

Sr No.	PhD Ecology and Environmental Studies
1	Choose the missing term out of the given options: _a_a_b_a_b_b_ab_aab
Alt1	aaabb
Alt2	babab
Alt3	bbaab
Alt4	bbbaa

2	Choose word from the given options which bears the same relationship to the third word, as the first two bears: Hour : Second :: Tertiary : ?
Alt1	Intermediary
Alt2	Primary
Alt3	Ordinary
Alt4	Secondary

3	Select the lettered pair that has the same relationship as the original pair of words: Stickler : Insist
Alt1	Laggard : Outlast
Alt2	Braggart : Boast
Alt3	Haggler : Concede
Alt4	Trickster : Risk

4	Select the lettered pair that has the same relationship as the original pair of words: Necromancy : Ghosts
Alt1	Romance : Stories
Alt2	Magie : Amulets
Alt3	Alchemy : Gold
Alt4	Sorcery : Spirits

5	Find out the number that has the same relationship as the numbers of the given pair: MAD : JXA : RUN : ?
Alt1	ORK
Alt2	OSQ
Alt3	PRJ
Alt4	UXQ

6	Spot the defective segment from the following:
Alt1	Keep the miscreants
Alt2	at your arm's length
Alt3	for
Alt4	they will pull the wool over your eyes

7	The terrorists held the tourists ----- for ransom.
Alt1	as hostages
Alt2	hostages
Alt3	hostage

Alt4	captives
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8	If I ----- wealthy, I would have got many friends.
Alt1	had been
Alt2	were
Alt3	was
Alt4	am

9	Choose the option closest in meaning to the given word: NEOLOGISM
Alt1	inoculation
Alt2	coinage
Alt3	consistency
Alt4	mirth

10	Choose the antonymous option you consider the best: SUAVE
Alt1	crestfallen
Alt2	polite
Alt3	rough
Alt4	cherished

11	In a certain code, REFRIGERATOR is coded as ROTAREGIRFER. Which word would be coded as NOITINUMMA ?
Alt1	ANMOMIUTNI
Alt2	AMNTOMUIIN
Alt3	AMMUNITION
Alt4	NMMUNITIOA

12	Traffic : Road in the same way as
Alt1	Aeroplane : Aerodrome
Alt2	Blood : Veins
Alt3	Roots : Tree
Alt4	Car : Garage

13	The following information is given: One of M.Gopi, his wife, their son and Mr.Gopi's mother is an architect and another is a doctor. (i) If the doctor is younger than the architect, then the doctor and the architect are not blood relatives. (ii) If the doctor is a woman, then the doctor and the architect are blood relatives. (iii) If the architect is a man, then the doctor is a man. Whose occupation is known by this information?
Alt1	Mr. Gopi is the doctor
Alt2	Mr. Gopi's son is the architect
Alt3	Mrs. Gopi is the doctor
Alt4	Mr. Gopi's mother is the doctor

14	Gopal was ranked 5th from the top and 16th from the bottom in a test. How many students were there in his class
Alt1	19
Alt2	21
Alt3	22
Alt4	20

15	Median of 10o, 5o, -2o, -1o, -5o, 15o is
Alt1	-2o
Alt2	-1o
Alt3	2o
Alt4	3o

16	Which of the following is 'OXYMORON'?
Alt1	Found Missing
Alt2	TIT-TAT
Alt3	GOTO
Alt4	Misunderstood

17	There are 5 persons in a class. Each one is shaking hand with the other. Find the total number of hand shakes?
Alt1	5
Alt2	10
Alt3	20
Alt4	60

18	Of the 26 Capital letters, how many are symmetrical along with vertical and horizontal axes.
Alt1	4
Alt2	3
Alt3	6
Alt4	5

19	There are 30 boys and 60 girls in a village . There are 70 men and 40 women in that village. What is the percentage of boys in that village?
Alt1	0.1
Alt2	0.25
Alt3	0.2
Alt4	0.15

