

Sample paper (MSc. Environmental Science)

Q. No.	Question Text	Option A	Option B	Option C	Option D
1	An ecosystem gradually merges with an adjoining one through a transitional	Ecological niche	Ecological footprint	Ecotone	Ecosphere
2	The Indian Parliament passed the Biodiversity Bill in	2000	2005	2001	2002
3	EIA is a----- which helps to evaluate environmental impact of proposed developmental	Quantitative	Tool	Subjective	Clearance
4	The first protected area in India is	Silent valley	Corbett National Park	Bandipur sanctuary	Kanha National Park
5	The components of LPG are;+M22	Methane & Hexane	Propane & Butane	Ethane & Methane	Methane & Butane
6	Which of the following conceptual spheres of the environment is having the	Atmosphere	Hydrosphere	Lithosphere	Biosphere
7	Which of these layers of the atmosphere consists of the ozone layer that is responsible for absorbing	Troposphere	Mesosphere	Stratosphere	None of these
8	Which of these are essential non-metallic minerals?	Coal, silica, clay, cement	Iron, copper, aluminium, zinc	Gold, platinum, silver	Granite, limestone, marble
9	The environmental lapse rate is related to:	Change in atmospheric temperature with altitude	Change in atmospheric temperature with latitude	Change in atmospheric Pressure with latitude	Change in Rainfall with latitude
10	Septic tank is:	An aerobic attached growth treatment system	An aerobic suspended growth biological treatment system	An anaerobic attached growth biological treatment system	An anaerobic suspended growth treatment system
11	Biochemical Oxygen Demand measures:	Industrial pollution	Air pollution	Pollution capacity of effects	Dissolved O2 needed by microbes to decompose organic waste
12	Air pollution from automobiles can be	Cyclone separator	Electrostatic precipitator	Catalytic converter	Wet scrubber
13	Which one of these does NOT refer to the direct use	Grass for grazing	Gums and resins	Medicine	Bamboo for baskets
14	Which of these does not constitute to be a reason for	Extinction of species	Increasing use of wood	Building dams and mining	Extensive usage of fuel woods
15	Which of these elements is considered to be the largest source of commercial energy consumption in the world?	Nuclear	Natural gas	Oil	Coal

16	How many total numbers of biodiversity hotspots are there in the world?	36	32	28	18
17	Which two forms of alcohol do we include in biofuels?	Methanol and Ethanol	Propanol and Ethanol	Propanol and Methanol	None of the above
18	The pre-industrial concentration of CO ₂ in the atmosphere was	260 ppm	315 ppm	230 ppm	280 ppm
19	The average salinity of sea	0.018	0.02	0.025	0.035
20	The main reason for blueness of the sky is -	Due to the presence of water vapor	Due to the absorption of blue light due to the air	Due to the scattering of sunlight by air molecules	None of the above
21	The mosquito repellent that is used in the homes in the form of a coil, liquids, etc.	Sedatives	Pesticide	Insecticide	Fertilizers
22	Which of the following gas destroys the chlorophyll present in the plant leaves?	SO ₃	H ₂ S	SO ₂	CO ₂
23	In which city India's largest Bio-CNG plant was inaugurated recently to focus on 'Waste to Energy'	Pune	Indore	Bangalore	Delhi
24	In May 2020, a Geographical Indication (GI) tag was given to----- flower for its unique features like longer stigmas, deep-red color, high aroma,	Uttarakhand Rhododendron	Kerala Neelakurinji	Kashmiri Saffron	Madurai Jasmine
25	The two Indian cities jointly recognized as the '2021 Tree City of the World.' by United Nations Food and Agriculture Organisation (UN-FAO) along with Arbor Day Foundation	Hyderabad and Mumbai	Bangalore and Mumbai	Hyderabad and Pune	Kerala and Madurai
26	Scoping is procedure of----- environmental	Identifying	Impact	Physical impact	Attributes
27	India's first organic waste-powered Electric Vehicle (EV) charging station is	Hyderabad	Mumbai	Baroda	Delhi
28	State that launched the "Single-Use Plastic Buy Back	Madhya Pradesh	Jharkhand	UttarPradesh	Himachal Pradesh
29	India has committed to achieve 500 GW of installed electricity capacity from non-fossil fuel sources by 2030 at	COP 26	COP 24	COP 27	COP 22
30	India's largest floating solar power plant is in	Tamil Nadu	Kerala	Telangana	Gujarat

