x 5 = 10 Weightage)