20	There are N students in a class and only 8 of them are girls. If 11 boys added to the class,how many students in the class are boys?
Alt1	N+3
Alt2	N-3
Alt3	N-19

Alt4	19
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21	What is the estimate of species richness on earth?
Alt1	<1 million
Alt2	40-50 million
Alt3	5-30 million
Alt4	4-5 million

22	For which of the following species has the use of habitat corridors been proposed as an important conservation tool?
Alt1	Bay Checkerspot Butterfly
Alt2	Eastern hemlocks
Alt3	Florida panther
Alt4	Sea otters

23	Photosynthetically active radiation is between:-
Alt1	300 - 600 nm
Alt2	400 - 700 nm
Alt3	700 - 1200 nm
Alt4	100 - 400 nm

24	The food web consists of:-
Alt1	Food chains
Alt2	Guilds
Alt3	Predators and prey
Alt4	Biogeochemical cycles

25	Persons working in cement plants and limestone quarries are more prone to:-
Alt1	Cancer
Alt2	Silicosis
Alt3	Asthma
Alt4	Flourosis (bone disease)

26	Which of the following could be an example of microevolution?
Alt1	The sudden appearance of an entire genus
Alt2	A change in wing colour within a bird population due to point mutation
Alt3	Fluctuations in trait evolution
Alt4	Large structural differences between surface layer fossils and those deeper

27	What of these is indicative of demographic stochasticity?
Alt1	Bottleneck
Alt2	Random variation in fecundity
Alt3	Random variation in gene flow
Alt4	Random variation in sex ratios

28	Why did the Asian Cheetah go extinct in India?
Alt1	Human hunting

Alt2	Cheetah was never found in India
Alt3	Disease
Alt4	Habitat loss

29	Which part of the growth curve does one harvest a population to obtain sustainable yield?
Alt1	When population is stable
Alt2	When it is declining
Alt3	At the beginning
Alt4	At the steep part

30	Trophic pyramid depicts:-
Alt1	Community structure of ecosystem
Alt2	Biomass from trophic level to another
Alt3	Food types of animals and plants
Alt4	Number of functional groups at each trophic level

31	Separation of compounds in Gas Chromatograph (GC) depend on:-
Alt1	Solubility in gaseous phase
Alt2	Molecular weight
Alt3	Solubility in stationary phase
Alt4	Solubility in carrier gas and liquid phase

32	What is genetic diversity?
Alt1	The germplasm resources
Alt2	The number of genotypes in an ecosystem
Alt3	Genetic differences between species
Alt4	Genetic variability within species

33	ISRO stands for:-
Alt1	Integrated Science Research Organization
Alt2	International Space Research Organization
Alt3	Indian Space Research Organization
Alt4	Indian Science Research Organization

34	The lithosphere includes all:-
Alt1	Oceans
Alt2	Gases and airborne particles
Alt3	Ice caps
Alt4	Rocks, soils and sediments

35	The Competitive Exclusion Principle states that:-
Alt1	Two related species cannot coexist
Alt2	Two species competing for the same resources cannot coexist
Alt3	Competition does not regulate biological communities
Alt4	More competitive species will specialise

36	Which of the following could be an example of allopolyploidy?
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Alt1	Chromosome number decreases by one in a gamete and in the offspring it produces
Alt2	Chromosome number increases by one in a gamete and in the offspring it produces
Alt3	One parent has 32 chromosomes, the other has 10, and their offspring has 42
Alt4	Gametes and somatic cells have the same number of chromosomes

37	Which of these is an ecosystem service?
Alt1	Ex situ conservation
Alt2	Captive breeding
Alt3	Carbon sequestration by forests
Alt4	Hunting of wildlife

38	Coliform bacteria in water is an indication of the presence of:-
Alt1	Decaying animals and plants
Alt2	Excess fertilizer
Alt3	Radioactive waste
Alt4	Human feces

39	Availability of ozone at the ground level is:-
Alt1	Useful to human
Alt2	Harmful to human
Alt3	There is no ozone at ground level
Alt4	Neither useful nor harmful to human