31	Automatic sirens near the national highway, to protect elephants from accidents has been installed by which state	Orissa	Karnataka	Uttarakhand	Assam
32	Which Ministry gives environmental clearance to developmental projects in	MHRD	MOEF	MNES	MoEF&CC
33	Which country has the highest incidence of pollution linked deaths in the	China	Bangladesh	India	Kenya
34	Water Conservationist and environmentalist also known as "Water man of India"	Rajendra Singh	Shirish Apte	Aabid Surti	Amla Ruia
35	Which among the following country is considered to have the world's first	India	Brazil	Australia	South Africa
36	The concept of River networking in India is related	Landslides	Flood control	Waste management	Cyclones
37	Rachel Carson in her book Silent Spring has raised concern on	Economical & social impacts of environment	Deforestation	Climate change	Impacts of agro-chemicals on ecological functions
38	Average composition of biodegradable waste in Municipal Solid Waste	30 – 35%	40 – 45%	55 – 65%	60 – 70%
39	Solar radiation before entering the atmosphere carries energy at a rate of 2 cal cm ⁻² min ⁻¹ , which is	Atmospheric constant	Photosynthetic constant	Thermal constant	Solar constant
40	The amount of UV radiation passing through the atmosphere and reaching the earth surface in the tropics near equator is	Equal to the amount reaching the earth surface near poles	Lower than the amount reaching the earth surface near poles	Higher than the amount reaching the earth surface near poles	Higher than the amount reaching the earth surface near north pole and Lower than the amount reaching the earth surface near south pole
41	Potato slices are allowed to dehydrate under the sun.	Their water potential decreases	Their water potential increases	Their water potential does not change	Their water potential becomes Zero
42	Where are hydathodes present in plant?	Root tips	Leaf margins	Xylem vessels	Xylem tracheid
43	Organisms which do not require any additional growth supplements are	Auxotroph	Heterotrophs	Herbivores	Phototrophs
44	Nitrite reductase is present in	Chloroplast of leaves	Leucoplast of roots	Cytosol of leaves	Mitochondria of roots

45	How do C4 plants avoid photorespiration?	By not using RuBisCO	By employing PEP carboxylase in mesophyll cells and RuBisCO in bundle-sheath cells	By employing RuBisCO in mesophyll cells and PEP carboxylase in bundle-sheath cells	By closing their stomata during the day
46	The ripe fruit falls off due to the activity of	Ethylene	Auxin	Cytokinins	Absciscic acid
47	Which of the following can be used as Heart medicine?	Saponins	Pyrethroids	Cardenolides	Phenylalanine
48	Which of the following is present in the casparian strip of root endodermis?	Waxes	Cutin	Suberin	Cutinase
49	Bending of Avena coleoptiles is due to which	Phytochorme	Cryptochorme	Phototropin	Neochrome
50	In short day plants, flowering is induced by :	Long nights	Photoperiod less than 18 hours	Day length less than critical and long uninterrupted night	Day length slightly more than critical and long uninterrupted night
51	Identify from the following the only taxonomic category that has a real existence	Phylum	Species	Genus	Kingdom
52	Biological species concept was given by	Stanley	Hutchinson	Darwin	Mayr
53	Deuteromycetes are called imperfect fungi because	The sexual cycle has not been observed	Their body shape is not properly developed	They do not produce mycelia	They have no asexual reproduction
54	Which of the following group of algae do not have	Green algae	Blue algae	Brown algae	Diatoms
55	The algal partner of lichen is	Mycobiont	Phycobiont	Saprotroph	None of the above
56	Stanley Miller synthesized in his experiment	Virus	Protein	Amino acid	Cell
57	Which of the following was not found in free form	Ammonia	Methane	Oxygen	Hydrogen
58	Connecting link between protozoa and one celled	Paramecium	Euglena	Amoeba	Trypanosoma
59	To be successful in evolution a mutation must occur in	Plasma proteins	Somatoplasmic DNA	Germplasm's DNA	RNA
60	Alleles are	Alternate forms of a gene	Homologous Chromosomes	Pair of Sex Chromosomes	None of these
61	Cu_2Cl_2 is used as a catalyst in the chemical reaction involving the formation of	DDT	PVC	TNT	Glucose
62	the iron ore magnetite consists of	Fe_2O_3	Fe_3OH_4	FeCO_3	$3\text{Fe}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$
63	The nucleus of an atom consists of	Electrons and neutrons	Electrons and protons	Protons and neutrons	All of the above

