	c) Gases produced by industries	d) Living organisms
2.	Which of the following ecological pyramids can	never occur in an inverted from
	a) Pyramid of number	b)Pyramid of biomass
	c) Pyramid of energy	d) Pyramid of species richness
3.	Identify the correct type of food chain.	
	Dead animal \rightarrow Blow fly maggots \rightarrow Common	$1 \text{ frog } \rightarrow \text{ Snake}$
	a) Grazing food chain	b) Detrital food chain
	c) Decomposer food chain	d) Predator food chain
4.	Which of the following is expected to have the l	nighest 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)
5.	Ecosystem is	
	a) Always open	b) Always closed
	c) Both open and closed depending upon	d) Both open and closed depending upon
	community	biomass
6.	Which of the following pair is a sedimentary ty	pe of biogeochemical cycle?
	a) Carbon and nitrogen	b)Phosphorus and sulphur
	c) Phosphorus and nitrogen	d) Phosphorus and oxygen
7.	Tropical dense forests are due to	
	a) Low rainfall and low temperature	
	b) High rainfall and low temperature	
	c) Low rainfall and high temperature	
	d) High rainfall and high temperature	
8.	In a lake, phytoplankton grow I abundance in	
	a) Littoral zone b) Limnetic zone	c) Profundal zone d) Benthic region
9.	At each step of food chain when food energy is	transferred from one trophic level to the next
	higher trophic level only about 10% of energy i	s passed onto next level. This is known asA
	given byB inC Here A, B and C Refers t	0
	a) A-Energy flow law, B-Lindeman, C-1942	b) A-10% law, B-Lindeman, C-1942
	a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940
10.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 I amorphous substance that is highly resistant to
10.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 amorphous substance that is highly resistant to at an extremely slow rate is called
10.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 l amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation
10. 11.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 l amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation
10. 11.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production 	 b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation
10. 11.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production 	 b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is 	 b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter 	 b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 a morphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on dead and decaying organi 	 b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal c) A plant feeding on an animal 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on an animal 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 l amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12. 13.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on an animal d) Animal sthat depend on plants for food a a) Decemposers 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production
10. 11. 12. 13.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on another animal All the animals that depend on plants for food a a) Decomposers b) Root feeders 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production c matter
 10. 11. 12. 13. 14. 	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on an animal d) Animal feeding on another animal All the animals that depend on plants for food a a) Decomposers b) Root feeders Regarding the mode of obtaining food, the organists and microarcanisms. These 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production c matter are called c) Consumers d) Grazers nisms occurring in an ecosystem are classified a are respectively called
 10. 11. 12. 13. 14. 	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on an other animal All the animals that depend on plants for food a a) Decomposers b) Root feeders Regarding the mode of obtaining food, the organito plants, animals and microorganisms. These 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production c matter are called c) Consumers d) Grazers nisms occurring in an ecosystem are classified e are respectively called
10. 11. 12. 13. 14.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on another animal All the animals that depend on plants for food a a) Decomposers b) Root feeders Regarding the mode of obtaining food, the orgatint oplants, animals and microorganisms. These b) Primary secondary and tertiary consumers 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production c matter are called c) Consumers d) Grazers nisms occurring in an ecosystem are classified e are respectively called
10. 11. 12. 13. 14.	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on an other animal All the animals that depend on plants for food a a) Decomposers b) Root feeders Regarding the mode of obtaining food, the orgatinto plants, animals and microorganisms. These b) Primary, secondary and tertiary consumers c) Consumers, producer and decomposers 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production c matter are called c) Consumers d) Grazers nisms occurring in an ecosystem are classified e are respectively called
 10. 11. 12. 13. 14. 	 a) A-Energy flow law, B-Lindeman, C-1942 c) A-Energy flow law, B-Lipemann, C-1940 The process of accumulation of a dark coloured microbial action and undergoes decomposition a) Mineralisation b) Humitication Total energy fixed by an ecosystem is called a) Primary production c) Net production A detrivore is a) Animal feeding on plant matter b) Animal feeding on an animal d) Animal feeding on another animal d) Animal feeding on another animal All the animals that depend on plants for food a a) Decomposers b) Root feeders Regarding the mode of obtaining food, the orgatinto plants, animals and microorganisms. These a) Producer, consumers and decomposers b) Primary, secondary and tertiary consumers c) Consumers, producer and decomposers 	b) A-10% law, B-Lindeman, C-1942 d) A-10% law, B-Lipemann, C-1940 d amorphous substance that is highly resistant to at an extremely slow rate is called c) Organisation d) Transformation b) Gross production d) Secondary production c matter are called c) Consumers d) Grazers nisms occurring in an ecosystem are classified e are respectively called

15.	Out of the follo	wing biogeod	chemical cycles	which one is gaseo	us?		
	I. sulphur II	. Phosphorus	5				
	III. nitrogen I	V. Carbon					
	Choose the cor	rect option					
	a) Only I	b)(Dnly II	c) Only IV		d) III and IV	
16.	The amount of	living matter	r present in an e	cosystem at a give	n time is c	alled	
	a) Biomass	b)S	Standing crop	c) Standing st	tate	d) Productivity	
17.	In a food chain	, the maximu	m population o	f			
	a) Producers	b)F	Primary consum	ers c) Secondary	consumer	r d) Tertiary consumers	
18.	Overlapping re	egion betwee	n two ecosysten	ns is called			
	a) Biome	b)E	Ecotone	c) Niche		d) Photic zone	
19.	The major fund	ctions of an e	cosystem incluc	les			
	I. productivity	II. Decompos	ition				
	III. energy flow	v IV. Nutrient	flow				
	Choose the cor	rect option					
	a) I, II and III	b) I	I, III and IV	c) I, III and IV	1	d) I, II, III and IV	
20.	Most diverse o	rganism of ar	n ecosystem is				
	a) Producer	b)(Consumer	c) Decompose	er	d) Carnivore	
21.	In grazing food	d chain energ	y comes from				
	a) Organic rem	nain b)A	\ir	c) Water		d) All of these	
22.	The amount of	usable energ	y, which is avai	lable for doing wor	rk, when t	he temperature and	
	pressure are u	niform throu	ghout the syste	m is called			
	a) Enthalpy	b)A	Activation energ	y c) Spontaneo	us energy	d) Free energy	
23.	Which one of t	he following	is correct for xe	rarch succession?			
	a) Successiona	I series from	xeric to mesic	b)Succession	al series f	rom hydric to mesic	
	condition			condition			
~ .	c) Both (a) and	d (b)		d) None of the	e above		
24.	Biotic compon	ents refer to			<i>с</i>		
	a) Gases produ	iced by indus	tries	b) Nutrient-d	eficient sc)	
25	c) Living organ	1ISMS he following	la correct metab	0)FOSSII TUEIS	obitat and	l the forest type where it	
25.			is correct mater	ling of a plant, its n	apitat and	a the forest type where it	
	a) Proconic tr			b) Saccharum	officinari	im aross forest	
	a) Prosopis, (16	ee, sui ub sta horb tror	nical rain forest	d) Acacia cato	ochu troo	ini, yi ass, iui esi coniforous forost	
26	Select the onti	ons that corr	actly identifies	U) Acacia cate A R and C in the give	and C in the given table		
20.							
	Organishis	l evel	Food Chains				
	Fagle	Δ	Grazing				
	Earthworm	Primary	B				
	Editiworm	consumer	D				
	С	Secondary	Grazing				
		consumer	<u>-</u>				
	a) A-Secondary	v consumer, E	- B-Grazing, C-Alg	ae b)A-Top carr	nivore, B-D	Detritus, C-Frog	
	c) A-Scavenger	, B-Grazing, (C-Hawk	d) A-Decomp	oser, B-De	etritus, C-Perch	
27.	What is comm	on in earthwo	orm, soil mites a	ind dung beetle in a	an ecosyst	tem?	
	a) They all are	detritivores		b) Primary co	nsumer		
	c) Secondary c	onsumer		d) Tertiary co	nsumer		
28.	Which one of t	he following	is involved in se	edimentary cycle?			
	a) Carbon	b)N	Nitrogen	c) Hydrogen		d) Phosphorus	
29.	Which of the fo	ollowing pyra	imid is always u	pright and can nev	er be inve	erted?	

	a) Pyramid of biomass	b) Pyramid of number	c) Pyramid of energy	d) Both (a) and (c)
30.	Choose the correct stat	ements		
	I. Productivity is expres	ssed in gm ⁻² yr ⁻¹ or (kca	al m ⁻²)yr ⁻¹	
	II. The amount of biom	ass or organic matter pr	oduced per unit area ove	er a time period in plants
	during photosynthesis	is called primary produc	ction	
	III. Primary production	is expressed in term of	weiaht (a ⁻²) or eneray ($(kcal m^{-2})$
	IV. Sugarcane have mo	re efficiency to trap sunl	ight, so they accumulate	more primary
	productivity			
	Choose the correct opt	ion		
	a) I and II	b) I and IV	c) I. II. III and IV	d) None of these
31	The 10% law is related	to		
011	a) Mendelian genetics			
	h) Non-Mendelian gene	atics		
	c) Energy transfer from	n lower trophic to higher	trophic level	
	d) Energy consumption	during photosynthesis	in Cnlants	
32	Which of the following	two organisms are prod	liners?	
52.	a) Plants and phytopla	nktons	h)Plants and consume	rc
	c) Zoonlanktons and ph	nictoria	d) Phytoplanktons and	chlorophyll
22	Consider the succession	n of plants	d) Hytoplanktons and	cinorophyn
55.	I In hydrarch succession	n of plants	hydric to the mesic cond	ition
	II In verarch successio	n series progress from x	erarch to the mesic cond	lition
	III In verarch successio	n if it is started on hare	rock the nioneer species	is lichons
	IV In hydrarch and yer	arch succession series n	rourses from mesarch to	verarch condition
	Which of the following	is correct combination r	natch from above statem	pents?
	Choose the correct ont	ion		
	a) II and III	h) III and IV	c) II and IV	d) and
34	Which creatures are di	rect or indirect food of a	Il creatures on the ocean	a) I, II and III
54.	a) Protozoans	h) Phytonlankton	c) Fish	d) Aquatic insects
35	An inverted pyramid of	f A may occasionally	be observed in B com	munities
00.	a) A-energy: B-grasslar	nd	h) A -energy: B-forest	
	c) A-hiomass: B-marine	2	d) A-hiomass: B-grassl	and
36	Which one of the follow	- ving is not a functional u	nit of an ecosystem?	
50.	a) Productivity	h) Startification	c) Energy flow	d) Decomposition
37	Which one of the follow	ving types of organisms	occupy more than one tr	onhich level in a nond
57.	ecosystem?	ang types of organisms	occupy more manone tr	opinici i cver in a pond
	a) Phytonlankton	h) Fish	c) Zooplankton	d) Frog
20		0/11311		u)rrog
50.	a) Dark coloured amor	nhous organic matter ric	h in lignin	
	b) Dark coloured organ	hic matter rich in cellulos		
	c) Both (a) and (b)			
	d) Ped coloured substa	nces rich in iron		
30	In terrestrial ecosystem	n such as forest mavimu	im operavis found in wh	ich tropic loval?
37.	a) T	h)T	c) T	
40	a) 1 ₁ Erog that foods on inse	D/I_2	C) 1 ₃	u) 1 ₄
40.	a) Primary consumer	ισιο, το α	h) Secondary consume	r
	a) Tortiony consumer		d) Decomposer	I
11	The organisms which	attack doad animals are	u) Decomposer	
41.	a) Eirst link of the feed	attack usedu at ittiläis äre	nrimary producere	
	b) Second link the feed	chain and are borbiners	primary producers	
	a) Third link of the feet	chain and are tertioned		
	c) minu link of the food	u chain and are tertiary (JULISUITIELS	

