

West Bengal State University
B.A./B.Sc./B.Com. (Honours, Major, General) Examinations, 2012

PART - II

GEOGRAPHY — HONOURS

Paper -III

(NEW & OLD SYLLABUS)

Duration : 4 Hours]

[Full Marks

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

The figures in the margin indicate full marks.

NEW SYLLABUS

Group - A

(Climatology)

Category - A

Answer any *two* questions within 600 words each.

2 × 10

1. Discuss the importance of Ozone layer in the atmosphere. What are the cause formation of Ozone hole over Antarctica ? 5
2. Explain the Tri-cellular Model of General Circulation.
3. Discuss the origin of Indian monsoon with special reference to Jet streams.
4. What are the bases of Köppen's classification of world climate ? Mention its me and demerits. 4

Category - B

Answer any *four* questions within 150 words each.

4 × 5 =

5. Explain the causes of low level temperature inversion.
6. What is the importance of hygroscopic nuclei in raindrop formation ?
7. Discuss the role of Rossby waves in transfer of heat in the mid-latitude region.
8. Compare between barotropic and baroclinic conditions of the atmosphere.
9. Differentiate between evaporation and potential evapo-transpiration.
10. Explain the relation between composition of lower atmosphere and terrestrial h balance.
11. Describe the structure of a Tropical cyclone.

Group - B**(Soil Geography)****Category - A**

Answer any *one* question within 600 words each.

1 × 10 = 10

12. Explain the role of relief and climate in the development of Podzol soil.
13. Discuss the importance of organic matter and pH in determining soil fertility.

Category - B

Answer any *four* questions within 150 words each.

4 × 5 = 20

14. Describe an ideal soil profile with the help of a suitable diagram.
15. Under what conditions is lateritic soil formed ?
16. Why does the moisture holding capacity differ in various soil types ?
17. Differentiate leaching from capillary action.
18. Bring out the role of man in soil erosion.
19. Mention the different methods of soil conservation.
20. Make a genetic classification of Indian soil.

Group - C**(Biogeography)****Category - A**

Answer any *one* question within 600 words.

1 × 10 = 10

21. Discuss the environmental conditions of Taiga biome. Why is the Tropical rain forest rich in biodiversity ? 6 + 4
22. What are the principles of Man and Biosphere Programme ? Mention the importance of Tiger Project in India. 4 + 6

Category - B

Answer any *four* questions within 150 words each.

4 × 5 = 20

23. How does the roles of producer and decomposer differ in an ecosystem ?
24. Explain the concept of ecosystem with reference to its components.
25. Identify the different threads to biodiversity.
26. Highlight the importance of Nitrogen cycle in the biosphere.
27. Mention the characteristics of Ecotone.
28. What do you understand by 'in situ' and 'ex situ' conservation ?
29. What are the basic characteristics of Parkland Savannah ?

OLD SYLLABUS**Group - A****(Climatology)****Category - A**

Answer any *two* questions within 600 words each. 2 × 10 =

1. Discuss the importance of Ozone layer in the atmosphere. What are the cause formation of Ozone hole over Antarctica ? 5
2. Explain the General Circulation Model with reference to the planetary wind system.
3. Discuss the origin of Indian monsoon with special reference to Jet streams.
4. What are the bases of Köppen's classification of world climate ? Mention its merits and demerits. 4

Category - B

Answer any *three* questions within 150 words each. 3 × 4 =

5. What are the impacts of low level inversion of temperature ?
6. What is the importance of hygroscopic nuclei in raindrop formation ?
7. How are Rossby waves formed ?
8. Compare between barotropic and baroclinic conditions of the atmosphere.
9. Differentiate between evaporation and potential evapo-transpiration.

Category - C

Answer any *four* questions within 50 words each. 4 × 2 =

10. What is Sun-spot cycle ?
11. What is meant by frontogenesis ?
12. What does Af climatic type signify ?
13. What is mesopause ?
14. Define Albedo.
15. What is thermal equator ?
16. What do you mean by 'eye' of a cyclone ?

Group - B**(Soil Geography)****Category - A**

Answer any *one* question within 600 words. 1 × 10 = 10

17. Explain the role of relief and climate in development of Podzol soil.
18. Discuss the importance of organic matter and pH in determining soil fertility.

Category - B

Answer any *three* questions within 150 words each. 3 × 4 = 12

19. Describe an ideal soil profile with the help of a suitable diagram.
20. Under what conditions is lateritic soil formed ?
21. Why does the moisture-holding capacity differ in various soil types ?
22. Differentiate 'leaching' from 'capillary action'.
23. Mention the different methods of soil conservation.

Category - CAnswer any *four* questions within 50 words each.

4 × 2 = 8

24. What is the importance of C : N ratio ?
25. What is field capacity ?
26. What is meant by 'truncated profile' ?
27. Define humification ?
28. What is calcification ?
29. Mention the characteristics of 'prismatic' soil structure.
30. What is understood by 'contour bunding' ?

Group - C**(Biogeography)****Category - A**Answer any *one* question within 600 words.

1 × 10 = 10

31. Discuss the environmental conditions of Taiga biome. Why is the tropical rainforests rich in biodiversity ?
32. Explain the impact of deforestation on environment citing examples from India.

Category - BAnswer any *three* questions within 150 words each.

3 × 4 = 12

33. Differentiate 'biomass pyramid' from 'energy pyramid'.
34. How does the role of producer and consumer differ in an ecosystem ?
35. Explain the concept of ecosystem with reference to its components.
36. Identify the different threats to biodiversity.
37. Highlight the importance of nitrogen cycle in the biosphere.

Category - CAnswer any *four* questions within 50 words each.

4 × 2 = 8

38. What is 'edge effect' ?
 39. Define bio-geochemical cycle.
 40. What do you understand by 'niche' ?
 41. What is detritus food chain ?
 42. What is ecocline ?
 43. Bring out the concept of 'community' in biogeography.
 44. Give two examples of 'bio-diversity hot spots' in India.
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