

**M.Sc. ENVIRONMENTAL SCIENCE**  
**Fourth Semester**  
**WILDLIFE ECOLOGY**  
**(MEV – 403 A)**

**Duration: 3Hrs.**

**Full Marks: 70**

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

**(PART-B: Descriptive)**

**Duration: 2 hrs. 40 mins.**

**Marks: 50**

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

1. What is man-elephant conflict? What are the causes of man-animal conflict? Discuss various preventive and mitigative measures to address man-animal conflict. (1+3+6=10)
2. What are the various habitat-centric measures adopted in India to protect the threatened species? Discuss each one of them in details. (3+7=10)
3. Define wetland. Discuss the importance of wetlands. (2+8=10)
4. What are *in situ*, *ex situ* and community conservation programmes? Discuss the strengths and weaknesses of these programmes. (3+7=10)
5. How a census is different from a sampling? Describe various wildlife census techniques. (2+8=10)
6. Why Northeast is so rich in terms of wildlife? Discuss various threats to wildlife of this region. (5+5=10)
7. What is animal migration? Why migration is important? Write a note on bird migration. (2+3+5=10)
8. Define social organisation. Discuss in details the social organisation of any one mammalian species. (2+8=10)

**M.Sc. ENVIRONMENTAL SCIENCE**  
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**Duration: 20 minutes**

**Marks – 20**

**(PART A - Objective Type)**

**I. Choose the correct answer:**

**1×20=20**

- i) Rudrasagar Lake—a Ramsar Site—is located in?  
(a) Tripura (b) Mizoram  
(c) Manipur (d) Nagaland
- ii) A \_\_\_\_\_ is an instrument used for taking measurement of canopy cover.  
(a) Range finder (b) Densimeter  
(c) Clinometer (d) Densitometer
- iii) Which one of the following is not a grassland species?  
(a) Hispid hare *Caprolagus hispidus*  
(b) Bengal Florican *Houbaropsis bengalensis*  
(c) Pygmy Hog *Porcula sylvanus*  
(d) Red-headed trogon *Harpactes erythrocephalus*
- iv) Wildlife act of India declares national park under:  
(a) Section 18 (b) Section 35  
(c) Section 37 (d) None
- v) Keystone species is:  
(a) a species that has either large habitat needs or other requirements whose conservation results in many other species being conserved at the ecosystem or landscape level.  
(b) a species that has a disproportionate effect on its environment relative to its biomass and whose removal initiates significant changes in ecosystem structure and loss of biodiversity.  
(c) a species used as the focus of a broader conservation marketing campaign based on its possession of one or more traits that appeal to the target audience.  
(d) a species whose status provides information on the overall condition of the ecosystem and of other species in that ecosystem.
- vi) Which one of the following is not a migratory bird in Assam?  
(a) Peregrine Falcon *Falco peregrines*  
(b) White Wagtail *Motacilla alba*  
(c) Red-vented Bulbul *Pycnonotuscafer*  
(d) Baer's Pochard *Aythya baeri*

- vii) What is the dominant type of habitat utilised by great Indian one-horned rhinoceros in Orang National Park?  
(a) Dry savanna grassland (b) Wet alluvial grassland  
(c) Woodland habitat (d) Wetland habitat
- viii) Which one of the following is not a major threat to the frogs in northeast India?  
(a) Habitat fragmentation  
(b) Linear infrastructures such as road, railway tracks etc  
(c) Climate change  
(d) Chytrid fungus
- ix) Which species have the smallest home range?  
(a) Western hoolock gibbon *Hoolock hoolock*  
(b) The Indian rhinoceros *Rhinoceros unicornis*  
(c) The Royal Bengal Tiger *Panthera tigris*  
(d) Asian elephant *Elephas maximus*
- x) Which method is not utilised in tiger population survey?  
(a) Camera trap (b) Mark -recapture  
(c) Occupancy survey (d) Point count
- xi) RAMSAR convention was adopted in:  
(a) 1971 (b) 1972 (c) 1973 (d) 1974
- xii) The following are the characteristics of a threatened animals:  
1. Population declined 70 ≥%  
2. Population size estimated to number fewer than 250 mature individuals  
3. Extent of area occupancy below 500 km<sup>2</sup>  
4. Probability of extinction in wild at least 20% within 20 years or five generations.  
As per IUCN Red Data Book, the organism would be kept in category of:  
(a) Endangered (b) Vulnerable  
(c) Critically Endangered (d) Near Threatened
- xiii) Which is not a protected area according to the Wild Life (Protection) Act, 1972?  
(a) Conservation Reserve (b) Community Reserve  
(c) Biosphere Reserve (d) National Park
- xiv) Which one of the following is not the role of non-governmental organisation?  
(a) Creating awareness among the public on current environmental issues and solutions.  
(b) Facilitating the participation of various categories of stakeholders in the discussion on environmental issues.  
(c) Analysis and monitoring of environmental quality.  
(d) Establishing Wildlife Sanctuaries and National Parks
- xv) Which bamboo species in hills of NE region play important role in nutrient cycling?  
(a) *Bambusa tulda* (b) *Bambusa khasiana*  
(c) *Dendrocalamus hamiltonii* (d) All

xvi) Which non-governmental organization works globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development?

- (a) TRAFFIC (b) People for the Ethical Treatment of Animals (PETA)  
 (c) People for Animal (d) Greenpeace

xvii) What is/are the hidden cost(s) of man-animal conflict?

- (a) Transaction loss (b) Opportunity loss  
 (c) Health impacts (d) All of the above

xviii) If the flowers of a particular species started flowering earlier than the normal month for several years, this is a sign of?

- (a) Pollution (b) Loss of pollinators  
 (c) Diseases (d) Climate change

xix) One of the following elephant corridors is found in northeast India?

- (a) Chilla-Motichur elephant corridor  
 (b) Simplipal-Satkosia elephant corridor  
 (c) Bagmara-Balpakram elephant corridor  
 (d) Kotgarh-Chandrapur elephant corridor

xx) The vision of Indian Rhino is limited to around:

- (a) 500 m (b) 100 m (c) 50 m (d) 10 m

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University of Science and Technology, Meghalaya

Date Stamp: \_\_\_\_\_

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

Session: 2016-17  
 Course \_\_\_\_\_  
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