M.A./M.Sc. 1st Semester Examination, 2019

GEOGRAPHY

PAPER — GEO-104.1 & 104.2

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

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

Illustrate the answers wherever necessary

Write the answers to questions of each Paper in separate books wherever necessary

GEO-104.1

(*Basics of Environment and Ecology*)

GROUP—A

1. Answer any *one* from the following :　　　　8 × 1

   (*a*) Elaborate the measures commonly used in the quantitative assessment of the spatial configuration of a landscape.

(b) Briefly discuss the structure and functioning of ecosystem processes with suitable diagram.

GROUP—B

2. Answer any *two* from the following : 4×2

   (a) What do you understand by the term 'ecosystem stability' ? Why is the importance of the same ?

   (b) Identify the typologies of Ecosystem Pyramid and give pyramids of Savanna ecosystem.

   (c) What are the major components considered in defining disturbance regimes of a landscape ?

   (d) Determine the place of Traditional Ecological knowledge in the management of landscapes.

GROUP—C

3. Answer any *two* from the following : 2×2

   (a) Differentiate macroecosystem from micro ecosystem.

(Continued)

(*b*) What is HIPPO ?

(*c*) What are the types of biotic interaction that create pattern in a landscape ?

(*d*) What are the roles of a keystone species in an ecosystem ?

GEO-104.2

(*Landscape Ecology*)

GROUP—A

4. Answer any *one* from the following : 8 × 1

(*a*) Briefly discuss the principles of landscape ecology as a new branch of scientific study of landscape.

(*b*) Give a brief account on the components of landscape ecology with their spatial importance.

GROUP—B

5. Answer any *two* from the following : 4 × 2

(*a*) *Explain the methods* of measuring landscape diversity of any region.

(*Turn Over*)

(b) What factors are responsible for fragmentation of landscape ?

(c) Elucidate the importance of GIS techniques in landscape planning.

(d) Distinguish the ecological characteristics of core area from the characteristics of landscape edge.

GROUP—C

6. Answer any *two* from the following : 2 × 2

(a) What is Red Data Book ?

(b) Comment on the objectives of IUCN.

(c) What do you understand by scale in landscape ecology ?

(d) What is Shanon Diversity index ?