



## BIOLOGY

### BOOKS - NEET PREVIOUS YEAR (YEARWISE + CHAPTERWISE)

## ECOSYSTEM

#### Exercise

1. Which ecosystem has the maximum biomass ?

A. Forest ecosystem

B. Grassland ecosystem

C. Pond ecosystem

D. Lake ecosystem

**Answer: A**



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2. Presence of plants arranged into well-defined vertical layers depending on their height can be seen best in

A. tropical savannah

B. Tropical rain forest

C. Grassland

D. Temperate forest

**Answer: B**



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**3.** A river with an inflow of domestic sewage rich in organic waste may result in

- A. Increased population of aquatic food web organisms
- B. An Increased production of fish due to biodegradable nutrients
- C. Death of fish due to lack of oxygen
- D. drying of the river very soon due to algal bloom

**Answer: C**



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4. Which is the National Aquatic Animal of India

- A. River dolphin
- B. Blue whale
- C. Seahorse
- D. Gangetic shark

**Answer: A**



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5. Term 'ecosystem' was coined by

A. AG tansley

B. Be haeckel

C. E warming

D. EP odum

**Answer: A**



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**6.** Which one of the following is a characteristic feature of cropland ecosystem?

A. Least genetic diversity

B. The absence of weeds

C. Ecological succession

D. The absence of soil organisms

**Answer: A**



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7. The primary producers of the deep-sea hydrothermal vent ecosystem are:

A. Green algae

B. Chemosynthetic bacteria

C. blue-green algae

D. coral reefs

**Answer: B**



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**8.** In which of the following both pairs have correct combination?

**A.**

Gaseous nutrient cycle	Carbon and nitrogen
Sedimentary nutrient cycle	Sulphur and phosphorus

**B.**

Gaseous nutrient cycle	Carbon and nitrogen
Sedimentary nutrient cycle	Nitrogen and phosphorus

**C.**

Gaseous nutrient cycle	Carbon and nitrogen
Sedimentary nutrient cycle	Carbon and phosphorus

**D.**

Gaseous nutrient cycle	Carbon and nitrogen
Sedimentary nutrient cycle	Carbon and nitrogen

**Answer: A**



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**9. During ecological succession:**

- A. The gradual and predictable change in species composition occurs in a given area
- B. The establishment of a new biotic community is very fast in its primary phase
- C. The number and types of animals remain constant
- D. The changes lead to a community that is in near equilibrium with the environment and is called pioneer community



**Answer: A**



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**10. Most animals that live in deep oceanic waters are:**

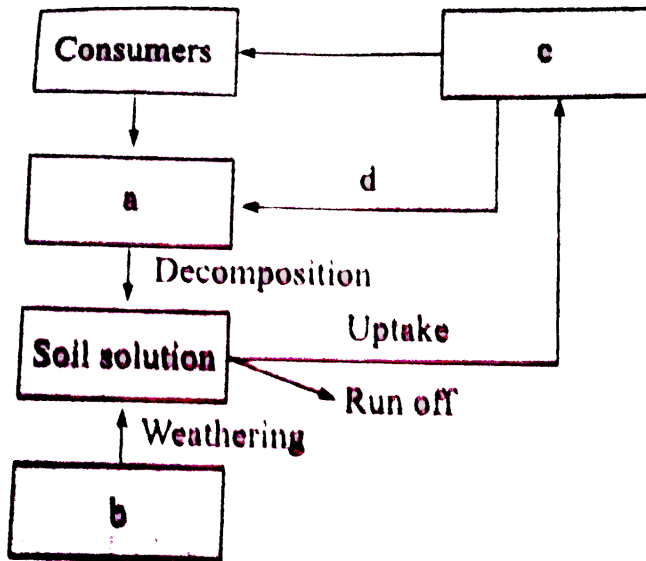
- A. Primary consumers
- B. Secondary consumers
- C. Tertiary consumers
- D. Detritivores

**Answer: D**



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11. Given below is a simplified model of phosphorus cycling in a terrestrial ecosystem with four blanks (a-d) . Identify the blanks.



