

2022

Time . 3 hours

Full Marks . 60

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer four questions selecting one question from each Group in which Q.No. 1 and 2 are compulsory.

1. [A] Choose the correct answer of the following :

1×10 = 10

(a) Energy transduces of an ecosystem is :

- (i) Sun
- (ii) Autotrophs
- (iii) Heterotrophs
- (iv) Detritivores

(b) Charles Elton was pioneered in studying :

- (i) Food chain
- (ii) Trophic level
- (iii) Food web
- (iv) Ecological Pyramid

(c) If energy emitted by Sun is 2500 Jouls, the amount of energy transferred from produce to herbivore is :

- (i) 2500
- (ii) 250
- ~~(iii) 25~~
- (iv) 0.5 Jouls

(d) Connectance describe the complexity of :

- (i) Population
- ~~(ii) Food web~~

(iii) Species

(iv) Food chain

(e) The law which defines that amount of energy reaching to each trophic level is determined by NPP and converted biomass is :

(i) Liebigg's law ✓

(ii) Lindsman law ✓

(iii) First law of Thermodynamics

(iv) Second law of Thermodynamics

(f) Minimata disease is caused by pollutant of :

(i) lead

(ii) Marcury ✓

(iii) Arsenic

(iv) Fluoride

(g) Phytochemical smog contains as secondary pollutant :

(i) PAN

(ii) Formaldehyde

(iii) Both (i) and (ii)

(iv) NO₂

(h) One of the following has no atmospheric phase :

(i) Carbon cycle

(ii) Oxygen cycle

(iii) N₂ cycle

(iv) Phosphorus cycle ✓

(i) Nuclear energy is considered as :

(i) Renewable source of energy ✓

(ii) Non renewable source of energy

(iii) Non exhaustible source of energy

(iv) None of these

(j) "Our solutions are in nature" is the theme of

(i) International Biodiversity Day

(ii) National Biodiversity Day

(iii) World Earth Day

(iv) National Conservation Day

[B] Mark True or False : $1 \times 5 = 5$

(k) UNEP stands for United Nations Energy Programme.

(l) Number of Hot spots in India is four.

(m) Gathering of sea turtles for nesting is called Arribada.

(n) First steps of Ecological succession is Invasion.

(o) Noise pollution is measured in decibel.

2. Write short notes on any three of the following. $5 \times 3 = 15$

(a) Sulphur cycle

✓ (b) Growth curve

✓ (c) Green house effect

(d) Red Data Book

✓ (e) Food chain

Group – A

✓ 3. Give an account of energy flow in an ecosystem. 15

4. Describe water cycle in details. 15

5. With a short description of concept of climax, describe the sequential steps of ecological succession. <https://www.bbmkuonline.com> 15

Group – B

✓ 6. What are primary and secondary pollutants ? Describe the effect of air pollution. 15

7. Differentiate renewable and Non-renewable source of energy. Give an account of details different sources of renewable source of energy. 15

8. Write notes on any two of the following :

$7\frac{1}{2} \times 2 = 15$

- (a) Biodiversity
- (b) Conservation of water
- (c) Acid Rain



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WP – 60/3 (1,200) (7) UG — Zool (C – 102)

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