64	The number of moles of solute present in 1 kg of a solvent is called its	Molality	Molarity	Normality	Formality
65	The most electronegative element among the	sodium	Bromine	Fluorine	Oxygen
66	The metal used to recover copper from a solution of	Na	Ag	Hg	Fe
67	The number of d-electrons in Fe^{2+} (Z = 26) is not equal to	p-electrons in Ne (Z = 10)	s-electrons in Mg (Z = 12)	d-electrons in Fe (Z = 26)	p-electrons in Cl (Z = 17)
68	The metallurgical process in which a metal is obtained in a fused state is called	Smelting	Roasting	Calcinations	Froth floatation
69	The molecules of which gas have highest speed ?	H_2 at -73°C	CH_4 at 300 K	N_2 at $1,027^\circ\text{C}$	O_2 at 0°C
70	The oldest rocks in the earth's crust were once molten, and came from deep inside the earth. The molten rock, called magma, spewed out in volcanic eruptions during the earth's early life	Granite	Basalt	Igneous rocks	Sedimentary rocks
71	The law which states that the amount of gas dissolved in a liquid is proportional to	Dalton's law	Gay Lussac's law	Henry's law	Raoult's law
72	The main buffer system of the human blood is	$\text{H}_2\text{CO}_3 - \text{HCO}_3^-$	$\text{H}_2\text{CO}_3 - \text{CO}_3^{2-}$	$\text{CH}_3\text{COOH} - \text{CH}_3\text{COO}^-$	$\text{NH}_2\text{CONH}_2 - \text{NH}_2\text{CONH}^+$
73	The gas present in the stratosphere which filters out some of the sun's ultraviolet light and provides an effective shield against	Helium	Ozone	Oxygen	Methane
74	The most commonly used bleaching agent is	alcohol	Carbon dioxide	Chlorine	Sodium chlorine
75	The nucleus of a hydrogen atom consists of	1 proton only	1 proton + 2 neutron	1 neutron only	1 electron only
76	The heat required to raise the temperature of body by	specific heat	Thermal capacity	Water equivalent	None of the above
77	The nuclear particles which are assumed to hold the nucleons together are	electrons	Positrons	Neutrons	Mesons
78	The mass of P_4O_{10} that will be obtained from the reaction of 1.33 gram of P_4 and 5.07 of oxygen is	2.05 gram	3.05 gram	4.05 gram	5.05 gram
79	The octane number of zero is assigned to	2-methyl octane	n-heptane	iso-octane	3-methyl octane

80	The metal that is used as a catalyst in the hydrogenation	Ni	Pb	Cu	Pt
81	What is 'dun' ?	A plain land within mountain	A transverse valley cut by river	A recent valley	A wide longitudinal strike valley
82	Isostasy term was first used	Airy	Wagner	Dalton	Dalton
83	What are the two most abundant elements in nebula (gas clouds) in the	Hydrogen and Helium	Nitrogen and Oxygen	Oxygen and Silicon	Iron and Nickel
84	Which of the following are barchans ?	Deflection Basin	Oasis	Crescent shaped dunes	Sand storms
85	Which of the following is associated with volcano ?	Tillite	Morain	Varve	Tephra
86	Which of the following is formed by chemical	Morains	Bauxite	Gorge	Bajada
87	Esker is a type of	Moraine deposit	Eolian deposit	Glacial deposit	Fluvial deposit
88	Which of the following is an amorphous mineral ?	Opal	Cat's Eye	Topaz	Lapiz Lazuli
89	The discontinuity between outer core and inner core is	Mohorovicic Discontinuity	Conard Discontinuity	Repetti Discontinuity	Lehmann Discontinuity
90	Which of the following rock is found in Island arc ?	Komateiite	Albitite	Syenite	Andesite
91	Earliest life on planet earth belongs to	Green algae	Cyanobacteria	Trilobite	Sponges
92	Old age fossils deposited in the younger age rocks are	Trace Fossils	Living Fossils	Derived Fossils	None of these
93	Which of the following is a living fossil?	Arca	Cardita	Lingula	Trigonia
94	Surface earthquakes waves of higher intensity causes	No disaster	Greater Disaster	Lesser Disaster	High intensity waves are never generated in surface earthquake.
95	The Richers scale is used for measuring the	Relative humidity of atmosphere	Intensity of earth's tremor	Electric conductivity of water	Speed of wind
96	The elements that makes up about 50% of the Earth's	Silicon	Iron	Oxygen	Aluminium
97	Asteroids are between	Mars and Jupiter	Mars and Earth	Jupiter and Saturn	Saturn and Uranus
98	The terms "Tethys Sea" was	Danna	Hall	Suess	Wegner
99	A plate comprises	Crust only	Crust and whole of the mantle	Crust and some part of mantle	Crust, mantle are some part of core
100	Oxy-bow lakes are generally associated with the ___ stage of stream.	Youth	Mature	Old	In any stage of a stream