d) Present at the end of food chain and are detrivores

42. Pyramid of energy in aquatic ecosystem is a) Always upright b) Always inverted c) Bell-shaped d) None of these 43. Consider the following statements about ecological pyramids I. Charles Elton developed the concept of ecological pyramid II. After the name these pyramids are also called as Eltonian pyramids III. It is a graphical representation or pyramid shaped diagram which depicts the number of organisms, biomass and energy at each trophic level Which of the statements given above are correct? a) I and II b) I and III c) II and III d) I, II and III 44. Top consumer I Primary consumer II Primary producer III Solar radiation IV I. 10 kcal/m²/yrII. 100 kcal/m²/yr III. 1000 kcal/m²/yrIV. 100000 kcal/m²/yr Refer to the above diagram of energy pyramid. The ecological efficiency at primary consumer level, in comparison to that at secondary consumer level, is a) Same b)More c) Less d) Cannot be ascertained from the data 45. Which of the following pyramid of numbers in ecology is not upright? a) Pond ecosystem b) Desert ecosystem c) Tree ecosystem d) Forest ecosystem 46. A lion that eats a zebra that ate grass is a a) Primary producer b) Primary consumer c) Secondary consumer d)Quaternary consumer 47. Pyramids of biomass in pond ecosystem is a) Inverted b) Upright c) Linear d) Irregular 48. The process of which humus is degraded by some microbes to release inorganic nutrients is known as a) Mineralization b)Humification c) Photophosphorylation d)Pollination 49. The process of mineralisation by microorganisms helps in the release of a) Inorganic nutrients from humus b) Both organic and inorganic nutrients from detritus c) Organic nutrients from humus d) Inorganic nutrients from detritus and formation of humus 50. Which of the following plants develop characters of xerophytes? a) Heliophytes b) Sciophytes c) Hydrophytes d) Halophytes 51. Which one of the following statements is correct for secondary succession? a) It occurs on a deforested site b) It follows primary succession c) It is similar to primary succession except that it has a relatively fast pace d) It begins on a bare rock 52. Phytoplanktons are found in which of the following zones? a) Limnetic zone b) Secondary consumers

	c) Littoral zone		d) Aphotic zone	
53.	The role of a cow in a fo	ood chain is		
	a) Primary consumer	b) Heterotroph	c) Herbivores	d) All of these
54.	Which of the following	are the essential source	s for releasing CO ₂ in the	atmosphere?
	I. Burning of wood			
	II. Volcanic activity			
	III. Combustion of orga	nic matter		
	IV. Fossil fuels			
	Choose the correct opti	ion		
	a) I, II and III	b) II, III and IV	c) I, III and IV	d) I, II, III and IV
55.	Source of energy in an	ecosystem is		
	a) Sun	b) ATP	c) Sugar made by plant	d) Green plant
56.	Consider the following	statements about limita	itions of ecological pyram	nids
	I. It never takes into ac	count the same species I	pelonging to two or more	trophic levels
	II. It assumes a simple f	food chain, which never	exists in nature	·
	III. In split of the vital r	ole played by saprophyt	tes/decomposers, they ar	e not given any position
	in ecological pyramids			5 51
	Which of the statement	ts given above are corre	ct?	
	a) I and II	b) I and III	c) II and III	d) I, II and III
57.	Which of the following	always has a pyramidal	shape, that is, decreasing	y values at higher trophic
	levels?	5 15		
	a) Pyramids of number		b)Pyramids of biomass	5
	c) Both (a) and (b)		d) Pyramids of energy	
58.	Identify the plant belor	nging to the reed-swamp	stage in hydrarch succe	ssion
	a) Juncus	b) Sagittaria	c) Salix	d) <i>Trapa</i>
5 9 .	Secondary productivity	y is		· ·
	a) The rate of formation	n of new organic matter	by consumers	
	b) Greater than primary	y productivity	-	
	c) 5% less than primar	y productivity		
	d) Equal to the gross pr	imary productivity		
60.	Extinction of a species	in a food chain is compe	nsated by	
	a) Food chain	b) Ecological pyramid	c) Food web	d) None of these
61.	The changes that occur	in successive seral stag	es to reach a climax com	munity are
	I. changes in the divers	ity of species of organism	ms	
	II. increase in the numb	per of species and organ	isms	
	III. increase in the total	biomass		
	Choose the correct opti	ion		
	a) I and II	b) I and III	c) II and III	d) I, II and III
62.	Which one of the follow	ving is a gaseous cycle?		
	a) Sulphur cycle	b) Phosphorus cycle	c) Nitrogen cycle	d) All of these
63.	Which of the following	statements are correct?		
	I. Least productive ecos	systems are deserts and	deep lakes	
	II. Sugarcane is the mos	st productive crop		
	III. Most productive eco	osystem is coral reef		
	Choose the correct opti	ion		
	a) I and II	b) I and III	c) II and III	d) I, II and III
64.	Pyramid of energy in e	cosystem is		
	a) Always upright	b) Always inverted	c) Mostly upright	d) Mostly inverted
65.	A plant is			
	a) An autotroph	b) A heterotroph	c) A primary producer	d) Both (a) and (c)

66.	. Ecosystem having the highest primary productivity is			
	a) Pond	b) Ocean	c) Desert	d) Forest
67.	The Great Barrier Reef	along the east coast of A	ustralia can be categoriz	ed as
	a) Population	b) Community	c) Ecosystem	d) Biome
68.	A much smaller fraction	on of energy flows in a ter	rrestrial ecosystem throu	ıgh
	a) Grazing food chain		b) Detritus food chain	
	c) Complex food chain		d) Food web aquatic ec	osystem
69.	A is required for hi	gher primary productivi	tyB have the lowest	primary productivity as
	the soil is deficient in r	noisture.		
	Choose the correct opt	ion for A and B		
	a) A-Rain; B-desert	b) A-Heat; B-forest	c) A-Rain; B-forest	d) A-Forest; B-desert
70.	Driving force of any ec	osystem is		
	a) Organic fuels and ca	rbohydrates	b)Biomass	
	c) Solar energy		d) Decomposers	
71.	Climax community is			
	a) Stable		b)Self perpetuating	
	c) Final biotic commur	nity	d) All of these	
72.	Stratification occurs in			N T
70	a) Desert	b) I ropical forest	c) Deciduous forest	d) lundra
13.	Plant species having a	wide range of genetical of	distribution evolve into a	liocal population known
	as			N Damidatian
74	a) Ecolype	D) BIOME	c) Ecosystem	d) Population
74.	Regarding 10% law	word by Lindomon in 10	40	
	I. THIS Idw was put for	walu by Linuemai in 194	42 food opprav from opp tra	pical loval to the other
	only about 10% is stor	w, during the transfer of i	lood energy from one tro Land the remaining 90%	is lost in respiration
	decomposition and wa	et at higher trophic leve		s is lost in respiration,
	Which of the statemen	ts given above is/are cor	rect?	
	a) Only I	b) Only II	c) Land II	d) None of these
75.	Ecological succession i	sa	-,	-,
	a) Long term process	b) Very fast process	c) Short term process	d) Migration
76.	At which latitude, heat	gain through insolation	approximately equals he	eat loss through
	terrestrial radiation?			C C
	a) 66° North and South	ı	b) $22\frac{1}{2}^{\circ}$ North and Sou	ıth
	c) 40° North and South		2 d) $42^{\frac{1}{2}}$ ° North and Sou	th
			$\frac{1}{2}$ North and Sou	
11.	Rabbits eats grass and	other plants to survive, i	but they do not eat anim	als. Refer the dest
	category for rabbits?	h) Compluteres		a) I la mb is como o
70	a) Decomposers	D) Carnivores	c) Producers	d) Herbivores
70.	if we completely remo	ve the decomposers non	in all ecosystem, its funct	ioning will be duver sery
	a) Horbivoros will pot	rocoivo solar oporav	h) Minoral movement	vill be blocked
	a) The pivol es will not	sition will be very high	d) Eporav flow will be	alockod
70	To show how many or	anisms are present at e	ach level of a food chain	acologists use a model
17.	called	ganishis are present at ea		ecologists use a model
	a) An energy flow pure	mid	h) Pyramid of numbers	
	c) Pyramid of energy		d) Food chain /food we	h nyramid
80	Competition for food	ight and snace is most se	evere between two	
00.	a) Closely related spec	ies growing in different r	niches	
	b) Distantly related so	ecies arowing different r	niches	
	s, bistanti y related spe	cores growing unterent i	nonos	

c) Closely related species growing in same niches d) Distantly related species growing in same niches 81. What human activities are responsible increase to the amount of CO_2 in the atmosphere? a) Deforestation b) Massive burning of fossil fuels c) Vehicle for energy d) All of the above 82. The reservoir for the gaseous type of biogeochemical cycle exists in a) Stratosphere b) Atmosphere c) lonosphere d) Lithosphere 83. Autotrophs a) Make their own food b) Are the base of the food chain c) Are primary producers d) All of the above 84. 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 85. Which of the following ecosystem types has the highest annual net primary productivity? a) Tropical rain forest b) Tropical deciduous forest c) Temperate evergreen forest d) Temperate deciduous forest 86. In pond ecosystem, diatoms represent a) Producers b) Primary consumer c) Secondary consumer d) Tertiary consumer 87. The importance of ecosystem lies in a) Cycling of materials b) Flow of energy c) Both (a) and (b) d) Its biomass 88. Two species occupying same or overlapping area are called as a) Sympatric b) Allopatric c) Parapatric d) Ring species 89. Which of the following representations show the pyramid of numbers in a grassland ecosystem? b)B c) C d) None of these a) A 90. Choose the area which will take minimum time for succession a) Newly created reservoir b) Bare rock c) Buried or cut forest d) Newly cooled lava 91. Each tropical level has a certain mass of living material at a particular time called a) Standing crop b)Biomass c) Branching lines d) Progressive straight line 92. What is the rate of secondary production in the energy pyramid given below? Top consumer I I. 10 kcal/m²/yr II.100 kcal/m²/yr Primary consumer II III. 1000 kcal/m²/yr Primary producer III IV. 100000 kcal/m²/yr Solar radiation IV a) Uncertain b) 100 kcal/m²/yr c) 10 kcal/m²/yr d) 110 kcal/m²/yr 93. Energy transfers or transformation are never 100% efficient. This is due to a) Entropy b) Homeostasis c) Catabolism d) Anabolism 94. The process by which water soluble inorganic nutrients go down into the soil horizon and get precipitated as unavailable salts is called as

	a) Fragmentation	b) Leaching	c) Catabolism	d) Mineralization
95.	The nature of climax co	ommunity in ecological s	uccession in most depen	dent upon
	a) Climate	b) Water	c) Soil fertility	d) None of the above
96.	Group of two or more t	han two plant species is	called as	
	a) Plant community	b) Animal ecosystem	c) Plant ecosystem	d) Ecological niche
97.	The products of decom	position process are		
	a) Humus	b) Inorganic nutrients	c) Organic nutrients	d) Both (a) and (b)
98.	The reservoir for the se	edimentary cycle exists i	n	
	a) Earth crust	b) Organic sediments	c) Calcareous	d) Limestone
			sediments	
99.	Standing crop refers to			
	a) All the photosynthet	ic living forms in an area	1	
	b) All he living forms in	an area		
	c) The amount of living	matter in a component	population of an ecosyst	em at any time
	d) All the crop plants in	n an area		
100	Nektons are			
	a) Organisms that swim	n in water	b) Floating plants	

c) Suspended lower plants

1.