- |    | <i>A</i>      | <i>B</i>      | <i>C</i>      | <i>D</i>    |
|----|---------------|---------------|---------------|-------------|
| A. | Rock minerals | Detritus      | Litter fall   | Producers   |
|    | <i>A</i>      | <i>B</i>      | <i>C</i>      | <i>D</i>    |
| B. | Litter fall   | Producers     | Rock minerals | Detritus    |
|    | <i>A</i>      | <i>B</i>      | <i>C</i>      | <i>D</i>    |
| C. | Detritus      | Rock minerals | Producer      | Litter fall |
|    | <i>A</i>      | <i>B</i>      | <i>C</i>      | <i>D</i>    |
| D. | Producers     | Litter fall   | Rock minerals | Detritus    |

**Answer: C**



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12. If 20 J of energy is trapped at producer level, then how much energy will be available to peacock as food in the following chain?

Plant → Mice → Snake → Peacock

A. 0.02 J

B. 0.002J

C. 0.2 J

D. 0.0002J

**Answer: C**



13. Match the following and select the correct option.

(a) Earthworm (i) Pioneer species

(b) Succession (ii) Detrivore

(c) Ecosystem service (iii) Natality

(d) Population growth (iv) Pollination

A. 

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
1	2	3	4

B. 

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
4	1	3	2

C. 

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
3	2	4	1

D. 

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>
2	1	4	3

Answer: D



14. Natural reservoir of phosphorus is:

- A. Rock
- B. Fossils
- C. Sea water
- D. Animals bones

**Answer: A**



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15. Secondary productivity is rate of formation of new organic matter by:

A. Producer

B. Parasite

C. Consumer

D. Decomposer

**Answer: C**



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**16.** Which one of the following is not a gaseous biogeochemical cycle in ecosystem?

A. Sulphur cycle

B. Phosphorus cycle

C. Nitrogen cycle

D. Carbon cycle

**Answer: B**



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**17.** Which one of the following is not a functional unit of an ecosystem

A. Energy flow

B. Decomposition

C. Productivity

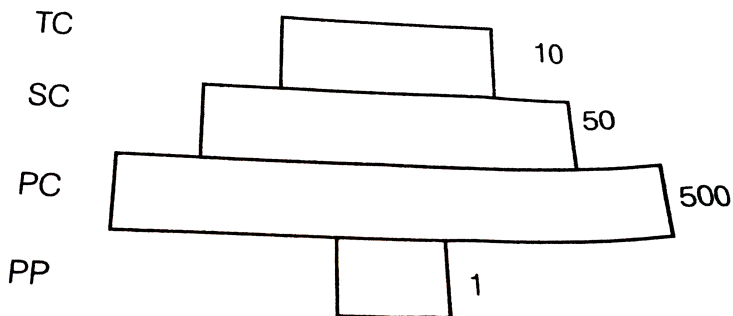
D. Stratification

Answer: D



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18. Given below is an imaginary pyramid of number. It represents (br) what could be one of the possibilities about certain organisms at some of the different levels ?



A. Level PC is insects and level SC is small insectivorous birds



- B. Level PP is phytoplanktons in sea and Whale on top  
level TC
- C. Level one PP is pipal trees and the level SC is sheep
- D. Level PC is rats and level SC is cats

**Answer: A**



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**19.** The upright pyramid of number is absent in

- A. Pond
- B. Forest
- C. Lake

D. Grassland

**Answer: B**



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20. The second stage of hydrosere is occupied by plants like

