

[This question paper contains 4 printed pages.]

1924

Your Roll No.

B.Sc. Prog./III

E

LS-303 – ECOLOGY AND ENVIRONMENTAL
MANAGEMENT

(Admissions of 2008 and onwards)

Time : 3 Hours

Maximum Marks : 75

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

Use separate answer sheet for section-A and section-B

SECTION – A

M.M. : 38

(Botany)

*Answer three questions in all.
Question No. 1 is compulsory.*

1. (a) Define the following terms (any eight),
 - (i) Climax community
 - (ii) Heliophytes
 - (iii) Field capacity
 - (iv) Biodiversity
 - (v) Autecology

P.T.O.

(vi) Mutualism

(vii) Homeostasis

(viii) Keystone species

(ix) Food Web

(x) Vegetation

(8)

(b) Expand the following:-

(i) WWF,

(ii) IVI,

(iii) IPCC,

(iv) EPA

(4)

(c) Answer the following (one word):

(i) Soil transported by running water.

(ii) Process of successful establishment of a species in a new area.

(iii) Instrument used to measure the relative humidity of a particular area.

(iv) Give example of an insectivorous plant. (2)

2. Write short note (any three)

(a) Theory of tolerance

(b) Endemism

(c) Carbon cycle

(d) Bioremediation

- (e) Ecological adaptations in hydrophytes (3×4=12)
3. Differentiate between the following (any three)
- (a) Troposphere and stratosphere
 - (b) Habitat and niche
 - (c) In-situ and ex-situ conservation
 - (d) Mull and Mor humus
 - (e) Primary and Secondary succession (3×4=12)
4. (a) Define ecosystem. Discuss the flow of energy in an ecosystem with an illustrated diagram. (6)
- (b) Describe the analytical characters of a plant community. (6)

SECTION – B
(Zoology)

M.M. : 37

Answer three questions in all, including question No. 1, which is compulsory.

1. (a) Define the following
- (i) Wallace line
 - (ii) Amensalism
 - (iii) Predation
 - (iv) Niche (4)
- (b) Differentiate between the following:
- (i) Ecological mortality and specific mortality

P.T.O.

- (ii) Fertility and Fecundity
 - (iii) Sanctuaries and National parks
 - (iv) Assign the animals to their respective zoogeographical realms, (3×2)
- (c) Do any six:
- (i) Amia
 - (ii) Phrynosoma
 - (iii) Pangolin
 - (iv) Lepidosiren
 - (v) Protopterus
 - (vi) Rhea
 - (vii) Camel (3)
2. Describe how population regulates itself. (12)
3. (a) Describe the various means of dispersal
(b) Intraspecific competition (7+5)
4. Give the various sources and effects of Air pollution. (12)
5. Write short notes on any three of the following
- (i) Wild life management
 - (ii) Faunal peculiarities of Ethoplan region
 - (iii) Gause experiments on competition
 - (iv) Biosphere Reserve. (3×4=12)
- (100)