40	Economic valuation of consumptive use value of natural resources is by:-
Alt1	It cannot be valued
Alt2	The market value of the resource
Alt3	The time and energy taken to harvest the resource
Alt4	Value of selling the resource

41	Standard FCC is created by the following band combinations:-
Alt1	B, G, R in B, G, R color guns
Alt2	IR, G, R in B, G, R color guns
Alt3	IR, R, G in B, G, R color guns
Alt4	G, R, IR in B, G, R color guns

42	In microbial mining, one of the following organism is utilized:-
Alt1	Many different bacteria
Alt2	Clostridium
Alt3	Thiobacillus
Alt4	Pseudomonas

43	COD of wastewater indicates:-
Alt1	inorganic matter
Alt2	Non-biodegradable matter
Alt3	Biodegradable matter
Alt4	Total organic matter

44	The instrument used to measure relative humidity is:-
Alt1	Hydrometer
Alt2	Thermometer
Alt3	Barometer
Alt4	Hygrometer

45	The model of exponential population growth predicts that the per capita population growth rate (r):-
Alt1	Get larger as a population gets larger
Alt2	Does not change as population gets larger
Alt3	is always at its maximum level (rmax)
Alt4	Get smaller as a population gets larger

46	Ecologists sometimes use mathematical models to:-
Alt1	Make basic observations about ecological relationships in nature
Alt2	Simulate natural events before conducting detailed field studies
Alt3	Avoid conducting laboratory studies or field work
Alt4	Determine the geographical ranges of populations

47	Under Kyoto Protocol, during the second commitment period, the parties committed to reduce GHG emissions by at least _____ below 1990 levels in the eight-year period from 2013 to 2020.
Alt1	0.3
Alt2	0.18
Alt3	0.25
Alt4	0.12

48	In lake ecosystem, the one that is classified as producer is:-
Alt1	Protozoa
Alt2	Rotifer
Alt3	Algae
Alt4	Bacteria

49	Which aquatic mammal probably went extinct recently?
Alt1	Dugong
Alt2	Baiji
Alt3	Blue Whale
Alt4	Crocodile

50	Electrostatic precipitators remove:-
Alt1	Nitrous oxide
Alt2	carbon dioxide
Alt3	particulate matter
Alt4	hydrocarbons

51	The calculated value of chi-square test is:-
Alt1	can be either positive or negative
Alt2	always negative

Alt3	always positive
Alt4	none of these

52	The major pollutants released from thermal power plants are:-
Alt1	SO ₂ & CO ₂
Alt2	SO ₂ - NO ₂
Alt3	CO & CO ₂
Alt4	Hydrocarbons

53	Bird pollinated flowers are usually:-
Alt1	Nocturnal, scented, white, tubular flowers with nectar
Alt2	Diurnal, yellow, scented, nectar
Alt3	Diurnal, blue, odourless, pollen
Alt4	Diurnal, red, tubular, odourless, with nectar

54	Habitat zonation in coastal marine ecosystems follows the following gradient from landward to seaward:-
Alt1	mangroves, coastal reefs sea grasses and salt marshes
Alt2	salt marshes, mangroves, sea grasses and coral reef
Alt3	sea grasses, salt marshes, coastal reefs and mangroves
Alt4	coastal reefs, mangroves, salt marshes and sea grasses

55	A characteristic that exhibits smooth changes in populations distributed along a geographical gradient is called a:-
Alt1	Subspecies
Alt2	hybridisation
Alt3	Ring specie
Alt4	Cline

56	Indicate the natural order of this ecosystem process:-
Alt1	Producers, consumers, decomposer and recycling
Alt2	Consumer, decomposer, producers and cycling
Alt3	Producer, recycling, decomposers and consumers
Alt4	Decomposer, producer, recycling and consumers

57	Life tables are used for assessing:-
Alt1	population growth and regulation
Alt2	probability of surviving to a particular age
Alt3	livelihood options of communities
Alt4	food webs

58	Geo stationery satellites are used for:-
Alt1	Resource mapping
Alt2	Disaster mapping
Alt3	Communication
Alt4	Estimating Aerosol

