

Indraprastha Institute of Information Technology Delhi

ESC 205 A Environment Science

Mid Semester Examination- September 21, 2025

MM 20

Time 1 hr.

Attempt all the questions

Each question carries 0.5 mark

1. Fill in the blanks

- i. India is number country in the world in having the most arable fertile land. **One or two**
- ii. Agricultural practices started almost years ago. **10000**
- iii. Lentic refers to
lake, pond or swamp
- iv. Detritus food chain – Starts with dead **animals /organic matter**
- v. The least amount of energy is found at..... of the pyramid in the Trophic level. **top**
- vi. Ecology is the study of **ecosystems**
- vii. A trophic refers to **.foodand nud trition**
- viii. Saprotrophs are **decomposers**
- ix. Simpson's Diversity Index is a measure of diversity which takes into account the number of species present, as well as theof each species
relative abundance .
- x. Tropical forests are denser than the forests. **temperate** **5**

2. Which of the following is correct :

- a. Examples of Terrestrial Biodiversity one of the following :
1.tropical rainforests, 2.oceans, 3. Drains, 4. None of these **1**
- b. Marine diversity is even much higher than the
1.rural diversity, 2. terrestrial diversity, 3.immunological systems, 4. None of these. **2**
- c. Species which are restricted only to a particular area are known as
1. endergonic, 2. divergent, 3. endominic, 4. none of these **4**
- d. Poaching is another threat to
1. depreciation,2. Synthesis, 3. Wild life, 4. none of these **3**
- e.Faunal analysis refers to the analysis of
1. plant remains, 2. animal remains, 3. algae, 4. none of these. **2**
- f. Ex-situ conservation involves :
1. gene bank, 2. animal habitats, 3. mineral matter, 4. none of these.
1
- g. Pitcher plant is a plant in Northeast India which eats
1. fruits, 2. flowers, 3. Insects, 4. none of these **3**

h. Forest cover in India is just

1. 2 % of the world area, 2. 2 % of world forests, 3. 21 % of world forest cover, 4. none of these. **2**

i. Water poor countries include

1. Brazil, 2. Argentina, 3. Saudi Arabia,
4. none of these **3**

j. A layer of sediment or rock that is highly permeable and contains water is called an 1. Sedimentation, 2. humous, 3., aquifer, 4. none of these. **3** **5**

3. Answer true or false

i. Hysterical strength is displayed during the hysteria disease. **False**

ii. Hormones cortisol and adrenaline are excreted during the display of hysterical strength. **True**

iii. Goat is not bovine animal **True**

iv. Vishakhapur National Park Bishnupur is the only Floating park in the world. **False**

v. Columbia is a water deficient country in the world. **False**

vi. There is more groundwater than fresh water in this world. **True**

vii. Critical minerals are essential for the defence of a nation. **False**

viii. Cr 3+ is more toxic than Cr 6+. **False**

ix. The IUCN stands for International Union for Community of Nations. **False**

totrophs use instead of glucose ?

CO₂

x. What % of medicines in allopathic system have originated from natural products?

About 35 % **5**

4. Why is biodiversity important for the survival of life on this earth?

Biodiversity is essential for the processes that support all life on Earth, including humans. Without a wide range of animals, plants and microorganisms, we cannot have the healthy ecosystems that we rely on to provide us with the air we breathe and the food we eat. And people also value nature of itself.

5. Why were the horses but not the zebras domesticated?

Hostility and Aggression: Zebras are naturally aggressive, making them difficult to handle and train.

Evasion Reflexes: They have a strong ducking reflex, complicating efforts to lasso or restrain them.

Lack of Social Hierarchy: Unlike horses, zebras do not have a clear family structure or social hierarchy, which is crucial for domestication.

Survival Instincts: Zebras evolved to avoid predators like lions, resulting in a highly defensive and aggressive nature.

Inadequate Back Structure: Zebras have not evolved to support the weight of a human rider comfortably. Their backs are not strong enough to carry heavy loads or to be saddled.

These traits mean zebras are not just wild animals, but animals particularly suited to avoiding capture and taming.

6. What is the importance of rare earth permanent magnets?

Rare earth magnets are used in the motors of many electric devices, such as electric vehicles, power tools, and appliances. The strong magnetic field of the magnets helps to improve the efficiency of the motors.

7. Why is eating and being eaten so important on this earth?

All animals on Earth must eat other organisms to survive because we cannot make our own food, like plants and cyanobacteria can. This need for food creates a food chain, a relationship between all predators and prey in the ecosystem.

8. How can we contribute to the maintenance of the environmental health of the universe?

Being aware of the limits of the earth's natural resources.

Conserving energy (i.e. shutting off unused lights)

Recycling paper, cans, and glass as much as possible.

Enjoying and appreciating time outside in natural settings.

Not polluting the air, water or earth.

9. Describe the reasons for the cloud bursts.

Cloudbursts occur when warm, moist air from low-lying areas is pushed upward along mountain slopes through orographic / elevated terrain lifting. As this air rises to higher altitudes with lower atmospheric pressure, it expands and cools adiabatically.

10. Biomagnification of mercury leads to which of the following diseases.

Itai Itai, epilepsy, minamata, plague, herpes.

minamata

11. Which of the following enzyme is mainly used in the photosynthesis:

Protease, lipase, rubisco, polymerase.

Rubisco

12. Comment whether the following statement about the global warming is true or false.

With 2degree C of warming, global mean sea level is projected to rise by 0.46-0.99 meters (1.51-3.25 feet) by 2100 compared to 1986-2005 levels. And even if we were to halt warming, sea levels would continue to rise for centuries.

True

13. Describe the 2 environmental effects of mining .

Noise, Vibration, Aquifer contamination, Loss of vegetation cover, Mass destruction of water bodies, Loss of biodiversity, Land-use changes and food insecurity, Air pollution.