ECOSYSTEM

1. The components of ecosystem are seen to function as an unit, when we consider which of the folloiwng aspect

(1) Productivity and decomposition

(2) Decomposition and energy flow

(3) Productivity and energy flow

(4) Productivity, decomposition, energy flow and nutrient cycling

2. Amount of biomass or organic matter produced per unit area over a time period by plants is represented or expressed in terms of :-

(1) Weight (g^{-2}) – g^{-2} yr^{-1}

(2) Energy (Kcal m^{-2}) – Kcal m^{-2} / yr^{-1}

(3) Fresh weight

(4) Dry weight

3. The rate of biomass production is called productivity. It may be primary or secondary productivity. Primary productivity does not depends on

(1) Plants species inhabitating a particular area

(2) Predation

(3) Environmental factors

(4) Photosynthetic capacity

4. The annual net primary productivity of the whole biosphere is approximately

(1) 170 billion tons

(2) 50 billion tons

(3) 55 billion tons

(4) 710 billion tons

5. In net primary productivity of whole biosphere what is the contribution of oceans in billion ton ?

(1) 50 (2) 70

(3) 42 (4) 55

6. By digestion and pulverisation detritus get fragmented. This fragmentation step of decomposition helps in

(1) Increasing porocity of detritus

(2) Increasing surface area of detritus

(3) Increasing rate of sedimentation

(4) All of these

7. Leaching is one of the important step of decomposition. During leaching, which of the following nutrient go down into the soil horizon ?

(1) Water soluble inorganic substance

(2) Water insoluble inorganic substances

(3) Water soluble organic substances

(4) Both water soluble organic substances and inorganic substances

8. During decomposition, humification leads to accumulation of a dark coloured amorphous substance called humus. Which of the following is correct regarding humus ?

(1) Susceptible to microbial action

(2) Undergoes decomposition at an extremely high rate

(3) Colloidal in nature

(4) It promote compaction of soil

9. Which of the following chemical will not reduce the rate of decomposition of detritus

(1) Lignin (2) Chitin

(3) Cutin (4) Sugars

10. Which among the following factors are most important climatic factors that regulate decomposition through their effects on the activities of soil microbes

(1) Temp & soil moisture

(2) Temp and pH of soil

(3) Temp and oxygen

(4) pH of soil and oxygen

11. Decomposition is one of the important functional aspect of ecosystem. Which of the following statement is not correct for decomposition ?

(1) Warm and moist environment favours decomposition

(2) Nitrogen and sugar component favours decomposition

(3) Low temperature and anaerobiosis favours decomposition

(4) Decomposition is largely an oxygen requiring process

12. How much amount of incident solar radiation and PAR is capture as GPP respectively :-

(1) 1–5% and 2–10%

(2) 2–10% and 1–5%

(3) 1–4% and 2–8%

(4) 0.4–4% and 0.8–8%

13. In an aquatic ecosystem which type of food chain is major conduit for energy flow is

(1) GFC (2) Parasitic food chain

(3) DFC (4) Both 1 and 3

14. About flow of food energy by the process of eating and being eaten, which of the following is incorrect

(1) In an aquatic ecosystem, GFC is major conduit for energy flow

(2) In terrestrial ecosystem, DFC major conduit for energy flow

(3) In predator food chain there is increase in size of organism with trophic level

(4) DFC can never be connected with GFC

15. Mass of the living material at a particular time called as the standing crop. Biomass of a species is expressed in terms of ..... is more accurate

(1) Fresh weight

(2) Dry weight

(3) Both (1) and (2)

(4) Kcal m^{-2}/yr^{-1}

16. In an ecosystem based on production of nearly 6 million plants, how many top consumers can be supported ?

(1) 708000 (2) 354000

(3) 3 (4) 30000

17. In an ecosystem if dry weight of producers is 809 kgm^{-2}. Then what will be the biomass of tertiary consumers

(1) 37 dry weight (Kg m^{-2})

(2) 11 (Kg m^{-2})

(3) 15 kg m^{-2}

(4) 1.5 kgm^{-2}

18. Ecological pyramids show diagramatic representation of ecological parameters like number, biomass and energy. Which is / are limitation of ecological pyramids ?

(1) It does not take into account the same species belonging to two or more trophic levels

(2) It does not accomodate a food web

(3) Saprophytes are not given any place in pyramids

(4) All the above

19. The gradual and fairly predictable changes in the species composition of a given area is called :-

(1) Bioprospecting

(2) Biofortification

(3) Ecological succession

(4) Ecological assessment

20. The gradual and fairy predictable changes in the species composition of a given area is not characterised by :-

(1) Increase in number of species

(2) Increase in number of individuals of species

(3) Increase in biomass

(4) Decrease in niche specialisation

21. About succession, which of the following statement is correct :-

(1) In xerosere, xeric conditions progress to hydric conditions

(2) In hydrosere, mesic environment progress to hydric conditions

(3) In hydrosere, hydric environment progress to mesic conditions

(4) Abandoned farm lands show primary succession

22. All successions whether taking place in water or on land proceeds to which climax community :-

(1) Hydric (2) Xeric

(3) Mesic (4) Halophytic

23. Which of the following regulate the rate of release of nutrients into atmosphere

(1) Soil (2) Moisture

(3) pH and Temperature (4) All the above

24. What percentage of carbon constitute the dry weight of organisms

(1) 49 %
(2) 71 %
(3) 30 %
(4) 20 %

25. How much amount of carbon is fixed in biosphere through photosynthesis annually

(1) 2×10^{13} kg
(2) 4×10^{13} kg
(3) 5×10^{13} kg
(4) 6×10^{13} kg

26. Which among the following is not considered as an ecological service?

(1) Generation of fertile soil
(2) Wild life habitat formation
(3) Products of antibiotics
(4) Crop pollination

27. Robert Constanza and his colleagues have put price tags on natures life support services with refrence to this which of the following is not true?

(1) Fundamental ecosystem services = $ 33 trillions
(2) Soil formation = $ 16.5 trillions
(3) Nutrient cycling = less than $ 3.3 trillions
(4) Climate regulation = $ 5 trillions

ANSWERS KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	**4**	**4**	**2**	**1**	**4**	**2**	**4**	**3**	**4**	**1**	**3**	**1**	**1**	**4**	**2**	**3**	**4**	**4**	**3**	**4**
Que.	21	22	23	24	25	26	27													
Ans.	**3**	**3**	**4**	**1**	**2**	**3**	**4**													