A. Azolla

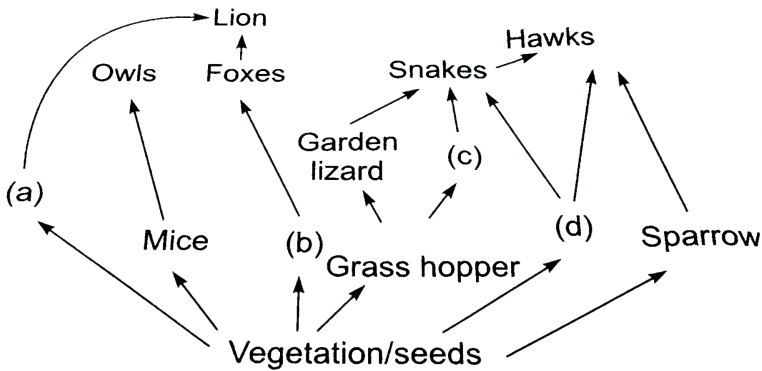
B. Typha

C. salix

D. Vallisneria

**Answer: D**

21. Identify the likely organisms (a), (b), (c) and (d) in the food web shown:



22. Identify the possible link "A" in the following food chain  
: Plant → insect → frog → "A" → eagle:

A. Rabbit

B. Wolf

C. Cobra

D. Parrot

**Answer: C**



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**23.** Which one of the following statements is correct for secondary succession?

A. It occurs on a deforested site

B. It follow pramery succession

- C. it is similar to primary succession except that it has a relatively fast pace
- D. It begins on a bare rock

**Answer: A**



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**24.** Which one of the following statements for pyramid of energy is incorrect, whereas the remaining three are correct?

- A. It show energy content of different trophic level of organisms
- B. It is inverted in shape

C. It is upright in shape

D. Its base is broad

**Answer: B**



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**25.** Mass of living matter at a trophic level in an area at any time is called:

A. Standing crop

B. Detritus

C. Humus

D. Standing state

**Answer: A**



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**26.** Of the total incident solar radiation the proportion of PAR is:

- A. About 70%
- B. About 60%
- C. Less than 50%
- D. More than 80%

**Answer: C**



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27. Biomass available for consumption by herbivores and decomposers is called

- A. Net primary productivity
- B. Secondary productivity
- C. Standing crop
- D. Gross primary productivity

**Answer: A**



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28. The correct sequence of plants in a hydrosere is



A. Oak → Lantan → Scirpus → Pistia → Hydrilla  
→ Volvox

B. Volvox → Hydrilla → Pistia → Scirpus →  
Lantana → Oak

C. Pistia → Volvox → Scirpus → Hydrilla → Oak  
→ Lantana

D. Oak → Lantana → Volvox → Hydrilla → Pistia  
→ Scirpus

**Answer: B**



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**29.** Which one of the following types of organisms occupy more than one trophic level in a pond ecosystem ?

A. Phytoplankton

B. Fish

C. Zooplankton

D. Frog

**Answer: B**



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**30.** Quercus species is the dominant component in

A. Temperature deciduous forests

B. Alpine forests

C. Scrub forests

D. Tropical rain forests

**Answer: A**



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**31.** Consider the following statements concerning food chains

(i) Removal of 80% tigers from an area resulted in greatly increased growth of vegetation

(ii) Removal of most of the carnivores resulted in an increased population of deers

(iii) The length of food chains is generally limited to 3 - 4

trophic levels due to energy loss

(iv) The length of food chains may vary from 2 to 8 trophic levels

Which two of the above statements are correct?

A. I and II

B. II and III

C. III and IV

D. I and IV

**Answer: A**



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**32.** About 70% of total global carbon is found in

A. Grasslands

B. Agroecosystems

C. Oceans

D. Forests

**Answer: C**



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**33.** The slow rate of decomposition of fallen logs in nature is due to their

A. Low moisture content

B. Poor nitrogen content

C. Anaerobic environment around them

D. Low cellulose content

**Answer: A**



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**34.** A lake near a village suffered heavy mortality of fishes within a few days. Consider the following reasons for this?

- (a) Lots of urea and phosphate fertilizers were used in the crops in the vicinity.
- (b) The area was sprayed with DDT by an aircraft.
- (c) The lake water turned green and stinky.
- (d) Phytoplankton population in the lake declined initially

thereby greatly reducing photosynthesis. Which two of the above were the main causes of fish mortality in the lake?