59	The permissible BOD of treated wastewater to be discharged into water bodies:-
Alt1	300mg/l
Alt2	30mg/l
Alt3	9mg/l
Alt4	3mg/l

60	What was the probably cause of extinction of dinosaurs?
Alt1	Meteorite
Alt2	Climate change
Alt3	Human hunting
Alt4	Diseases

61	According to optimal foraging theory, predators:-
Alt1	Feed on the plants when animal prey are scarce
Alt2	Always feed on the largest prey possible
Alt3	Choose prey based on search and handling prey relative to its caloric value
Alt4	Always feed on the prey that are easiest to catch

62	Sodium is usually estimated by which of the following analytical technique?
Alt1	Visible spectrophotometry
Alt2	Coulometry
Alt3	Flame photometry
Alt4	High pressure liquid chromatography

63	IPCC stand for:-
Alt1	Italian Panel on Climate Change
Alt2	Indian Panel on Climate Change
Alt3	Intergovernmental Panel on Climate Change
Alt4	International Panel on Climate Change

64	_____ are oxygen-producing photoautotrophs.
Alt1	Proteobacteria
Alt2	Spirochetes
Alt3	Chlamydias
Alt4	Cyanobacteria

65	The second law of thermodynamics deals with:-
Alt1	creation of matter in the Universe
Alt2	entropy in a system
Alt3	energy cannot be created or destroyed
Alt4	all systems are in thermal equilibrium

66	The global warming potential of CH ₄ is _____ times larger than CO ₂ .
Alt1	21 times
Alt2	11 times
Alt3	41 times
Alt4	31 times

67	Iron & manganese present as pollutant in water cannot be removed by:-
Alt1	Oxidation followed by settling & filtration
Alt2	Chlorination
Alt3	ion exchange process
Alt4	lime soda process or manganese zeolite process

68	The enzyme that cuts DNA into segments:-
Alt1	Ligase
Alt2	Endonuclease
Alt3	Polymerase
Alt4	Amylase

69	The hourly wages of 5 labourers is Rs. 6, 8, 10, 12, and 14. The mean is 10 and SD is 2.83. The wage is increased by Rs. 4- per hour. The new SD would increase by:-
Alt1	0
Alt2	1.414
Alt3	4
Alt4	2

70	A plant that has purple flowers (dominant) is crossed with one that has white flowers. The offspring were half white and half purple. What were the genotypes of the parents?
Alt1	PP x WW
Alt2	PP x pp
Alt3	Pp x pp
Alt4	Pp x Pp

71	An individual heterozygous for two genes is:-
Alt1	AaBb
Alt2	AABB
Alt3	aaBB
Alt4	Aabb

72	The temperature in Celsius scale is best described as a:-
Alt1	Ratio data set
Alt2	Ordinal data set
Alt3	Nominal data set
Alt4	Interval data set

73	Find the mean in the following numbers. 19, 21, 18, 17, 18, 22, 46.
Alt1	25
Alt2	19
Alt3	16
Alt4	23

74	You are interested in measuring how stress affects wildlife behavior. Your dependent variable would be:-
Alt1	Cortisol levels
Alt2	Cannot be measured
Alt3	Stress
Alt4	Species of wildlife

75	If you do not know the answer to a question on this test and took a chance to answer. What would be your probability of success?
Alt1	0
Alt2	1/2
Alt3	3/4
Alt4	1/4

76	You log transform a variable if:-
Alt1	the residuals decrease with larger values of variable
Alt2	the residuals increase with larger values of variable
Alt3	the values are too big
Alt4	you don't get statistical significance

77	Haploid cells in plants:-
Alt1	Mutant cells
Alt2	Typical cells in all living matter
Alt3	Gametes
Alt4	Type of polyploidy

78	The term asymptote is associated with:-
Alt1	A parabola
Alt2	A hyperbola
Alt3	Any conic section
Alt4	An ellipse

79	What is the main function of DNA?
Alt1	Replicates itself
Alt2	Provides energy for cell
Alt3	It directs protein synthesis
Alt4	Stores information for protein synthesis