d) Animals associated with plants

IMPORTANT PRACTICE QUESTION SERIES FOR NEET EXAM - 2



Read carefully the chart and identify, A, B, C, and D

	a) A-Domestic sewage, B-Thermal (hot) waste water, C-Organic compound, D-Inorganic				
	compounds				
	b) A-Chemical sewage, B-Industrial waste water, C-Inorganic compound, D-Organic compounds				
	c) A-Industrial sewage, B-Domestic waste water, C-Phenol group, D-Heavy metallic group				
	d) A-Sewage, B-Chemical industry waste wate	r, C-Organic compound, D	-Inorganic compounds		
2.	Ozone depletion is occurring widely in	v .	°		
	a) lonosphere b) Stratosphere	c) Both (a) and (b)	d) Troposphere		
3.	Fluoride pollution mainly affects	, , , , ,	, , , ,		
	a) Teeth b) Kidney	c) Brain	d) Heart		
4.	Chipko movement was successfully launched	by			
	a) SI Bahuguna b) HI Bahuguna	c) KL Bahuguna	d) Amrita Devi		
5	Stirred-tank bioreactors have been designed f	for			
0.	a) Addition of preservatives to the product				
	b) Purification of the product				
	c) ensuring anaerobic condition in the culture	e vessel			
	d) Availability of oxygen throughout the proce	255			
6.	What did Chernobyl. Three Mile Island, the L	ive Canal and Bhopal. Indi	a all have in common?		
	a) They were all radioactive disasters	·····			
	b) They were environmental problems caused	l by global warming			
	c) They were involved environmental racism	5			
	d) They were all technological disasters cause	d by solid wastes			
7.	Which of the following statement pertaining t	o pollutants is correct?			
	a) DDT is non-biodegradable pollutant				
	b) Excess fluoride in drinking water causes os	teoporosis			
	c) Excess cadmium in drinking water causes b	lack foot disease			
	d) Methyl mercury in water may cause 'Itai-Ita	ai' disease			
8.	What device is fitted to automobiles for reduc	ing the emission of poisor	nous gases like		
	NO ₂ andCO?	0	Ū		
	a) Catalytic converters	b)Electrostatic precipi	tator		
	c) Scrubber	d) Bag filter			
9.	Amrita Devi Bishnoi wildlife protection award	d is given to the individual	s or communities from		
	a) Rural areas b) Urban areas	c) NGOs	d) Hilly areas		
10.	Which of the following are the indicators of po	ollution?	-		
	a) Lichen b) Fungi	c) Algae	d) None of these		
11.	To remove which pollutants, enzymatic filters	are used?			
	a) Hydrocarbons b) Lead	c) Nitrogen pollutants	d) Chloride pollutants		
12.	What is the major cause of desertification?				
	a) Urbanization b) Greenhouse effect	c) El Nino effect	d) Both (a) and (c)		
13.	ESP is to arrest				
	a) Water pollution b) Air pollution	c) Radioactive pollutio	nd) Soil pollution		
14.	Which are sensitive to SO ₂ pollution?				
	a) Mosses b) Algae	c) Lichen	d) Ferns		
15.	Reforestation is useful for				
	a) Increasing the fertility of soil	b) Reducing floods			
	c) Preventing soil erosion and spread of deser	ts d)All of the above			
16.	Which of the following metals is a water pollu	tant and causes sterility i	n human being?		
	a) As b) Mn	c) Mg	d) Hg		
17.	Limit of BOD prescribed by Central Pollution	Control Board for the disc	harge of industrial and		
	municipal waste water into natural surface wa	ater, is			
	a) < 3.0 ppm b) < 10 ppm	c) < 100 ppm	d) < 30 ppm		

18.	Eutrophication is caused by		
	a) Acid rain	b) Nitrates and phospha	ates
	c) Sulphates and carbonates	d)CO ₂ and CO	
19.	Examples of regional pollution are		
	a) Acid rain b) Smog	c) Both (a) and (b)	d) None of these
20.	World Summit on Sustainable Development (20	002) was held in	
	a) Brazil b) Sweden	c) Argentina	d) South Africa
21.	Which statement represents the harmful effect	of depletion of earth's oz	one layer?
	a) The average temperature of earth's surface w	, ill increase gradually	5
	b) The oxygen content of the atmosphere will de	ecrease	
	c) Increased amount of ultraviolet radiation wil	l reach earth's surface	
	d) Sea levels will rise as the polar ice caps will g	radually melt	
22.	Which of the following statement is not correct	2	
	a) Ozone layer do not allow UV-B to reach the each	arth surface	
	b) Ozone hole is an actual hole over Antarctica		
	c) Halons are ozone depleting substances		
	d) The active chlorine destroys ozone and conve	ent it into O ₂	
23.	Euro II norms were stipulated to control sulphu	ir content at 350 ppm in	A and 150 ppm in
	B and aromatic hydrocarbons are to be con-	tained atC	
	Complete the given statement by choosing appr	opriate option for A-C	
	a) A-petrol, B-diesel, C-44%	b) A-diesel, B-petrol, C-4	42%
	c) A-petrol, B-diesel, C-49%	d) A-diesel, B-petrol, C-4	45%
24.	World environment day is celebrated on		
	a) 1st February b) 8th March	c) 6th December	d) 5th June
25.	A lake with nutrients is called		
	a) Trophic b) Euphotic	c) Oligotrophic	d) Eutrophic
26.	Three mile island and chernobyl disasters are a	ssociated with accidenta	I leakage of
	a) Radioactive wastes b) Industrial wastes	c) Municipal wastes	d) Hospital wastes
27.	Ozone is spread in the swimming pool because		
	a) It acts as disinfectant	b) To absorbs UV radiat	ions
~ ~	c) Uzone is easily available from O_2	d) All of the above	
28.	Which of the following methods are useful for s	olid waste disposal?	
	I. Open burning		
	II. Sanitary landillis		
	III. Ray-pickers and kabadiwalians		
	V. Natural Dreakdown		
	V. Recycling		
	Choose the correct option		
	a) and V b) V and V	c) II III IV V and VI	
20	Checking of re-radiating beat by atmospheric di	ist 0 C0 and water var	ours is
27.	a) Green house effect b) Solar effect	c) Ozona lavar affect	d) Padioactive effect
30	Of the following four metropolitan Indian cities	where polluted air hand	is above like a cloud is
00.	a) Mumbai h) Delhi	c) Kolkata	d) Chennai
31	Which of the following are correctly matched?		d) chemia
01.	Arsenic poisoning - Black foot disease		
	II. Secondary effluent		
	treatment - Biological process		
	III. Pyrolysis - Solid soil waste disposal		
	IV. <i>Tubifex</i> - Water pollution indicator		

	V. Biomagnification - Degradable pollutants		
	a) I,II,III and V b) I,III,IV and V	c) II,III,IV and V	d) I,II,III and IV
32.	Which of the following is a prime health risks a	ssociated with greater U	V radiation through the
	atmosphere due to depletion of stratospheric o	zone?	· ·
	a) Damage to digestive system	b) Increased liver canc	er
	c) Neurological disorder	d) Increased skin cance	er
33.	Irrepairable goods, computers and other electr	onic devices are known	as
001	a) a-wastes b) e-wastes	c) c-wastes	d) d-wastes
34	Consider the following statements	of o musics	uju wastos
01.	L Reforestation is the process of restoring a for	est that once existed but	was removed at some
	noint of time in the past		
	II Reforestation may occur naturally in a defor	ested area	
	III. A tree plantation movement or Van Mahots	ested and avais being carried out i	n India sinco 1082
	Which of the statements given above are correct	sta is being carried out i sta	
	a) Land II b) Land III	c) II and III	d) L II and III
25	a) Failu II Scrubbar is used to remove gases like	c) fi anu fii	u) i, ii aliu iii
55.		\sim	9) NO
27	a) O_2 D) O_2	c) cu	U/NO_2
30.	Consider the following statements about eutrop	onication	la na anat
	I. Eutrophication is the natural ageing of a wate	er body by nutrient en no	nment duatrial uractas is colled
	II. The accelerated ageing of lakes due to sewag	je and agricultural and ir	ndustrial wastes is called
	cultural or accelerated eutrophication		
	III. The plant nutrients responsible for eutroph	ication are nitrates and	pnospnates
	IV. Phosphates and nitrates accelerate the grow	/th of algae which utilise	e oxygen and may
	deoxygenate the water enough to kill the fish a	nd other aquatic animals	8
	Which of the statements given above are correct	ct?	N
	a) I and II b) I, II and III	c) I, III and IV	d) I, II, III and IV
37.	A sewage treatment process in which a part of	decomposer bacteria pre	esent in the waste is
	recycled into the starting of the process is calle	d	
	a) Cyclic treatment	b) Activated sludge tre	atment
20	c) Primary treatment	d) Tertiary treatment	
38.	Cigarette smoking causes		IN 1
20	a) Skin cancer b) Blood cancer	c) Bone cancer	d) Lung cancer
39.	Uzone saves the biosphere by absorbing the hig	gn energy radiation calle	20 N
	a) Infra-red rays (IR)	b) Ultraviolet rays (UV)
	c) X-rays	d) Gamma rays	
40.	The fertile top soil is removed by human activit		
	a) Over-cultivation	b) Unrestricted grazing]
	c) Deforestation and poor irrigation practices	d) All of the above	
41.	Which of the following statement is correct?		
	a) Extensive use of chemical fertilizers may lead	d to eutrophication of ne	earby water bodies
	b) Both Azotobacter and Rhizobium fix atmosp	pheric nitrogen in root n	odules of plants
	c) Cyanobacteria such as Anabaena and Nostoc	c are important mobilize	ers of phosphates and
	potassium for plant nutrition in soil		
	d) At present, it is not possible to grow maize w	vithout chemical fertilize	rs
42.	Algal blooms imparts a distinct colour to water	due to	
	a) Their pigments		
	b) Excretion of coloured substance		
	c) Absorption of light by algal cell wall		
	d) Formation of coloured chemicals in water fac	cilitated by physiologica	l degradation of algae
43.	Pollution is not caused by		