- A. II and III
- B. III and IV
- C. I and III
- D. I and II

**Answer: D**



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**35.** Which one of the following ecosystem types has the highest annual net primary productivity

- A. Tropical rain forest

- B. Tropical decidus forest
- C. Temperate evergreen forestn
- D. Temperate deciduous forest

**Answer: A**



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**36.** Which of the following is not used for construting of ecological pyramids

- A. Dry weight
- B. Number of individuals
- C. Rate of energy flow



D. Salinity

**Answer: D**



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**37.** Prolonged liberal irrigation of agricultural fields is likely to create the problem of

A. Acidity

B. Aridity

C. Mental toxicity

D. Salinity

**Answer: D**

**38.** More than 70% of world's fresh water is contained in

- A. Antarctica
- B. Glaciers and mountains
- C. Greenland
- D. polar ice

**Answer: D**

**39.** Which one of the following is mismatched ?

- A. Biomass burning - Release of  $CO_2$
- B. Fossil fuel burning -Release of  $CO_2$
- C. Nuclear power - Radioactive wastes
- D. Solar enery -Green house effect

**Answer: D**



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**40.** Which of the following is expected to have the highest value ( $gm / m^2 / yr$ ) in a grassland ecosystem?

- A. Secondary Production (SP)
- B. Tertiary Production (TP)

C. Gross Production (GP)

D. Net Production (NP)

**Answer: C**



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**41.** If by radiation all nitrogenase enzymes are inactivated, then there will be no

A. fixation of nitrogen in legumes.

B. Fixation of atmospheric nitrogen

C. Conversion from nitrate to nitrite in legumes

D. Conversion from ammonium to nitrate in soil

**Answer: A**



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42. An ecosystem which can be easily damaged but can recover after some time if damaging effect stops will be having

- A. Low stability and high resilience
- B. High stability and low resilience
- C. Low stability and low resilience
- D. High stability and high resilience

**Answer: A**



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**43.** Choose the correct match.

Bladderwort , sundew, venus, flytrap

- A. Nepenthes, dionea, drosera
- B. Nepenthes, utricularia, dionea
- C. Utricularia, drosera, dionea
- D. Dionea, trapa, vanda

**Answer: C**



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44. A bamboo plant is growing in a forest. What will be its trophic level?

- A. First trophic level ( $T_1$ )
- B. Second trophic level ( $T_2$ )
- C. Third trophic level ( $T_3$ )
- D. Fourth trophic level ( $T_4$ )

**Answer: A**



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45. Maximum biomass of autotrophs in oceans is formed by

- A. Benthic brown algae, coastal red algae and dephnids
- B. Benthic diatoms and marine viruses
- C. Sea grasses and slime molds
- D. Free-floating micro-algae, cyanobacteria and nanoplankton

**Answer: D**



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**46.** The maximum biomagnification would be in which of the following in case of aquatic ecosystem

- A. Fishes



B. Phytoplanktons

C. Birds

D. Zooplanktons

**Answer: A**



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**47.** The transfer of energy from one trophic level to another is governed by the 2nd law of thermodynamics. The average efficiency of energy transfer from herbivores to carnivores is

A. 0.05

B. 0.1

C. 0.25

D. 0.5

**Answer: B**



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**48.** Drawback of DDT as pesticide is

A. It becomes ineffective after some time

B. It is less effective than others

C. It is not easily /rapidly degraded in nature

D. Its high cost

**Answer: C**



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49. Clinging roots occur in

A. Podostemon

B. Orchid

C. Trapa

D. screwpine

**Answer: B**



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**50.** The response of different organisms to environmental rhythms of light and darkness is called:

- A. Phototaxis
- B. Phototropism
- C. Vernalisation
- D. Photoperiodism

**Answer: D**



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**51.** Warm ocean surge or Peru current that recurs after 5-8 years in East pacific along south America is

A. Magnox

B. Gull stream

C. El nino

D. aye aye

**Answer: C**



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**52.** In a terrestrial ecosystem such as forest, maximum energy is at trophic level:

A.  $T_1$

B.  $T_2$

C.  $T_3$

D.  $T_4$

**Answer: A**



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**53.** Tropical plants Prosopis, Acacia and Cappar is belong to

A. Grasslands

B. Thorn forests

C. Deciduous forests

D. Evergreen forests

**Answer: B**



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**54.** The rate at which light energy is converted into chemical energy of organic molecules, is the ecosystem's

- A. Net primary productivity
- B. Gross secondary productivity
- C. Gross primary productivity
- D.

**Answer: D**



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**55.** Which of the following ecosystem has the highest gross primary productivity?