80	The weight of eggs laid by a flock of hens would be expected to be distributed:-
Alt1	Bimodally
Alt2	Exponentially
Alt3	Logarithmically
Alt4	Normally

81	Which of these is a continuous variable?
Alt1	Clutch size of mynas in Pondicherry University campus
Alt2	Height measured in cm of students in class

Alt3	Choice of food items in restaurant
Alt4	Runs scored by players in a cricket match

82	Which of the following organisms does NOT require sunlight to live?
Alt1	trees
Alt2	photosynthetic bacteria
Alt3	algae
Alt4	chemosynthetic bacteria

83	A plant with round seeds has a parent with wrinkled seeds. What is its genotype (Round is dominant)?
Alt1	RR
Alt2	RrWw
Alt3	Rr
Alt4	rr

84	The Equations where x and y are densities of two species represent an interaction that is best described as:-
Alt1	Mutualism
Alt2	Competition
Alt3	Coexistence
Alt4	Predator-Prey

85	The monsoonal climate prevails over India. Where does the water come from and where does it go?
Alt1	Ocean evaporation fuels heavy rainfall feeding rivers
Alt2	Ice melt from the Himalayas feeds the rivers and aquifers
Alt3	El Nino brings water from the tropical belt
Alt4	Ancient aquifers

86	What type of air pollution is difficult to measure from space?
Alt1	Volatile organic compounds
Alt2	Ground level ozone
Alt3	SO ₂
Alt4	NO ₂

87	Where has the effects of global warming been seen earliest?
Alt1	In tropical latitudes
Alt2	Oceanic islands
Alt3	Everywhere
Alt4	In the temperate latitudes

88	When plants photosynthesise they use CO ₂ and water and reflect light strongly in which of these wavelengths?
Alt1	UV and visible
Alt2	Near Infra-red

Alt3	Visible
Alt4	UV

89	Expression of a genotype results in a :-
Alt1	Protein
Alt2	mRNA
Alt3	Phenotype
Alt4	Phenology

90	How do nuclear power plants provide energy?
Alt1	Fusion by fusing atoms
Alt2	Radioactive decay
Alt3	Nuclear meltdown
Alt4	Fission by splitting atoms

91	How many phases are there in meiosis?
Alt1	Four
Alt2	Three
Alt3	One
Alt4	Two

92	Most of the earth's water is found in:-
Alt1	Rivers
Alt2	Ocean
Alt3	Polar ice caps
Alt4	Apheretmos

93	Which of the following will have the greatest role in reducing carbon emissions?
Alt1	Stop using automobiles
Alt2	Stopping fossil fuel power plants
Alt3	Arresting deforestation
Alt4	Increasing agriculture

94	Country with largest emissions of greenhouse gases in the world:-
Alt1	India
Alt2	Japan
Alt3	USA
Alt4	China

95	Albedo' is a measure of an object's brightness, namely how much sunlight reaching earth is reflected back. Which of these has highest albedo?
Alt1	Ice
Alt2	Forests
Alt3	Water
Alt4	Desert

96	How long do dust and soot remain in the atmosphere?
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Alt1	1 day
Alt2	10 days
Alt3	1 month
Alt4	20 days

97	During the last ice age about 18000 years ago, sea level was:-
Alt1	Fluctuated
Alt2	About 120 m lower than present
Alt3	Same as now
Alt4	About 120 m higher than present

98	Which of these factors make for a dangerous fire?
Alt1	Low temperature and high humidity
Alt2	Hot, dry and fast winds
Alt3	Desert vegetation
Alt4	Humans setting fire

99	The six hottest years on record occurred during the past:-
Alt1	100 years
Alt2	200 years
Alt3	10 years
Alt4	20 years

100	GMO's are:-
Alt1	Gene Modification Order
Alt2	Generation of Modified Organisms
Alt3	Genetic and Molecular Origin
Alt4	Genetically Modified Organisms