	a) Thermal power plant	b)Automobile	
	c) Radioactive power plant	d)Hydroelectric power	r plant
44.	The term 'biomagnification' refers to the	, , ,	•
	a) Growth of organisms due to food consumption	on	
	b) Increase in population size		
	c) Blowing up of environmental issues by man		
	d) Increasing in the concentration of non-degra	dable pollutants as they	pass through food chain
45.	Carbon dioxide is called green house gas becau	se it is	je standing stan
	a) Used in green house to increase plant growth	b)Transparent to heat	but traps sunlight
	c) Transparent to sunlight but traps heat	d) Transparent to both	sunlight and heat
46.	One of the following acts as secondary pollutan	t	g
	a) Br_2 b) CI_2	c) NO ₂	d) HNO₃
47.	Which of the following toxic materials was pres	sent in Minamata bay of	Japan?
	a) Cd b) Pb	c) Ma	d) Ha
48.	Global agreement in specific control strategies	to reduce the release of	ozone depleting
	substances, was adopted by		5
	a) Rio de Janerio Conference	b)Montreal Protocol	
	c) Kyoto Protocol	d) Vienna Convention	
49.	Ecological sanitation is a sustainable system for	r handling human excret	a, using dry composting
	toilets. Such 'Ecosave' toilets are working in	Ũ	
	a) Asom and West Bengal	b) Andhra Pradesh and	l Maharashtra
	c) Kerala and Sri Lanka	d) Karnataka and Andh	nra Pradesh
50.	Common indicator organism of water pollution	is	
	a) Lemnapancicostata		
	b) Eichhorniacrassipes		
	c) Escherichiacoli		
	d) Entamoeba histolytica		
51.	Kyoto protocol has specified the commitments	of different countries	
	a) To mitigate climate changes	b) Limit production of	chlorofluorocarbons
	c) To prepare a world climate programme	d) None of the above	
52.	Which of the following groups of gases cause pl	notochomical smog2	
	33 1 3 1	iotochemical smoy:	
	a) O_3 PAN and CO b) HC, NO and PAN	c) O_2 ,PAN and NO_2	d) O_2 , PAN and NO_3
53.	a) O_3 PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (c) O_2 ,PAN and NO_2 <i>e. g.</i> , DDT, Mercury) acc	d) O_2 , PAN and NO_3 umulates in the body
53.	a) O_3 PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called	c) O_2 ,PAN and NO_2 <i>e. g.</i> , DDT, Mercury) acc	d) O_2 , PAN and NO_3 umulates in the body
53.	a) O_3 PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation	c) O_2 ,PAN and NO_2 <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica	d) O_2 , PAN and NO_3 umulates in the body tion
53.	a) O ₃ PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation	d) O_2 , PAN and NO_3 umulates in the body tion
53. 54.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and set 	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones	d) O ₂ , PAN and NO ₃ umulates in the body tion
53. 54.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a 	c) O_2 ,PAN and NO_2 <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g	d) O_2 , PAN and NO_3 umulates in the body tion
53. 54.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield 	c) O ₂ ,PAN and NO ₂ (e. g., DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation	d) O_2 , PAN and NO_3 umulates in the body tion jas coming from the sun
53. 54.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is 	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp	d) O_2 , PAN and NO_3 umulates in the body tion gas coming from the sun pheric gases and clouds
53. 54.	a) O ₃ PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp IIs on the earth's surface	d) O_2 , PAN and NO_3 umulates in the body tion gas coming from the sun oheric gases and clouds , heating it. Of this only a
53. 54.	a) O ₃ PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back	c) O ₂ ,PAN and NO ₂ (e. g., DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmos Ils on the earth's surface	d) O_2 , PAN and NO_3 umulates in the body tion gas coming from the sun oheric gases and clouds , heating it. Of this only a
53.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III 	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosy IIs on the earth's surface c) II and III	d) O ₂ , PAN and NO ₃ umulates in the body tion gas coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III
53. 54. 55.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III In India, the heaviest demand of forests is for a) Evaluated 	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp IIs on the earth's surface c) II and III	d) O ₂ , PAN and NO ₃ umulates in the body tion jas coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III
53. 54. 55.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III In India, the heaviest demand of forests is for a) Fuel wood c) Wood for agricultural tools 	c) O ₂ ,PAN and NO ₂ (e. g., DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp IIs on the earth's surface c) II and III b) Timber wood	d) O ₂ , PAN and NO ₃ umulates in the body tion gas coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III
53. 54. 55.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III In India, the heaviest demand of forests is for a) Fuel wood c) Wood for agricultural tools 	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp IIs on the earth's surface c) II and III b) Timber wood d) Medicines	d) O ₂ , PAN and NO ₃ umulates in the body tion gas coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III
53. 54. 55.	 a) O₃PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III In India, the heaviest demand of forests is for a) Fuel wood c) Wood for agricultural tools The ultraviolet radiations in the stratosphere a 	c) O ₂ ,PAN and NO ₂ (e. g., DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp IIs on the earth's surface c) II and III b) Timber wood d) Medicines re absorbed by	d) O ₂ , PAN and NO ₃ umulates in the body tion gas coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III
53. 54. 55. 56.	a) O_3 PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III In India, the heaviest demand of forests is for a) Fuel wood c) Wood for agricultural tools The ultraviolet radiations in the stratosphere a a) O_3 b) O_2 Carbon monovide is a pollutant because it	c) O ₂ ,PAN and NO ₂ <i>e. g.</i> , DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosp IIs on the earth's surface c) II and III b) Timber wood d) Medicines re absorbed by c) CO ₂	d) O ₂ , PAN and NO ₃ umulates in the body tion as coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III
53. 54. 55. 56. 57.	a) O_3 PAN and CO b) HC, NO and PAN The phenomenon by which certain pollutants (tissues in increasing concentration is called a) Biological degradation c) Eutrophication Read the following statements carefully and sel I. UV rays essential for the production as well a II. Ozone present in ionosphere acts as a shield III. One fourth of the incoming solar radiation is and only half of the incoming solar radiation fal small portion is reflected back a) I and II b) I and III In India, the heaviest demand of forests is for a) Fuel wood c) Wood for agricultural tools The ultraviolet radiations in the stratosphere a a) O_3 b) O_2 Carbon monoxide is a pollutant because it a) Reacts with O_2	c) O ₂ ,PAN and NO ₂ (e. g., DDT, Mercury) acc b) Biological magnifica d) Bioprecipitation lect the correct ones s degradation of ozone g absorbing UV radiation s reflected by the atmosy IIs on the earth's surface c) II and III b) Timber wood d) Medicines re absorbed by c) CO ₂	d) O ₂ , PAN and NO ₃ umulates in the body tion as coming from the sun oheric gases and clouds , heating it. Of this only a d) I, II and III

	c) Reacts with haemoglobin	d) Makes nervous syste	em inactive
58.	It is estimated that out of the total global warm	ing, the relative contribu	ition of
	CO ₂ , CH ₄ , CFCsand N ₂ O are found respectively a	IS	
	a) 60%, 20%, 14% and 6%		
	b) 6%, 14%, 20% and 60%		
	c) 20%, 60%, 14% and 6%		
	d) 20%, 14% ,60% and 6%		
59.	In big cities, the major atmospheric pollutant is		
	a) Carbon monoxide and oxide of sulphur	b) Hydrocarbon and ho	ot air
	c) Pollens and Marsh gas	d)Ozone	
60.	Steps taken by the Government of India to cont	rol air pollution include	
	a) Compulsory mixing of 20% ethyl alcohol with	h petrol and 20% biodie	sel with diesel
	b) Compulsory PUC (Pollution Under Control) co	ertification of petrol driv	en vehicles, which tests
	for carbon monoxide and hydrocarbons	·	·
	c) Permission to use only pure diesel with a ma	ximum of 500 ppm sulpl	hur as fuel for vehicles
	d) Use of non-polluting Compressed Natural Ga	s(CNG) only as fuel by al	I buses and trucks
61.	Which of the following plants is used for the pu	rification of water?	
	a) Beggiatoa b) Chlorella	c) Spirogyra	d) Eichhornia
62.	Which of the following is non-biodegradable?		
	a) Sewage b) DDT	c) Livestock waste	d) Market garbage
63.	Minamata disease was caused due to the consu	mption of	
	a) Sea food containing lot of cadmium	b) Fish contaminated w	/ith mercury
	c) Ousters with lot of pesticide	d) Sea food contaminat	ed with selenium
64.	Which one among the following is likely to have	e the highest level of DD ⁻	F deposition in its body?
	a) Phytoplanktons b) Sea gull	c) Crab	d) Eel fish
65.	Escherichiacoli is used as an indicator organism	n to determine pollutior	of water with
	a) Industrial effluents	b) Pollen of aquatic pla	nts
	c) Heavy metals	d) Faecal matter	
66.	'Bad' ozone is formed in		
	a) Atmosphere b) Ionosphere	c) Stratosphere	d) Troposphere
67.	Which Act was formulated in the year 1986?		
	a) The Insecticide Act		
	b) The Water (prevention and control of polluti	on) Act	
	c) The Air (prevention and control of pollution)	Act	
	d) The Environment (protection) Act		
68.	The thickness of ozone in a column of air from t	he ground to the top of t	the atmosphere is
	measured in terms of		
(0	a) Decidel units b) Pascal units	c) Svedberg units	d) Dobson units
69.	The Montreal protocol refers to		alimata abanna
	a) Persistent organic ponutants	d) Giobai warming and	
70	Croop bouse effect refers to	d) Biosalety of genetica	ing modified organisms
70.	a) Cooling of earth b) Tranning of UV rays	a) Draduction of coroal	c d) Marming of oorth
71	A country of ear (1) b) frapping of UV rays	v high rate	s uj wai ming or ear th
/1.	I. Radiation nonnuclear wasters A at a ver	y night ale	
	II. ALIUW UUSES, I duid IIUIIS CausesB	continto ontion for A and	ID
	a) A lethal: B cancer	b) A cancer: P mutation	טו n
	c) A mutation: B down syndroma	d) // down cyndromou	< cancor
70	c) A-mutation; B-down syndrome A pollutant can best defined as it	d) A-down syndrome; E	3-cancer

	a) Has natural geochemical cyc	les	b) Changes homeostasis	s of environment
	c) Disturb natural flora of a pla	се	d) Become stabilized in	ecosystem forever
73.	Global warming can be control	led by		
	I. reducing deforestation	-		
	II. planting trees (afforestation)		
	III. slowing down the growth o	f human populat	ion	
	IV. reduction of emission of gre	enhouse gases ir	nto the atmosphere	
	V. cutting down the use of fossi	l fuels	•	
	Which of the statement given a	bove are correct	?	
	a) I, II, III and IV b) II, II	I, IV and V	c) I, III, V and IV	d) I, II, IV and V
74.	What is true about the Euro II i	norms?		·
	a) It stipulates to control sulph	ur at 350 ppm in	diesel and 150 ppm in p	petrol
	b) It stipulates to reduce sulph	ur level to 50 ppr	n in petrol and diesel	
	c) It stipulates to reduce sulphi	ur level to 200 pp	om in diesel and petrol	
	d) It stipulates to reduce sulphi	ur level to 200 pp	om in diesel and 100 ppr	n in petrol
75.	Montreal protocol, which calls	for appropriate a	action to protect the ozor	ne layer from human
	activities was passed in the year	r		
	a) 1986 b) 198	7	c) 1988	d) 1985
76.	Consider the following stateme	ents about scrubb	ber	
	I. It is used to remove gases like	e sulphur dioxide	e from industrial exhaus	t
	II. In a scrubber, the exhaust is	passed through	a spray of water or lime	
	III. Water dissolves gases and I	ime reacts with s	ulphur dioxide to form a	a precipitate of calcium
	sulphate and sulphide			
	Which of the statements given	above are correc	t?	
	a) I and II b) I and	111 b	c) II and III	d) I, II and III
77.	Excess atmospheric CO ₂ increa	se green house e	ffect asCO ₂	
	a) Precipitates dust in the atmo	osphere	b) Reduces atmospheric	c pressure
	c) Is opaque to infra red rays		d) Is not opaque to infra	a red rays
78.	Removal of forest areas to fulfi	I the needs of gro	wing human population	is called
	a) Deforestation b) Refo	prestation	c) Depletion of forest	d) Afforestation
79.	Which of the following is a seco	ondary air pollut	ion?	
	a) Hydrocarbons		b)Smog	
~~	c) Particulate matter		d) Automobile exhausts	5
80.	Maximum green house gases al	re released by		N F
01	a) India D) Brit	ain	C) USA	d) France
81.	Good Ozone is formed in	on horo	a) Strataonhara	d) Transonhara
റ	a) Almosphere b) Iono	sphere	c) stratosphere	d) Troposphere
οΖ.	a) SO NO b) CEC			
02	a) SO_2 , NO_3 b) CFC.	$S, C\Pi_4, N_2O$	$C_{1} C_{1} C_{1} C_{1} C_{1} C_{2}$	$U/NU_2, UU_2$
05.	dasas possassas which of the fo	llowing metals u	isod as catalyst?	
	a) Distinum	adium	c) Phodium	d) All of those
84	El Nino effect is closely associa	ted with		u) All OI these
04.	a) Global warming b) Acid	Irain	c) Greenhouse dases	d) All of these
85	Formation of non-functional m	ethaemoglobin c	auses blue-baby syndro	me This is due to
00.	a) Excess of arsenic concentrat	ion in drinking w	ater	
	b) Excess of nitrates in drinking	n water		
	c) Deficiency of iron in food	5		
	d) Increased methane content i	n the atmospher	e	
86.	Given diagram represent two c	levices <i>A</i> and <i>B</i> us	sed to control air pollutio	on. Identify them
	U I			5

