

2016

(November)

BOTANY

(Major)

Course : 507

(Plant Ecology, Phytogeography and Evolution)

Full Marks : 48

Pass Marks : 19 (Backlog)/14 (2014 onwards)

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. (a) Fill in the blanks : 1×3=3

(i) Transitional zone between terrestrial and aquatic ecosystems is known as _____.

(ii) The amount of organic matter or biomass produced by an individual organism, population, community or ecosystem during a given period of time and area is known as _____.

(iii) The branch of biogeography that is concerned with the geographic distribution of plant species and their influence on the earth's surface is known as _____.

(b) Choose the correct one : 1×2=2

(i) Which of the following is always upright ecological pyramid?

- (1) Pyramid of number
- (2) Pyramid of biomass
- (3) Pyramid of energy

(ii) Which of the following indicates the relationship between different groups of organism and also helps in contrasting the story of life's journey on this planet?

- (1) Fossil
- (2) Speciation
- (3) Isolation

2. Give precise notes on the following : 3×3=9

- (a) 10% energy flow in the ecosystem
- (b) Raunkiaer's law of frequency
- (c) IUCN and Red Data Book

3. Define ecosystem. Write about the structure and function of an ecosystem. 2+5+5=12

(3)

Or

Define environmental pollution. Write about the sources and impact of water pollution on the ecosystem. $2+4+6=12$

4. Define plant adaptation. Compare among hydrophytic, xerophytic and epiphytic adaptations. $1+11=12$

Or

Write short notes on the following : $4 \times 3 = 12$

- (a) Conservation of biodiversity
- (b) Greenhouse effect and global warming
- (c) Physiographic factors

5. Write precise notes on the following : $5 \times 2 = 10$

- (a) Phytogeographical regions of India

Or

Major division of phytogeography

- (b) Vestigial organs in human, animal and plants

Or

Organic evolution and its main postulates