- A. Grasslands
- B. Coral reefs
- C. Mangroves
- D. Equatorial rain forest

**Answer: B**



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**56.** The nature of climax community ultimately depends on

- A. Climate



- B. Bed rock
- C. Soil organisms
- D. Pool of available nutrients

**Answer: A**



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**57.** In a food chain, the largest population is that of

- A. Decomposers
- B. Producers
- C. Primary consumers
- D. Tertiary consumers

**Answer: B**



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**58.** If the forest cover is reduced to half, what is most likely to happen on a long basis?

- A. Tribals living in these areas will starve to death
- B. Cattle in these and adjoining areas will suffer die due to lack of fodder
- C. Large areas will become deserts
- D. Crop breeding programmes will suffer due to a reduced availability of germplasm

**Answer: C**



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**59.** In a biotic community , primary consumers are

A. Carnivores

B. Omnivores

C. Detritivores

D. Herbivores

**Answer: D**



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**60.** Which of the following is the most stable ecosystem?

A. Forest ecosystem

B. Desert

C. mountain

D. Ocean

**Answer: D**



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**61.** The primary succession refers to the development of communities on a

A. Freshly cleared crop field

B. Forest clearing after devastating fire

C. pond , freshly filled with after a dry phase

D. Newly-exposed habitat with no record of earlier  
vegetation

**Answer: D**



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**62.** Which of the following pair is a sedimentary type of biogeochemical cycle?

A. Oxygen and nitroge

B. Phosphorous and sulphur

C. Phosphorous and notrogen

D. Phosphorus and cabon dioxide

**Answer: B**



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**63.** If we completely remove decomposers from an ecosystem, the ecosystem functioning will be adversely affected because-

A. Energy flow will be blocked

B. hHerbivores will not receive solar energy

C. Mineral movement will be blocked

D. Rate of decomposition will be very high

**Answer: C**



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**64.** In grass-deer-tiger food chain, grass biomass is one tonne. The tiger biomass shall be

A. 100 kg

B. 10 kg

C. 200 kg

D. 1 kg

**Answer: B**



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**65.** Second most important trophic level in a lakes is

- A. Zooplankton
- B. Phytoplanktons
- C. Benthos
- D. Neuston

**Answer: A**



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**66.** Xeric environment is characterised by

- A. Precipitation
- B. Low atmospheric humidity



C. Extreme of temperature

D. Extreme of temperature

**Answer: B**



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**67.** Bulk  $CO_2$  fixation occurs in

A. Crop plants

B. oceans

C. tropical rain forests

D. Temperature forests

**Answer: B**



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**68.** The pyramid which cannot be inverted in a stable ecosystem is that of

- A. Biomass
- B. Number of individuals
- C. Energy
- D. All of the above

**Answer: C**



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**69.** Pyramid of numbers deals with number of

- A. Species in an area
- B. Individuals in a community
- C. Individuals in a trophic level
- D. Sub-species in a community

**Answer: C**



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**70.** Pyramid of number in a pond ecosystem is

- A. Irregular
- B. Inverted

C. Upright

D. Spindle-shaped

**Answer: C**



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**71.** Food chain in which microorganisms breakdown the food formed by primary producers is

A. Parasitic food chain

B. Detritus food chain

C. Consumer food chain

D. Predator food chain

**Answer: B**



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**72. Pick up the correct food chain.**

A. Grass → Chameleon → Insect → Bird

B. Grass → Fox → Rabbit → Bird

C. Phytoplankton → Zooplankton → Fish

D. Fallen leaves → Bacteria → Insect larvae

**Answer: C**



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**73.** What is true of ecosystem?

- A. Primary consumers are least dependent producers  
producers
- B. primary consumers out-number producers
- C. producers are more than primary consumers
- D. Secondary consumers are the largest and most  
powerful

**Answer: C**



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**74.** In an ecosystem, which one shows one-way passage

A. Free energy

B. Carbon

C. Nitrogen<sup>0</sup>

D. potassium

**Answer: A**



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**75.** Upper part of sea/aquatic ecosystem contains

A. Plankton

B. Nekton

C. Both(a) and(b)

D. Benthos

**Answer: A**



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