	Clean air 								
	Water line spray Discharge corona								
	Collection beak								
	Dirty air $\rightarrow \cdots \otimes \rightarrow \rightarrow $ Clean air								
	air Particulate								
	A Dust particle B	e							
	a) A Bag filter: B Scrubber	h) A Scrubbar B Flactr	ostatic procinitator						
	c) A Scrubber: B Bag filter	d) A Electrostatic preci	nitator: B Bag filtor						
87	One of the main reasons of soil erosion in India	is	pitator, b-bay inter						
07.	a) hum cultivation b) Deforestation	c) Drought conditions	d) Tomporaturo						
00	Asymum poice permissible during day time in	c) Drought conditions	u) remperature						
00.	waximum noise permissible during day time in								
00	a) / 5 UD U) 55 UD	C) OD UD	u) 45 UB						
09.	bod litci eased by		d) Distillated wastes						
00	a) Algae D) MOSS	c) Ferris	d) Distillated wastes						
90.	when the horse was recognized as an air poliut		d) 1007						
01	a) 1992 D) 1963	C) 1949	0) 1987						
91.	Green nouse effect is the cumulative result of the	ne influences of certain g	ases. Identify the gas,						
	which is not involved in this initiance?								
	a) Methane	b) Chiorofiuorocarbons	5						
00	c) Nitrogen	d) Carbon dioxide							
92.	I aj Manal marble is affected by	-) 0							
00	a) SU_2 D) U_2	C) U_3	d) NU_2						
93.	An International treaty, Montreal Protocol In 19	787 to curb the emission	of ozone depleting						
	substances, was held at								
~ 1	a) Canada b) Kyoto	c) Washington	d) Rio de Janerio						
94.	The natural phenomenon of Keeping earthworn	n due to presence of cert	ain gases in the						
	atmosphere is called								
05	a) Global warming b) Uzone depletion	c) Greenhouse effect	d) EI-NINO effect						
95.	Rise in temperature leads to deleterious change	es in environment result	ing in odd climatic						
	changes called								
0(a) Global warming b) El Nino effect	c) La Nino effect	d) Greenhouse effect						
96.	A lake with an inflow of domestic sewage rich li	n organic waste may res	uit in						
	a) Drying of the lake very soon due to algal	b) An increased produc	tion of fish due to lot of						
	moold	nutrients							
	c) Death of fish due to lack of oxygen	a) increased population	h of aquatic food web						
07		organisms							
97.	Acid rain is mainly caused due to increase in the	e levels of the gas(es)							
00	a) SU_2 only b) CU_2 only	c) SO_2, CO_2	d) NO_2 and SO_2						
98.	Nutrient enrichment of a lake will cause								
~~	a) Eutrophication b) Stratification	c) Biomagnifications	d) Bioaccumulation						
99.									
	I. These are fitted into automobiles for reducing	gemission of poisonous	gases like NO_2 and CO						
	II. They have expensive metals like platinum, pa	alladium and rhodium as	s catalysts						
	III. As the exhaust emission passes through cata	alytic converter nitric ox	ide splits into nitrogen						
	and oxygen: carbon monoxide is oxidized to car	bon dioxide and unburn	it nydrocarbons get						
	burnt completely into CO_2 and H_2O								
	IV. Wotor vehicles fitted with catalytic converte	r snould use unleaded p	etrol because lead in the						
	petrol inactivates the catalyst								
	Which of the statements given above are correc	t about catalytic conver	ters?						

a) I, II and III	b) II, III and IV	c) I, III and IV	d) I, II, III and IV
100.Sound becomes a	hazardous noise pollutio	n if its level exceeds	
a) 30 dB	b) 80 dB	c) 120 dB	d) 150 dB

	MPORT	ANT PR	RACT		STI	ON SERI	es for	R NEET	EXAM -	1 (ANSWE	RS)
1)	а	2)	С	3)	b	4)	С				
5)	а	6)	b	7)	d	8)	b				
9)	b	10)	b	11)	b	12)	b				
13)	С	14)	а	15)	d	16)	b				
17)	а	18)	b	19)	d	20)	С				
21)	b	22)	d	23)	а	24)	С				
25)	а	26)	b	27)	а	28)	d				
29)	С	30)	b	31)	С	32)	а				
33)	d	34)	b	35)	С	36)	b				
37)	b	38)	d	39)	а	40)	b				
41)	d	42)	а	43)	d	44)	С				
45)	С	46)	С	47)	а	48)	а				
49)	а	50)	d	51)	а	52)	С				
53)	d	54)	d	55)	а	56)	d				
57)	d	58)	b	59)	а	60)	С				
61)	d	62)	а	63)	d	64)	а				
65)	d	66)	b	67)	С	68)	а				
69)	а	70)	С	71)	d	72)	b				
73)	а	74)	С	75)	а	76)	С				
77)	d	78)	b	79)	b	80)	С				
81)	d	82)	b	83)	d	84)	а				
85)	а	86)	а	87)	С	88)	а				
89)	b	90)	С	91)	а	92)	b				

93)	d	94)	b	95)	а	96)	а
97)	d	98)	а	99)	С	100)	а

1 (a)

A biotic components includes the non-living physico-chemical factors of the environment. These components not only affect the distribution and structure of organisms but also their behavior and inter-relationships. Abiotic factors include inorganic substances, organic compounds, climatic factors and edaphic factors

2 (c)

The shape of pyramid of energy is always upright as energy always decreases at each successive level (*i.e.*, from producers to consumers).

3 **(b)**

Organic remains (dead plant parts, animal remains and excretions) are also called detritus. A food chain, which begins with detritus or dead organic matter is called detritus food chain. The energy passes into decomposers and detrivores, then to smaller carnivores, then to larger carnivores and so on.

4 (c)

The rate of total capture of energy or the rate of total production of organic material is **gross primary productivity**, while the balance or biomass remaining after meeting the cost of respiration of producers is net primary productivity. Hence, gross productivity has highest value in grassland ecosystem.

5 **(a)**

Ecosystem is an open system. It receive input in the form of solar energy and matter. It results in productivity or synthesis of organic food. Food with its contained energy passes through various components of ecosystem

6 **(b)**

Phosphorus and sulphur.

In sedimentary cycle, the main reservoirs are soil and rocks, *e*. *g*., sulphur cycle, phosphorus cycle, etc.

7 (d)

Tropical rain forests (tropical dense forests) occur near the equator where rainfall and temperature are very high.

8 **(b)**

In a lake, there are littoral zone, limnetic zone and profundal zone. In limnetic zone, the producers are mainly phytoplanktoni algae which are diatoms, green algae and blue green algae. In profundal zone, the organisms mainly depend for their food on the littoral and limnetic zone.

9

A-10%, B-Lindeman, C-1942

10 **(b)**

(b)

The process of 'humification' can occur naturally in soil or in the production of compost. It leads to accumulation of dark amorphous substance called humus

11 **(b)**

Total energy fixed by an ecosystem is called gross production

12 **(b)**

Detrivores feeds on and breakdown the dead plants and animal matter, returning essential nutrients to the ecosystem. Detritivores includes microorganisms such as bacteria and protists as well as larger organisms such as fungi, insects, worms and isopod crustaceans

13 **(c)**

All the animals that depend for food on plants are called consumers. *Consumers are divided*

into the following categories

Primary consumers Animals which feed directly on plants, *i.e.*, herbivores **Secondary consumers** Consumers that feed on primary consumers, *i.e.*, carnivores **Tertiary consumers** Consumers that feed on secondary consumers. Grazers is one of the category of consumers

15 **(d)**

Nitrogen and carbon cycle.

In sedimentary cycle, the main reservoirs are soil and rocks, *e.g.*, sulphur cycle, phosphorus cycle, etc.

17 **(a)**

Producers

18 **(b)**

The zone of transition between two different communities presenting a situation of overlapping is known as **ecotone**.

19 **(d)**

The major functions of an ecosystem includes (i) Productivity (ii) Decomposition (iii) Energy flow (iv) Nutrient cycling

21

Sun.

(b)

A much less fraction of energy flows through grazing food chain in ecosystem terrestrial. Energy for the food chain comes from the sun. Food chain adds energy into the ecosystem

22 **(d)**

Free energy is the portion of a system's energy that can perform work when temperature is uniform throughout the system as in a living cell.

Enthalpy is the total energy including usable energy and unusable energy.

23 **(a)**

Xerarch succession is plant succession which takes place in dry area leading to a successional series from xeric to mesic conditions

24

(c)

Living organisms.

The components of an ecosystem may be divided into two main types, *i.e.*, **Biotic component** comprising the various kinds of living organisms and **Abiotic component** consisting of environmental factors



25

(a)

Prosopis is a tree found in scrub. *Saccharumofficinarum* is grass, which is cultivated. *Shorearobusta* (sal) is tree found in moist tropical forests. *Acacia catechu* is tree found in dry deciduous forests.

26 **(b)**

A-Top carnivore, B-Detritus, C-Frog

27 **(a)**

Some workers differentiate into two more categories of living beings amongst the biotic components of an ecosystem. These are detrivores and parasites. Parasites belong to

diverse groups, *e. g.*, bacteria, fungi, protozoans, worms, etc. Every type of living being can be attacked by parasites. Detrivores or scavengers are animals which feed on dead bodies of other organisms, *e. g.*,termites, carrion beetles. They are helpful in quick disposal of the dead bodies

28

Phosphorus.

(d)

(c)

(b)

In sedimentary cycle, the main reservoirs are soil and rocks, *e.g.*, sulphur cycle, phosphorus cycle, etc.

29

Pyramid of energy represents amount of energy traped per unit area and time in different trophic levels of a food chain. It is always upright.

30

The rate of synthesis of energy containing organic matter by any trophic level per unit area in unit time is described its productivity. It is measured as weight (e. g., $g/m^2/yr$) or energy (e. g., kcal/m²/yr). The amount of energy accumulation in green plants as biomass or organic matter per unit area over a time period through the process of photosynthesis is known as primary productivity. Primary productivity is expressed in term of weight (g⁻²) or energy (kacl m⁻²). C₄-plants area more productive thatC₃ plants. Sugar cane is most productive crop being efficient in trapping light

31 **(c)**

The number of trophic levels in the food chain is restricted as the transfer of energy follows 10% law. This law states that only 10% of the energy is transferred to next trophic level from the lower trophic level

32

(a)

(d)

In a terrestrial ecosystem, plant grows by manufacturing food from carbon dioxide of air and water and minerals of soil with the help of chlorophyll and sunlight. Plants, thus acts as the producer on land

In a pond, phytoplankton (rooted and floating plants) synthesise food materials from dissolved nutrients by photosynthesis. They, thus act as the producers. Consumers are not producers. They eat (consume) producers

33

In both hydric and xerharch succession ultimately lead to mesarch conditions. The pioneer species on bars rock is always lichen

34 **(b)**

Phytoplanktons are the producers in ocean's ecosystem.

