REV-00 MSB/21/26

2017/06

## M.Sc. BOTANY Fourth Semester PLANT ECOLOGY (MSB – 402 D)

**Duration: 3Hrs.** 

Part-A (Objective) =20 Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

(5+5=10)

**Full Marks: 70** 

## Answer any four from Question no. 2 to 8 Question no. 1 is compulsory.

- Define population. How is it different from community? Write a note on the impact of environmental resistance on population. (2+3+5=10)
- 2. Write an essay on nitrogen cycle citing a suitable example an ecosystem. (10)
- What do you understand by Age structure in population ecology? What conclusion would you draw by studying it? Name different factors that may change the structures. (2+6+2=10)
- 4. Who did first propose the niche concept in ecology? Note down the differences between habitat and niche. Describe the different types of niche. (1+4+5=10)
- 5. Write notes on: (5+5=10)
  - i. Ecological efficiencies
  - ii. Polyclimax theories
- 6. Differentiate between:
  - i. Allopatric and sympatric species
  - ii. r selection and k selection
- What do you mean by ecological succession? Write a note on recent model on ecological succession. (4+6=10)

 Define phytosociology. Write the importance of qualitative characters in phytosociological study. (4+6=10)

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M.Sc. BOTANY Fourth Semester PLANT ECOLOGY (MSB – 402 D)		b. c. d. viii)
Duration: 20 minutes (PART A - Objective Type)	Marks – 20	a. b. c. d.
I. Choose the correct answer:	1×20=20	ix) W
<ul> <li>i) Which of the following is not a stage of succession?</li> <li>a. Germination</li> <li>b. Nudation</li> <li>c. Ecesis</li> <li>d. Migration</li> <li>ii) Which of the following is correct?</li> </ul>		a. b. c. d. x) Pl a.
<ul> <li>a. IP=BP-ER</li> <li>b. IP=BP+ER</li> <li>c. IP=BPxER</li> <li>d. IP=BP/ER</li> </ul>		b. c. d. xi) W
<ul> <li>iii) An ecotype is:</li> <li>a. A local population</li> <li>b. A genetically adapted population</li> <li>c. (b) only</li> <li>d. (a) and (b) both</li> </ul>		a. b. c. d. xii) V
<ul> <li>iv) Niche concept was given by:</li> <li>a. Lindeman</li> <li>b. Elton</li> <li>c. Haeckel</li> <li>d. Grinell</li> </ul>		a. b. c. d. xiii)
<ul> <li>v) Biological nitrogen fixation is done by:</li> <li>a. Nostoc</li> <li>b. Azotobacter</li> <li>c. Xanthomonus</li> <li>d. All above</li> </ul>		a. b. c. d. xiv)
<ul> <li>vi) Which of the following pyramid is upright only?</li> <li>a. Number</li> <li>b. Biomass</li> <li>c. Energy</li> <li>d. All above</li> </ul>		a. b. c. d.

<ul><li>vii) Leaf area can be calculated using:</li><li>a. Planimeter</li><li>b. Odometer</li><li>c. Nanometer</li></ul>
<ul> <li>d. Hygrometer</li> <li>viii) Antibiosis is: <ul> <li>a. + interaction</li> <li>b ve intraction</li> <li>c. both</li> <li>d. None of the above</li> </ul> </li> </ul>
<ul> <li>ix) Who proposed the relay floristic composition concept?</li> <li>a. Clements</li> <li>b. Egler</li> <li>c. Engler</li> <li>d. Odum</li> </ul>
<ul> <li>x) Phenology is related to:</li> <li>a. Seasonal variation</li> <li>b. carbon dioxide concentration</li> <li>c. soil quality</li> <li>d. water quality</li> </ul>
<ul> <li>xi) Which of the following is an example of mutualism?</li> <li>a. Lichen</li> <li>b. Eicchornia</li> <li>c. Tentipholia</li> <li>d. Vetiver</li> </ul>
<ul> <li>xii) Who proposed the Law of minimum?</li> <li>a. Hutchinson</li> <li>b. Barber</li> <li>c. Grinell</li> <li>d. Liebig</li> </ul>
<ul> <li>xiii) Density means:</li> <li>a. Numerical strength</li> <li>b. Average number</li> <li>c. Both a and b</li> <li>d. Neither a nor b</li> </ul>
<ul> <li>xiv) The term 'Succession' was coined by:</li> <li>a. Wegner</li> <li>b. Hult</li> <li>c. Cowles</li> <li>d. Du toit</li> </ul>

xv) IVI stands for:

- a. Irreversible value index
- b. Important value index
- c. Indiana value index
- d. Interested vale index
- xvi) A biotic community is an assemblage of:
  - a. Food webs
  - b. Food chain
  - c. Closely related species
  - d. Interacting species
- xvii) Which of the following is not a eutrophic lake?
  - a. Deepor beel in Assam
  - b. Sambar lake of Rajasthan
  - c. Dal lake of Kashmir
  - d. Khaziar in Himachal

xviii) The 10% law was proposed by:

- a. Aristotle
- b. Lindeman
- c. Myers
- d. Tansley

xix) In which year the term ecosystem was first used?

- a. 1934
- b. 1935
- c. 1945

d. 1944

- xx) Which of the following is considered as soil element?
  - a. Nitrogen
  - b. Ozone
  - c. Oxygen
  - d. Hydrogen

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SESSION: 2016-17 COURSEPAPER Code:			
IAME OF THE PAPER:			
SEMESTER			
	A Barris		
Instructions to Candidates	For Objective Type Questions		Session: 2016-17
1. This answer booklet has 4 pages. Please check before			
writing whether it is complete or in good condition.	Page No.	Marks	Course
2. Do not write your name anywhere in the answer booklet.			Roll No
Write legibly on both sides of the paper			
I. You may use some space for any rough notes or calculation			Enrollment No
on the answer booklet if you need. These rough notes,			Semester
calculations must be scored out before submitting the answer			Name of the Paper
booklet.			-
5. Do not bring any book or loose paper in the examination			
hall.	Total		Paper Code
. Do not tear any page from the answer booklet.	For Descriptive Type Questions		
7. Do not write anything on the question paper or blotting			
paper or any pieces of paper while you are in the examination	Question No.	Marks	
hall.			
<ol> <li>Any act of indiscipline or misbehavior in the examination hall</li> </ol>			
will result in your expulsion.			
<ol> <li>No examinee is allowed to leave the examination hall until</li> </ol>			1
30 minutes lapse after the commencement of the examination.			
10. Additional answer sheet will be supplied after the main	•		-
answer booklet is completed.			
	Total		
	Grand Total		

Scrutinizer's Signature