

NEET ECOSYSTEM — ECOSYSTEM: STRUCTURE AND FUNCTION, PRODUCTIVITY — PYQS

Max. Marks: 92

Questions: 23

Section A (MCQ) — 23 questions

Q.1 Match **List I** with **List II** : [NEET (UG) 2026]

List-I		List-II	
A.	Productivity	I.	Gross primary productivity minus respiration losses
B.	Net primary productivity	II.	Rate of formation of new organic matter by consumers
C.	Gross primary productivity	III.	Rate of biomass production
D.	Secondary productivity	IV.	Rate of production of organic matter during photosynthesis

- (1) A-III, B-I, C-II, D-IV (2) A-I, B-II, C-III, D-IV
 (3) A-III, B-I, C-IV, D-II (4) A-I, B-III, C-IV, D-II

Scan or tap for the full solution



Q.2 Given below are two statements:

Statement-I: The primary source of energy in an ecosystem is solar energy.

Statement-II: The rate of production of organic matter during photosynthesis in an ecosystem is called net primary productivity (NPP).

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 Which of the following is the unit of productivity of an Ecosystem? [NEET (UG) 2025]

- (1) kcal m^{-3} (2) $(\text{kcal m}^{-2}) \text{yr}^{-1}$
 (3) g m^{-2} (4) kcal m^{-2}

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Q.4 In the equation $\text{GPP} - \text{R} = \text{NPP}$
 GPP is Gross Primary Productivity
 NPP is Net Primary Productivity
 R here is _____. [NEET (UG) 2023]

- (1) Respiratory quotient
 (2) Respiratory loss
 (3) Reproductive allocation
 (4) Photosynthetically active radiation

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Q.5 The amount of biomass or organic matter produced per unit area over a time period by plants during photosynthesis is called [NEET (UG) 2022 (Phase 2)]

- (1) Net primary production
 (2) Secondary production
 (3) Primary production
 (4) Gross primary production

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Q.6 In the equation $\text{GPP} - \text{R} = \text{NPP}$
 R represents : [NEET (UG) 2021]

- (1) Respiration losses (2) Radiant energy
 (3) Retardation factor (4) Environmental factor

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Q.7 In relation to Gross primary productivity and Net primary productivity of an ecosystem, which one of the following statements is correct? [NEET (UG) 2020]

- (1) There is no relationship between Gross primary productivity and Net primary productivity
- (2) Gross primary productivity is always more than net primary productivity
- (3) Gross primary productivity is always less than net primary productivity
- (4) Gross primary productivity and Net primary productivity are one and same

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Q.8 Presence of plants arranged into well defined vertical layers depending on their height can be seen best in :

[NEET 2017]

- (1) Grassland (2) Tropical Savannah
- (3) Temperate Forest (4) Tropical Rain Forest

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Q.9 Which ecosystem has the maximum biomass ?

[NEET 2017]

- (1) Pond ecosystem (2) Lake ecosystem
- (3) Grassland ecosystem (4) Forest ecosystem

Scan or tap for the full solution



Q.10 Which one of the following is a characteristic feature of cropland ecosystem ?

[NEET 2016 (Phase 1)]

- (1) Absence of weeds
- (2) Absence of soil organisms
- (3) Ecological succession
- (4) Least genetic diversity

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Q.11 The term ecosystem was coined by :

[NEET 2016 (Phase 1)]

- (1) E.P. Odum (2) E. Haeckel
- (3) E. Warming (4) A.G. Tansley

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Q.12 The primary producers of the deep-sea hydrothermal vent ecosystem are

[NEET 2016 (Phase 2)]

- (1) chemosynthetic bacteria
- (2) coral reefs
- (3) green algae
- (4) blue-green algae

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Q.13 An association of individuals of different species living in the same habitat and having functional interactions is - [AIPMT 2015]

- (1) Ecological niche (2) Ecosystem
- (3) Population (4) Biotic community

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Q.14 Vertical distribution of different species occupying different levels in a biotic community is known as :

[AIPMT 2015 (Cancelled)]

- (1) Stratification (2) Pyramid
- (3) Divergence (4) Zonation

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Q.15 In an ecosystem the rate of production of organic matter during photosynthesis is termed as :

[AIPMT 2015 (Cancelled)]

- (1) Secondary productivity
- (2) Net Productivity
- (3) Net primary productivity
- (4) Gross primary productivity

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Q.16 Secondary productivity is rate of formation of new organic matter by : [NEET 2013]

- (1) Parasite (2) Decomposer
- (3) Producer (4) Consumers

Scan or tap for the full solution



Q.17 The rate of formation of new organic matter by rabbit in a grassland, is called :

[AIPMT 2012 (Mains)]

- (1) Net productivity
- (2) Gross primary productivity
- (3) Secondary productivity
- (4) Net primary productivity

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Q.18 Which one of the following is not a functional unit of an ecosystem? [AIPMT 2012 (Prelims)]

- (1) Energy flow (2) Decomposition
- (3) Productivity (4) Stratification

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Q.19 Which one of the following is one of the characteristics of a biological community?

[AIPMT 2010 (Prelims)]

- (1) Mortality (2) Sex-ratio
(3) Stratification (4) Natality

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Q.20 The biomass available for consumption by the herbivores and the decomposers is called –

[AIPMT 2010 (Prelims)]

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

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Q.21 Which one of the following ecosystem types has the highest annual net primary productivity ?

[AIPMT 2007]

- (1) Temperate evergreen forest
(2) Temperate deciduous forest
(3) Tropical rain forest
(4) Tropical deciduous forest

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Q.22 Which of the following is expected to have the highest value ($\text{g/m}^2/\text{yr}$) in a grassland ecosystem ?

[AIPMT 2004]

- (1) Net production (NP) (2) Secondary production
(3) Tertiary production (4) Gross production (GP)

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Q.23 Which is the reason for highest biomass in aquatic ecosystem?

[AIPMT 2000]

- (1) Benthonic and brown algae
(2) Nanoplankton, blue green algae, green algae
(3) Diatoms
(4) Sea grass and slime moulds

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ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	3	1	2	2	3	1	2	4	4	4	4
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	1	4	1	4	4	3	4	3	2	3	4
Ques.	23										
Ans.	1										