35 **(c)**

An inverted pyramid of biomass may occasionally be observed in marine communities

36 **(b)**

Vertical distribution of different species occupying different levels is called stratification. For example, in forest ecosystem, trees occupies the top vertical strata, shrubs occupies the second and herbs, grasses occupies the bottom layer. It is not a functional unit of an ecosystem

37 **(b)**

In a pond ecosystem, fishes occupy the more than one trophic levels.

38 **(d)**

Humus is dark coloured amorphous substance rich in lignin and cellulose

39 **(a)**

Maximum energy is found in first trophic level $(T_1)i.e.$, produces.

40 **(b)**

Secondary consumer

Grass –	→ Grasshopper —	→ Frog —	→ Snake —	→ Hawk
(Producer)	(Primary	(Secondary	(Tertiary	(Quaternary
	consumer)	consumer)	consumer)	consumer)

41 **(d)**

The organisms, which attack dead animals are the present at end of food chain and known as decomposers. Decomposers are heterotrophic organisms, mostly bacteria and fungi, which lives on dead organic matter or detritus. They release different enzymes from their bodies into the dead and decaying plant and animal remains, leading to the release of simple inorganic substances. Thus, they play an important role in the cycling of minerals (a)

42

Pyramid of energy is a graphic representation of the amount of energy trapped per unit time and area in different trophic levels of a food chain with producers forming the base and top carnivores the top. The pyramid of energy is **always upright**.

43 **(d)**

There is some sort of relationship between the number, biomass and energy contents of the producers and consumers of different orders in any ecosystem. These relationships, when represented in diagrammatic ways are called ecological pyramids. The concept of pyramid was proposed by Charles Elton (1927) so, they are also called as Eltonian pyramids

44

(c)

The formula of ecological efficiency is

 $= \frac{\text{Energy in biomass production at a trophic level}}{\text{Energy in biomass production at}} \times 100$

prevense trophic level

We know that plant (producers) convent the photo energy into chemical energy and according to Lindman rule of energy transfer only 1% of energy will be transferred from one trophic level to other trophic level

So according to the formula of ecological efficiency primary consumer will have less ecological efficiency then secondary consumers because energy in biomass be production at first tropical level (*i.e.*, producers level) will more while ecological efficiency of secondary consumer will be high then primary consumer because in secondary consumer the energy produced in biomass at previous tropical level will be less then producer level

45

(c)

(a)

In tree ecosystem, the pyramid of number is inverted because only one tree has many consumers like birds, insects, etc.

While in pond, desert and forest ecosystem, the pyramids of numbers are upright because producers are large in number.

46 **(c)**

Producers → Primary consumers → Secondary consumers (Grass) (Zebra) (Lion)

47

Ecosystem	Shape of
	Pyramid
Pyramid of	
number	
Grassland	Upright
Forest (tree)	Inverted
Aquatic (pond)	Upright
Pyramid of	
biomass	
Grassland	Upright

Forest	Upright
Aquatic (lake)	Inverted
Pyramid of	
energy	
All ecosystems	Upright
(a)	•

48

The process by which humus is further degraded by some microbes to release inorganic nutrients is called mineralisation

49 **(a)**

The process by which humus is degraded by some microbes to release inorganic nutrients is called mineralisation

50

(d)

Halophytes (*i.e.*, plants growing in saline soils) show the characteristics of xerophytes, *e.g.*, *Sueda*, *Tamarix*, *Atriplex*, etc. These characters include succulence, thick cuticle, sunken stomata, high osmotic pressure, presence of anthocyanin, tannins, proline and other organic solutes, well developed root system etc.

51 **(a)**

Secondary succession or subsere is ecological succession that takes place in a recently denuded area which still contains a lot of organic debris, remains and propagules of previous living organisms. It is more common and caused by baring of an area due to forest fires, deforestation, excessive overgrazing, landslides, earthquakes, repeated floods, etc. only 50 to 100 years are required for establishment of a grassland over a recently denuded area. Formation of forest requires 100 to 200 years.

52 **(c)**

Phytoplanktons are found in littoral zone, which is shallow water region.

53 **(d)**

A primary consumers or herbivores are animals which feed on plants or plant products, *e. g.*,grasshoppers and several other insects, rabbit, hare, field mouse, deer, antelope, cow, elephant, zooplankton, tadpoles and some fishes

54 **(d)**

Burning of wood, forest fire, volcanic activity and combustion of organic matter and fossil fuels area are some essential sources for releasing CO_2 in the atmosphere

56 **(d)**

There are certain limitations of ecological pyramids, they are

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

(ii) It assumes a simple food chain, whereas in nature it does not exist

(iii) Saprophytes/decomposers are not given any place in ecological pyramids

57

(d)

(b)

The pyramid of energy is always upright whatever will be the case. It represents the total amount of energy utilised by different level organisms in unit area over a period of time





A good example of succession is the hydrarch succession or hydrosere succession, in which, a pond and its community are converted into a land community. In their reed swamp stage, amphibious plants grow where the water body becomes shallow (0.3-1.0 m), *e.g., Sagittaria. Juncus* shows sedge-medow stage, *Salix* shows woodland stage, while *Trapa* shows rooted-floating stage.

59

The rate of formation of new organic matter by consumers is called secondary productivity

60

(a)

(c)

(d)

(a)

(b)

(c)

(c)

Food web is a network of food chains, interconnected at various trophic levels, so as to form a number of feeding alternatives amongst the different organisms of a biotic community.

61 **(d)**

In successive seral stages, there is not only a change in the species diversity of organisms present but there is also an increase in the number of species. Succession of plants and animals communities occurs side by side

62 **(a)**

Nitrogen cycle.

In gaseous cycles, the main reservoirs of chemical are the atmosphere and ocean, *e. g.*, carbon cycle, nitrogen cycle, oxygen cycle, etc.

63

(i) Deserts have the lowest primary productivity as the soil is deficient in moisture(ii) Some plants have more efficiency to trap sunlight (sugar cane), so they accumulate more primary productivity

(iii) Productivity is maximum in the coral reefs because they grow in areas having good light, enough warm water and abundant nutrients

64

Pyramid of energy is a picture of rates of passage of food mass through the food chain. It is **always upright**, as in most of the cases there is always a gradual decrease in the energy content at successive trophy levels.

65 **(d)**

In a food chain a plant is primary producer. Producers are autotrophic organisms, which alone are able to manufacture organic food from inorganic raw materials in the process of photosynthesis

66

The highest primary productivity in terms of per unit area is of estuaries > Swamps and marrhes > Tropical rair forest > Temperate forest whiclein terms of average would net primary.Production is of opern ocean > Tropical rain forest > Temperate rainforest > Sauanna > Nothern coniferous forest

67

Great barrier reef along the North-eastern Australia is an ecosystem. It is about 2000 km long and up to 150 km from shore.

68 **(a)**

A much less fraction of energy flows through grazing food chain in ecosystem terrestrial. Energy for the food chain comes from the sun. Food chain adds energy into the ecosystem

69 **(a)**

Rain is required for higher primary productivity. Desert have the lowest primary productivity as the soil is deficient in moisture

70

The ultimate source of entire energy used by living things in an ecosystem is sunlight. Solar energy received by an ecosystem depends on the latitude, slope, cloud cover, air pollutants, etc.

71 **(d)**

Climax community is the stable, self perpetuating and final biotic. Climax community is the stable, self perpetuating and final biotic community that develops at the end of biotic succession and is in perfect harmony with the physical environment. It is also termed as climatic climax community

72 **(b)**

Stratification involves vertical changes, within the community. Stratification in a forest community (especially tropical forests) is most complicated, where as many as five vertical sub-divisions may be recognized, *i.e.*, subterranean sub-division, forest floor, herbaceous vegetation, shrubs and trees.

74

(c)

Only 10% of the herbivore productivity is utilised for raising productivity of primary carnivores. The rest is consumed in ingestion, respiration, maintenance of body heat and retain only 10% of energy present in primary carnivores. It is called 10% law which was proposed by Lindeman, 1942

75 **(a)**

Ecological succession is directional because succession proced in a direction and periodical. Primary succession is a biotic succession that occurs on a previously sterile or primarily bare area, *e. g.*,newly exposed sea floor igneous rocks, sand dunes, new cooled lava sediment, etc.

76 **(c)**

At 40° North and South, the heat gain through insolation approximately equals to the heat loss through terrestrial radiation.

77 **(d)**

Herbivores (plant-eating animals) are depends upon producers (plant) so, rabbits are herbivores

79 **(b)**

Pyramid of number is used to know how many organisms are present at each level of a food chain

80 **(c)**

For food, light and space, the greatest competition is between two closely related species of same niche. Struggle for existence (competition) may be intraspecific (*i.e.*, between individuals of the same species), interspecific (*i.e.*, between different species) and extra specific (*i.e.*, between individual and its environment).

81 **(d)**

Human activities like deforestation and massive burning of fossil fuel for energy and transport have significantly increased the rate of release of CO_2 into the atmosphere **(b)**

82

In gaseous cycles, the main reservoirs of chemical are the atmosphere and ocean, *e. g.*,carbon cycle, nitrogen cycle, oxygen cycle, etc.

83 **(d)**

Producers constitute the first trophic level or base of a food chain. Producers are autotrophic organisms, which alone are able to manufacture organic food from inorganic raw materials in the process of photosynthesis

84

(a)

Stability is the power of a system to be in their state against unfavourable factor. Resilience is the capability of regaining its original shape or position after being deformed. Hence, it has low stability and high resilience.

85 **(a)**

Productivity of tropical rainforest is highest. The tropical rain forest covering 300,000 km²

area. They contain more than 50% of total flora and fauna of the world.

86

(a)

(c)

(a)

(b)

(c)

(b)

In a pond ecosystem, **producers** include phytoplankton (*e.g.*, diatoms, *Chlorella*, *Spirogyra*, *Chlamydomonas*, etc), free floating macrophytes(*e.g.*,*Lemna*, *Azolla*), suspended macrophytes(*e.g.*, *Utricularia*, *Hydrilla*), submerged plants (*Vallisneria*), floating leaved plants (*e.g.*, *Nelumbo*), emergent plants (*Sagittaria*) etc.

87

Both (a) and (b).

An ecosystem may be defined as a structural and functional unit of the biosphere, comprising living organisms and their non-living environment that interact by means of food chains and chemical cycles resulting in energy flow, biotic diversity and material cycling to form a stable, self-supporting system

88

Population of two or more species, whose geographical ranges or distribution concide or overlap are known as **sympatric species**.

Allopatric species occupy different vertical zones in the same geographical area. Parapatric species do not overlap but continuous, *i.e.*, touch each other.

Ring species are characterized by circular or looped geographical distribution.

89

In a grassland ecosystem, a larger number of grass plants or herbs support a fewer number of grasshoppers that support a still smaller number of frogs, the latter still smaller number of snakes and the snakes very few peacocks or falcons



90

Buried or cut forest already has soil humus and some vegetation (underground stems). So in buried or cut forest, succession is easy and is completed

91 (a)

Each trophic level has a certain mass of living material at a particular time called the standing crop. The standing crop is measured as the biomass of living organisms (biomass), as the number in a unit area

92

We know that plant only utilisexd 1-2% of total energy incident on earth. In the given dustion 100000 Kcal/m²/yr salar radiation is incident on earth. So plant producer utilize 1% of 100000 kcal m²/yr and that 1% is

 $=\frac{100000 \times 1}{100} = 1000 \text{ kcal/m}^2/\text{yr}$

And from produces to the next level only 10% will goes, so $\frac{1000 \times 10}{100} = 100 \text{ kcal/m}^2/\text{yr}$ will be transferred to primary consumer which is called secondary production

94 **(b)**

By the process of leaching, water-soluble inorganic nutrients go down into the soil horizon and get precipitated as unavailable salts

95

Climate.

