

NEW
Part II 3-Tier
2017
GEOGRAPHY

(Honours)

PAPER—V (Set-2)

(PRACTICAL)

Full Marks : 100

Time : 6 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer all questions.

1. (a) Draw a vernier scale to read $333^{\circ}43'30''$ given 19 main scale divisions are equal to 20 vernier scale divisions and the value of one main scale division being half a degree.
- (b) What are the merits & demerits of the R. F. Scale ?
- (c) A map with R.F. 1 : 5000 is reduced 25% of it area. Find out the R.F. of the reduced map.
- (d) Calculate the area of Purulia District.

(Turn Over)

2. Draw a geological section along the line PQ on the given geological map and interpret the same under the following heads :
- (a) Geological succession.
 - (b) Topography and drainage in relation to underlying structure.
 - (c) Geological history. 12+3+2+3
3. (a) Draw the graticules of Bonne's Projection for the map of South America extending from 20°N to 60°S and 30°W to 90°W at an interval of 10° on a scale of 1 : 115,000,000.
- (b) State the important properties of this projection.
 - (c) Distinguish between perspective and non-perspective projection. 16+2+2
4. Conduct any one of the following surveys to be done allotted by lottery.
- (a) Make a closed traverse survey by prismatic compass survey around the four stations MNOP given in the field.
 - (i) Prepare the field book and enter the reading neatly.

- (ii) Make necessary corrections.
- (iii) Draw the traverse with necessary adjustment by parallel-meridian method.
- (iv) Calculate the included angles at each of the station.
- (v) Calculate the area of the traverse.

$$8+5+6+2+4$$

Or

- (b) Run a dumpy level survey along a line AB (Given in the field) of 25 m long at 2.5 m interval taking at least one change point when B.M. at 4th station is 15.25 m.
 - (i) Prepare the field book and enter the readings neatly.
 - (ii) Calculate the reduced levels.
 - (iii) Show the arithmetic check.
 - (iv) Draw a profile on a suitable scale.
 - (v) Calculate the gradient between highest and lowest points.
 - (vi) Briefly discuss the types of Bench Marks.

$$10+3+3+4+3+2$$

Or

(c) Determine the height and distance of the given object with transit theodolite (base inaccessible).

(i) Prepare a field book and enter the readings

(ii) Calculate the height and actual distance of the object from the given ground station.

(iii) Plot the data with suitable scale.

(iv) Mention the different sources of error in the theodolite surveying. 8+8+5+4

5. Identify given 5 (five) specimen of Rocks & Minerals mentioning atleast two important characteristics of each specimen. 5×2

6. Laboratory Note Book & Viva Voce. 5+5

Total Pages—2
+ 2 (Map)

C/17/B.Sc./Part-II(H)/3T(N)/Geolo.(Prac.)/5

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Answer all questions.

Group - A

1. Give a systematic description of the given hand specimens (4) of the minerals and name them.

4×2.5

(Turn Over)

2. Determine the sign of elongation and scheme of pleochroism of the given mineral (1) in this section. 10
3. Identify and describe the optical properties of three minerals from the given this section. 15

Group - B

4. Give a systematic description of given rock hand specimen (3) and name them. 3×10

Group - C

5. (a) Draw a cross-section of the given geological map along point A to B. 7½
- (b) Describe the geological features present in it? 7½
6. The fold axis of an antiform plunges 22° towards due north. Find out the dips of the east and west limbs that strike 300° and 30° respectively. 5
7. Field report 10
8. Laboratory Note Book (group A and B) 5

(3)

4. Enumerate the role of soil moisture and organic matter in augmenting the primary productivity. 5 + 5

Or

Define Biogeography. Discuss the importance and relevance of Biogeography. 2 + 8

5. Compare and contrast between tropical and temperate grassland biome with particular reference to plant community. 10

Or

Discuss about the different types of vertebrate fauna in various zoo-geographical realms of the world. 10

GROUP – B

[Semi-long type questions]

Answer any five questions each within 250 words :

6. Distinguish between Troposphere and stratosphere based on thermal properties. 4×5 4

(4)

Or

Write the controlling factors of air-mass modifications. 4

7. Distinguish between El Nino and La Nina based on their genesis and characteristics. 4

Or

Distinguish between fog and cloud based on their mechanism and visibility. 4

8. Distinguish podzolisation and laterisation. 4

Or

Distinguish saline and alkaline soil. 4

9. Distinguish food chain and food web. 4

Or

Briefly enumerate the importance of Bio-geochemical cycle. 4

(5)

10. Assess the impact of man-elephant conflict and the possible solutions in South Bengal. 4

Or

Write the ecological importance of biodiversity conservation in present context of sustainable development. 4

GROUP – C

[Short Answer type questions]

Answer any ten questions within 50 words :

11. What is 'Second Tropopause' ? 2 × 10
12. Define Hadley cell.
13. Define 'Heat Equator'.
14. Define 'Ice pellets'.
15. Why is Ozone Concentrated in stratosphere ?
16. What is 'Southern Oscillation Index' ?

17. Define soil texture.
 18. What is 'Anvil Cloud' ?
 19. In which category of land forestry is the only suitable landuse.
 20. Define ecological pyramid.
 21. Define 'Hard pan'.
 22. Define 'Biotope'.
 23. What is ecological succession ?
 24. What is nutrient cycle ?
 25. Distinguish between sheet erosion and rill erosion.
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