

### 3 (Sem-3) BOT M 1

2016

BOTANY

( Major )

Paper : 3:1

Full Marks : 60

Time : 3 hours

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

1. Choose and write the correct answer of the following : 1×7=7
- (a) Deserts, grasslands, forests and tundra are example of
- (i) biomass
  - (ii) biosphere
  - (iii) biogeographical region
  - (iv) ecosystem
- (b) Which of the following would necessarily decrease the density of a population in a given habitat?
- (i) Natality > Mortality
  - (ii) Immigration > Emigration
  - (iii) Mortality and emigration
  - (iv) Natality and immigration

- (c) Niche of a species is referred as
- (i) specific function
  - (ii) place of living
  - (iii) habitat and specific function
  - (iv) presence of species in a habitat
- (d) Which of the following is not a pollutant?
- (i) CO
  - (ii) CO<sub>2</sub>
  - (iii) NO<sub>2</sub>
  - (iv) SO<sub>2</sub>
- (e) Organization responsible for Red Data Book is
- (i) IUCN
  - (ii) WWF
  - (iii) CITES
  - (iv) UNO
- (f) Chipko Movement was launched for the protection of
- (i) grassland
  - (ii) wetland
  - (iii) desert
  - (iv) forest

(g) The plant which was made popular by de Vries mutation theory is

(i) *Pisum sativum*

(ii) *Primula sinensis*

(iii) *Triticum aestivum*

(iv) *Oenothera lamarckiana*

2. Explain any *four* of the following : 2×4=8

(a) Amensalism

(b) IVI

(c) Ecological age

(d) Ecads

(e) Phenology

(f) Gene pool

3. Write notes on any *three* of the following : 5×3=15

(a) Importance of ecology

(b) Impact of intensity and duration of light on plants

(c) Ecosystem resilience

(d) Ten per cent law and its significance

(e) Man as an ecological factor

4. Answer any *two* of the following questions : 10×2=20

(a) "Decomposers are considered as crucial and essential components of an ecosystem." Justify the statement.

(b) Describe the process of ecological succession on rock.

(c) Elaborately describe the causes and control measures of soil pollution.

(d) Enumerate the factors that regulate distribution of plants on earth.

(e) Discuss the vegetation of North-Eastern region of India.

5. (a) Describe briefly the paleobotanical and comparative morphological evidences of evolution. 5+5=10

Or

(b) What is variation? Explain the role of genetic variation in evolution of a population. 2+8=10

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