(a)

Climax community is the stable, self perpetuating and final biotic community that develops at the end of biotic succession and is in perfect harmony with the physical environment. It is also termed as climatic climax community

96 **(a)**

A population consists of organisms of a particular species and has characteristics like

natality, mortality, age structure growth dynamics, etc. When several populations share a common habitat and its resources, they interact among themselves and develop into a biotic community. Hence, community is a larger unit than a population.

97

(d)

(c)

The end result of decomposition is the production of dark brown, smelling, humus rich organic matter and inorganic substance like carbon dioxide, water and nutrients

98 **(a)**

In sedimentary cycle, the main reservoirs are soil and rocks, *e.g.*, sulphur cycle, phosphorus cycle, etc.

99

A certain mass of living material at each trophic level of an ecosystem at a particular time is called **standing crop**. The standing crop is measured as the mass of living organisms (biomass) or the number in a unit area.

IN	IPOR	TANT	PRAC		JESTI	ON SERI	ES FOR	R NEET	EXAM	- 2 (AM	ISWERS)
1)	а	2)	b	3)	а	4)	а				
5)	d	6)	а	7)	а	8)	а				
9)	а	10) a	11)	а	12)	а				
13)	b	14) с	15)	d	16)	b				
17)	b	18)) b	19)	С	20)	b				
21)	С	22) a	23)	b	24)	d				
25)	d	26)) a	27)	а	28)	d				
29)	а	30)) b	31)	d	32)	d				
33)	b	34)) a	35)	b	36)	d				
37)	b	38)) d	39)	b	40)	d				
41)	а	42)) a	43)	b	44)	d				
45)	С	46)) b	47)	d	48)	b				
49)	С	50)) с	51)	а	52)	С				
53)	b	54)) b	55)	а	56)	а				
57)	С	58)) a	59)	а	60)	d				
61)	d	62)) b	63)	b	64)	b				
65)	d	66)) d	67)	d	68)	d				
69)	С	70)) d	71)	а	72)	b				
73)	d	74)) a	75)	b	76)	d				
77)	С	78)) a	79)	b	80)	С				
81)	С	82)) b	83)	d	84)	а				
85)	b	86)) b	87)	b	88)	b				
89)	а	90)) a	91)	С	92)	а				
93)	а	94)) c	95)	b	96)	С				
97)	d	98)) a	99)	d	100)	b				

2 **(b)**

Ozone depletion is occurring widely in the strotasphere, the depletion is particularly marked over the Antarctic region. This has resulted in formation of a large area of thinned ozone layer, commonly called as ozone hole

3 (a)

Prolonged intake of fluoride polluted water causes stiffing of bone and joints particularly spinal cord. Due to affinity with calcium, fluoride stores in bones which causes mottling of teeth, bone pains and outward bending of kegs from the knees. This is known as **Knock Knee Syndrome**.

4 **(a)**

Sundar Lal Bahuguna.

Chipko Movement was started in Garhwal, Himalayas in 1974 by Shri Sundar Lal Bahuguna to prevent cutting down of trees. Local woman hugged trees to prevent their cutting by the contractors

5 **(d)**

The most common type of aerobic bioreactors in use today is the stirred-tank reactor, which may feature a specific internal configuration designed to provide a specific circulation pattern. The stirred-tank bioreactor have been designed for availability of oxygen throughout the process.

6 **(a)**

They were all radioactive disasters

7 (a)

DDT, BHC, PCBs, etc are non-biodegradable pollutants, which are not degraded easily and are long lasting in the environment.

8 **(a)**

Catalytic converters are fitted into automobiles for reducing emission of poisonous gases like NO_2 and CO. They have expensive metals like platinum-palladium and rhodium as catalysts

9 **(a)**

In 1731, a Bishnoi woman, Amrita Devi showed **exemplary** courage by hugging a tree to prevent its cutting. Government of India has recently instituted the Amrita Devi Bishnoi Wildlife Protection Award for individuals or communities from rural areas that have shown extraordinary courage and dedication in protecting wildlife

10 **(a)**

Lichens are extremely sensitive to pollutants in the atmosphere and thus, they can be used as bio-indicator of air quality. Their sensitively results from their ability to absorb substances dissolved in rain and dew.

11 **(a)**

Combined biological and enzymatic treatment are used to remove phenol Chydrocarbony. Tyrosinase extraxted from mushroom *Agaricus bisporus* was used in the removal.

12

Urbanization is the major cause of disertification

13 **(b)**

(a)

One of most appreciated air pollution cleaner system, ESP is widely used in various industries. It is applicable to pollutants particulate matter and hazardous air pollutants such as mostmetals. Wet ESPs are often used to control acid mists and can provide incidental control of volatile organic compounds.

14 **(c)**

Lichens are sensitive to SO_2 environment. They cannot grow in sulphur dioxide polluted area. So, lichens are called pollution indicating plants.

15 **(d)**

Reforestation is an inexpensive but slow process for flood control. Reforestation improve soil fertility and reduce soil erosion

16 **(b)**

Mn causes sterility, eye disease, loss of memory or loss of vision in human beings.

17 **(b)**

The Central Pollution Control Board prescribed the BOD limit for the discharge of industrial and municipal waste water as < 10 ppm.

18 **(b)**

Eutrophication is the excessive nutrient enrichment of a water body. It is caused due to the addition of domestic sewage, phosphates, nitrate, etc.

19 **(c)**

Acid rain and smog are example of regional pollution.

Acid rain is caused mainly by oxides of sulphur and nitrogen and has a pH of 4 or 4.5. once in the air these oxides may react with moisture to form H_2SO_4 and HNO_3 .

 SO_2 (oxidized) $\rightarrow SO_3 + H_2O \rightarrow H_2SO_4$

NO(oxidized) \rightarrow NO₂ + H₂O \rightarrow HNO₃

Smog is harmful mixture of smoke and fog. It consists of mixture of primary and secondary pollutants (eg. Hydrocarbons, NO₂, PAN,HCHO).

20

(b)

In 1992, world leaders convened an **Earth Summit**in **Rio de Janeiro, Brazil**, in search of international agreements that could help to save the world from pollution, poverty and the waste of resources. Another Earth Summit was convened from 26th August to 4th September 2002 in Johannesburg, South Africa.

21 (c)

Depletion or thining of ozone layer allows harmful UV rays to reach earth and causes skin ageing, skin cancer, cataract, etc.

22 **(a)**

Ozone hole is not an actual hole but an area of extreme reduction in ozone concentration in the ozone layer in stratosphere

23 **(b)**

A-diesel, B-petrol, C-42%

24 **(d)**

World environment day is celebrated on 5th June

25 **(d)**

A lake highly enriched with nutrients is called eutrophic.

26 **(a)**

Radioactive wastes.

Nuclear energy was assumed to be a natural, non-polluting way of electricity generation till the incidents at Three Mile Island and Chernobyl. It is now considered as the most potent pollutant

Leakage of radioactive materials from thermal power plants and unsafe disposal of radioactive wastes are the main causes of radioactive pollution

28

(d)

Methods of Solid Waste Disposal

(i) **Open Burning** Municipal waste is reduced by burning in open dumps but the unburnt waste serve as the breeding ground for rats and flies

(ii) **Sanitary Landfills** Wastes are dumped in a depression or trench after compaction and covered with dirt. Seepage of chemicals from these landfills can pollute underground water resources

(iii) **Rag-pickers and Kabadiwallahs** Wastes are collected and separated out into reusable or recyclable categories

(iv) **Natural Breakdown** The biodegradable materials are kept into deep pits in the ground for natural breakdown

(v) **Recycling** E-wastes can be recycled in specifically built facilities or manually to recover important metals

(vi) **Incineration** Majority of e-wastes generated in developed world is exported to developing world where they are incinerated

(a)

The main gases responsible for green house effect are CO₂, CH₄, CFCs, O₃, etc.

30 **(b)**

In Delhi, polluted air hangs above like a cloud.

31 **(d)**

Biomagnification or **biologicalamplification** is the passing of non-degradable pollutants like pesticides (DDT), etc, into the food chain and increasein amount per unit weight of organisms with the rise in trophic level due to accumulation in the body.

32 **(d)**

Increasing skin cancer and damages DNA and proteins in living organisms are the result of ozone depletion

33

(b)

Electronic waste (e-waste) describes loosely, discarded surplus, obsolete or broken electrical or electronic devices. Environmental groups claim that the informal processing of e-waste in developing countries cause serious health and pollution problems.

34 **(a)**

Reforestation is restoring a forest cover over an area where one existed earlier but was removed at some point of time in the past. It may occur naturally in a deforested area. A tree plantation movement or Van Mahotsava is being carried out in India since 1950. Under this movement, both government and private agencies perform tree plantation during July and February every year. In these months soil has sufficient water to support the growth of plant

35

(b) SO₂.

(d)

A scrubber can remove gases like sulphur dioxide. In a scrubber, the exhaust is passed through a spray of water or lime

36

Eutrophication is excessive growth of algae, plants and animals in water-bodies due to the nutrient enrichment particularly with nitrogen and phosphorous. Eutrophication is both natural and accelerated. Natural eutrophication is nutrient enrichment of a water-body due to natural ageing

Accelerated eutrophication is nutrient enrichment of water-bodies plants and due to human activities like passage of sewage, industrial effluents and run off from fertilised fields rich in nitrates and phosphates. Nutrients present in sewage, agriculture wastes and fertilisers cause dense growth of plants and planktonic algae. These are toxic to animals and humans

37 **(b)**

The activated sludge treatment involves the decomposition of organic matter through sewage fungus and decomposer bacteria by aeration in oxidation tanks. This aeration helps in the oxidation of sludge.

38 **(d)**

Carcinogen Cancer tissue Cigarette smoke - lungs Soot,coal tar - Skin

Leukamemia is blood cancer resulted due to unchecked proliferation of White Blood Cells(WBCs).

39 **(b)**

Ozone (O_3) is a gas, which is present as a layer in the stratosphere. It absorbs the high energy radiations or ultra violet (UV) rays from sun and protects us from the harmful effects of these radiations.

40

(d)

Over cultivation, unrestricted grazing deforestation and poor irrigation practices.

Soil erosion occurs when the soil is blown away by the wind or washed away by the rain. Human play a major role in soil erosion through their use and abuse of natural resources, for example deforestation, grazing, faulty farming systems, high crop intensity, housing construction by cutting plant mining, etc.

41

(a)

Eutrophication is a natural state in many lakes and ponds, which have a rich supply of nutrients. Generally, it occurs due to excessive use of chemical fertilizers and causes foul smell of water and death of aquatic organisms.

42 **(a)**

Algal blooms impart a distinct colour to water due to their pigments

43 **(b)**

Hydroelectric power plants do not cause pollution. The **thermal power plants** and **automobiles** cause air pollution. The chief pollutants of thermal power plants are fly ash, So₂, hydrocarbons and other gases while the pollutants of automobiles are CO hydrocarbons, SPM and other gases.

44 **(d)**

The phenomenon of increasing concentration of harmful substances inside the body of organism at successive trophic level is known as **biomagnification**. The pesticides, DDT, inorganic nitrate and non-degradable pollutants enter into the body of plants and animals through food chain.

45

(c)

(b)

The excess of amount of CO_2 forms a thick 'blanket' in the atmosphere which is transparent to sunlight but absorbs infra-red radiation trapping heat near the earth's surface. In this Way, due to CO_2 blanket, the earth's atmosphere works very much like a green house which causes warming up of the interior. So, carbon dioxide is called green house gas.

46

Primary pollutants are the pollutants which enter the air directly from the source, e.g., NO_2 , Br_2 , CI_2 , CO, DDT, etc.

