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NEET ECOSYSTEM — ENERGY FLOW (FOOD CHAINS, FOOD WEBS, TROPHIC LEVELS) — PYQS

Max. Marks: 68 **Questions:** 17

Section A (MCQ) — 17 questions

Q.1 Which of the following are primary consumers in a food chain? [RE-NEET (UG) 2026]

(1) Carnivores (2) Parasites
(3) Predators (4) Herbivores

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Q.2 Given below are two statements:

Statement-I: In an ecosystem, there is unidirectional flow of energy of sun from producers to consumers.

Statement-II: Ecosystems are exempted from 2nd law of thermodynamics.

In the light of the above statements, choose the most appropriate answer from the options given below: [NEET (UG) 2025]

(1) Statement-I is correct but statement II is incorrect
(2) Statement-I is incorrect but statement II is correct
(3) Both statement I and statement II are correct
(4) Both statement I and statement II are incorrect

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Q.3 In an ecosystem if the Net Primary Productivity (NPP) of first trophic level is 100x (kcal m^{-2})yr^{-1}, what would be the GPP (Gross Primary Productivity) of the third trophic level of the same ecosystem? [NEET (UG) 2024]

(1) $\frac{x}{10}$ (kcal m^{-2})yr^{-1}
(2) x (kcal m^{-2})yr^{-1}
(3) 10x (kcal m^{-2})yr^{-1}
(4) $\frac{100x}{3x}$ (kcal m^{-2})yr^{-1}

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Q.4 Match the trophic levels with their correct species examples in grassland ecosystem.

Column-I		Column-II	
a.	Fourth trophic level	i.	Crow
b.	Second trophic level	ii.	Vulture
c.	First trophic level	iii.	Rabbit
d.	Third trophic level	iv.	Grass

Select the correct option [NEET (UG) 2020]

(1) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)
(2) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
(3) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)
(4) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)

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Q.5 Most animals that live in deep oceanic waters are - [AIPMT 2015]

(1) primary consumers (2) detritivores
(3) tertiary consumers (4) secondary consumers

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Q.6 The mass of living material at a trophic level at a particular time is called : [AIPMT 2015 (Cancelled)]

(1) Net primary productivity
(2) Standing state
(3) Standing crop
(4) Gross primary productivity

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Q.7 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 [AIPMT 2014]

(1) 0.0002 J (2) 0.002 J
(3) 0.2 J (4) 0.02 J

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Q.8 Which one of the following is a primary consumer in maize field ecosystem ? [NEET 2013 (Karnataka)]

(1) Phytoplankton (2) Lion
(3) Grasshopper (4) Wolf

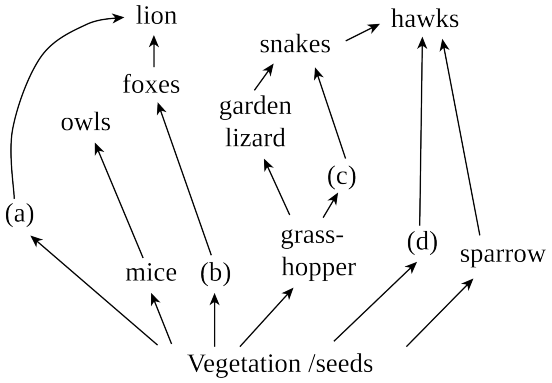
Scan or tap for the full solution

Q.9 When man eats fish which feeds on zooplankton which have eaten small plants, the producer in the chain is : [NEET 2013 (Karnataka)]

(1) Zooplankton (2) Fish
(3) Small plants (4) Man

Scan or tap for the full solution

Q.10 Identify the likely organisms (a), (b), (c) and (d) in the food web shown below : [AIPMT 2012 (Mains)]



(1) (a) ⟶ deer, (b) ⟶ rabbit, (c) ⟶ frog, (d) ⟶ rat
(2) (a) ⟶ squirrel, (b) ⟶ cat, (c) ⟶ rat, (d) ⟶ pigeon
(3) (a) ⟶ dog, (b) ⟶ squirrel, (c) ⟶ bat, (d) ⟶ deer
(4) (a) ⟶ rat, (b) ⟶ dog, (c) ⟶ tortoise, (d) ⟶ crow

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Q.11 Identify the possible link "A" in the following food chain:
Plant ⟶ insect ⟶ frog ⟶ "A" ⟶ Eagle
[AIPMT 2012 (Prelims)]

(1) Wolf (2) Rabbit (3) Cobra (4) Parrot

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Q.12 Which one of the following animals may occupy more than one trophic level in the same ecosystem at the same time? [AIPMT 2011 (Mains)]

(1) Lion (2) Frog (3) Goat (4) Sparrow

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Q.13 Mass of living matter at a trophic level in an area at any time is called : [AIPMT 2011 (Prelims)]

(1) Humus (2) Detritus
(3) Standing state (4) Standing crop

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Q.14 Of the total incident solar radiation the proportion of PAR is [AIPMT 2011 (Prelims)]

(1) About 60% (2) More than 80%
(3) Less than 50% (4) About 70%

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Q.15 Which one of the following types of organisms occupy more than one trophic level in a pond ecosystem? [AIPMT 2009]

(1) Phytoplankton (2) Zooplankton
(3) Frog (4) Fish

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Q.16 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 deer
(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? [AIPMT 2008]

(1) (iii), (iv) (2) (ii), (iii)
(3) (i), (iv) (4) (i), (ii)

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Q.17 Bamboo plant is growing in a far forest then what will be the trophic level of it ? [AIPMT 2002]

(1) Second trophic level (T_2)
(2) First trophic level (T_1)
(3) Fourth trophic level (T_4)
(4) Third trophic level (T_3)

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	4	1	3	2	2	3	4	3	3	1	3
Ques.	12	13	14	15	16	17					
Ans.	4	4	3	4	1	2					