Secondary pollutants develop from the interaction of primary pollutants and atmosphere constituents, e.g., oxides of nitrogen react with atmospheric moisture (water vapour) and from HNO_3 which results in acid rain.

47 **(d)**

Minamata bay of Japan was polluted by mercury (Hg), which resulted into Minamata disease.

48 **(b)**

The Montreal protocol on substances that deplete the ozone layer is a landmark international agreement designed to protect the stratospheric ozone layer. The treaty was originally signed in 1987 (effected in 1989) and substantially amended in 1990 and 1992. The Montreal protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere-chlorofluorocarbons(CFC_s), halons, carbon tetrachloride and methyl chloroform-are to be phased out by 2000(2005 for methyl chloroform).

49 **(c)**

Kerala and Sri Lanka.

An ecologically compatible system of disposal of human excreta is the use of dry composting toilets, called ecosave toilets. No water is required. Human excreta is converted into a resource as it forms natural fertilizer. Ecosan toilets are already working in many parts of Kerala and Sri Lanka

50

(c)

Since, large populations of *Escherichia coli* are found in human colon, the presence of E. coli in water indicates that, it has been contaminated with faecal matter. Thus, E. *coli* is

commonly known as indicator of water pollution.

51 **(a)**

Kyoto protocol has specified the commitments of different countries to mitigate climate changes.

52 **(c)**

O₃,PAN (Peroxy Acetyl Nitrate) and NO₂ are responsible for photochemical smog.

53

(b)

Many pesticides, such as DDT, aldrin and dieldrin, have a long life time in the environment. They are fat soluble and generally non-biodegradable. They get incorporated into the food chain and ultimately gets deposited in the fatty tissues of animals and humans In the food chain, because of their build up, they get magnified in the higher trophic levels called biological magnification. The phenomenon of biological magnification is also reported for certain other pollutants, such as heavy metals like lead, mercury and copper and radioactive substances as strontium-90

54 **(b)**

All of the given statements are correct except II

Ozone present in stratosphere acts as a shield absorbing UV radiation coming from the sun (a)

- 55 **(a)**
 - In India, the heaviest demand on forests is for fuel wood
- 56 **(a)**

Ozone layer is confined to the stratosphere. It is formed when sunlight reacts with O_2 molecules. The ozone protects the earth from harmful UV-rays by absorbing them.

57 (c)

Carbon monoxide is a pollutant. It is a poisonous gas. Hbhas maximum affinity for CO.

58 **(a)**

The rise in concentration of green house gases resulting in increasing the global mean temperature. It is called global warming. The various green gases are CO_2 (warming effect 60%), CH₄ (effect 20%), chlorofluorocarbons (effect 14%) and nitrogen oxide (effect 6%).

59 **(a)**

CO and oxides of sulphur from automobiles exhaust and smoke from factories is the main cause of pollution in big cities.

60 **(d)**

Air pollution problem in India become so serious that a public interest litigation (PIL) was filed in the supreme court. Under its directives, the government was asked to take appropriate measures including switching over the entire fleet of public transport from diesel to **compressed naturalgas** (CNG).

61

(d)

(b)

(b)

Eichhornia and certain phytoplanktons have capacity of purification of water. Cells of these plants uptake and accumulate heavy metals and other toxicants of polluted water. Organic pollutants of water like petroleum can be degraded with the help of bacteria *Pseudomonas. Beggiatoa* is a sulphur bacteria which oxidizes hydrogen sulphide to sulphar. *Chlorella* and *Spirogyra* are green algae, which do not help in purification of water.

62

The materials and poison such as aluminium ions, mercurial salts and DDT that either do not degrade or degrade only extremely slowly in the natural environment are called **non-biodegradable pollutants**.

63

Mercury was responsible for the Minamata epidemic that caused several deaths in Japan. This tragedy had occurred due to consumption of heavily mercury contaminated fish (27 to 102 ppm) by the villagers. 64 **(b)**

The increase in the concentration of a non-biodegradable pollutant through successive trophic levels is called **biologicalmagnification**. **Seagull** is the top consumer in the food chain therefore, highest concentration of DDT will be deposited in it. **Phytoplanktons** are producers in the water bodies therefore, they have least concentration of DDT.

65 **(d)**

E.coli resides in the large intestine of human. Therefore, if these are present in water supply, it can be guessed that water supply has been contaminated by sewage.

66 **(d)**

Bad ozone is formed in troposphere. It is harmful to plants and animals. Good ozone is formed in stratosphere and absorbs harmful UV radiation from the sun

68 **(d)**

The thickness of the ozone in a column of air form the ground to the top of the atmosphere is measured in terms of Dobson Units(DU).

69 **(c)**

Montreal protocol refers to the substances such as CFCs, (chlorofluorocarbons), methane that deplete the ozone layer.

70 **(d)**

Green house effect is the warming up of earth due to accumulation of green house gases. Green house gases mainly include carbon dioxide(CO_2), methane

(CH₄), chlorofluorocarbons (CFCs), etc.

71 **(a)**

Radiations from nuclear wastes cause mutations at a very high rate. At high doses, nuclear radiations are lethal. At low doses, radiations cause disorders and cancer

72 **(b)**

Pollutant is any substance, chemical or factor, which has a potential to harmfully affect the human being, plants and other animals and therefore, the homeostasis of environment.

73 **(d)**

Increase in the level of greenhouse gases in the atmosphere causes the rise in global mean temperature called global warming. *Strategies for reducing global warming are* (i) Reducing deforestation

- (ii) Plantation
- (iii) Reduction of emission of greenhouse gases into the atmosphere
- (iv) Cutting down the use of fossil fuels
- 74 **(a)**

(b)

Euro II norms were stipulated to control sulphur content at 350 ppm in diesel and 150 ppm in petrol and aromatic hydrocarbons are to be contained at 42%

75

In 1987, twenty seven industrialized countries signed the **Montreal protocol** for reduction and release of CFCs (chlorofluorocarbons) depleting ozone layer, into the atmosphere. It was followed by increasingly stringent amendments in London in 1990 and in Copenhagen in 1992.

76 **(d)**

A scrubber can remove gases like sulphur dioxide. In wet scrubber, a fine spray of water or alkaline fluid like lime is allowed to fall over exhaust emissions. Water dissolves gases. The particles also become heavy and fall down. Lime reacts with sulphur dioxide to produce a precipitate of calcium sulphate or calcium sulphide is used to remove soluble gases and particles

77

(c)

CO₂ is opaque to infra-red rays, which allow entry of radiations in atmosphere but prevents

return of heat to space from earth.

78

(a)

(b)

Population growth possesses serious threat to the forest. The forest are the basis needs of everyday life as they provide us food, shelter and raw material for other essentialities but these forests are deforested for fulfilling the increasing demands of overpopulation like clearing of forests for agriculture, industries, urban area, etc.

79

Smog secondary pollutants are formed by reactions amongst the primary pollutants. They are often more harmful than primary pollutants

80 **(c)**

According to **Holmes** et al, (1933), USA is responsible for the largest portion of man made contributions to the green house effect (21%), followed by Russia (14%), European countries (14%), India (4%) and the rest of the world (36%)

81 (c)

Stratosphere.

Bad ozone is formed in troposphere. It is harmful to plants and animals. Good ozone is formed in stratosphere and absorbs harmful UV radiation from the sun

- 82 **(b)**
 - $\mathsf{CFC}_s,\mathsf{CH}_4,\mathsf{N}_2\mathsf{O}$ deplete ozone layers in atmosphere.

83 **(d)**

Platinum-palladium and rhodium.

Catalytic converters are fitted into automobiles for reducing emission of poisonous gases like NO_2 and CO. They have expensive metals like platinum-palladium and rhodium as catalysts

84 **(a)**

El Nino effect is closely associated with global warming. Rise in temperature leads to deleterious changes in the environment and results in odd climatic changes (*e. g.*,El Nino effect)

85

(b)

The environmental Protection Agency (EPA) has set the Maximum Contamination Lavel (MCL) of nitrate for the safety of drinking water. Nitrate levels at or above this level have been known to cause a potentially fatal blood disorder in infants under six months of age called methaemoglobinemia or blue-baby syndrome, in which there is a reduction in the oxygen carrying capacity of blood.

87 **(b)**

Deforestation is the removal of a forest or stand of trees where the land is thereafter converted to a non-forest use. Examples of deforestation include conversion of forest land to farms, ranches or urban use

88 **(b)**

Noise is the most dangerous pollutant of the environment. The unit of sound level is decibel. In a residential areas, during day time 55 dB of sound (45 dB at night) is permissible through noise pollution control law.

90

(a)

(c)

In 1987, under Air Prevention and control of pollution Act, noise was recognised as an air pollutant

91

'Green house effect' refers to selective energy absorption by green house gases (e.g., carbon dioxide, methane, nitrogen oxide, chlorofluorocarbons and water vapour) in the atmosphere, which allows short wavelength energy to pass through but absorbs longer wavelength and reflect heat back to earth.

92 **(a)**

SO₂ emitted from Mathura refinery (located about 40 km from Taj Mahal) as well as from foundries, power houses and railway yards get mixed with the atmospheric moisture and get converted into sulphuric acid, which settle down on the exterior of Taj Mahal. It reacts with marble (CaCO₃) leading to corrosion and discolouration of the monument.

93 **(a)**

An international treaty, Montreal Protocol, was signed at Montreal, Canada, in 1987 to curb the emission of ozone depleting substance. More protocols have been laid down in controlling emission of CFCs

94 **(c)**

Greenhouse gases are those gases, which are transparent to solar radiation but retain and partially reflect back long wave heat radiations

CFFs, CO₂, CH₄, NO₂, are greenhouse gases. The phenomenon of keeping the earth warm due to presence of these gases in the atmosphere is called greenhouse effect

95 **(b)**

The temperature of the earth has increased by 0.6°C in last three decades, which will lead to changes in precipitation patterns. Rise in temperature leads to deleterious changes in environment resulting in odd climatic changes called **El Nino effect**. The rise in temperature will lead to the increased melting of polar ice caps which will cause the rise in sea level and many coastal areas will be submerged

96

(c)

(a)

Due to addition of domestic wastes (sewage, phosphates, nitrates, etc) water body become rich in nutrients. With the addition of nutrients, there is stimulated luxuriant growth of algae in water leads to algal blooms. The algal blooms complete with other aquatic plants for light and photosynthesis. Thus, oxygen level is depleted. Moreover, these blooms also release some toxic chemicals, which kill fish and other animals.

97 **(d)**

Acid rain problem can be attributed mainly to atmospheric pollutants such as oxides of sulphur and nitrogen. The oxides of sulphur are released from the smoke stacks of coal fired power plants, smelters and other industries. The oxides of nitrogen came from combustion of fuels in automobiles as well as in power plants.

98

Eutrophication is increased in amount of nutrients in water due to detergents, pesticides, etc, and it leads to organic loading, depletion of O_2 , etc.

99 **(d)**

Catalytic converters are fitted into automobiles for reducing emission of poisonous gases like NO₂ and CO. Catalytic converters have costly metals like platinum, palladium and rhodium as catalysts. Exhaust gases first pass through catalytic converter Hydrocarbons which have been left unburnt are oxidised to produce carbon dioxide and water. Carbon monoxide is also oxidised to form carbon dioxide. However, nitrogen oxide splits up to form nitrogen gas. Auto mobiles fitted with catalytic converter should not use

leaded petrol because lead inactivates the catalyst of the converter

100 **(b)**

80 dB.

Noise is defined as undesired high level of sound. It is a physical form of pollution that affects the receiver directly. Noise or pollutant sound has a value of 80 dB and above