

15.1 Biodiversity

- Term 'Biodiversity' popularized by (Pg. 258, E)
 - Robert hook
 - Ernst Haeckel
 - Edward Wilson
 - G. Tansley
- Edward Wilson was a - (Pg. 258, E)
 - Mathematician
 - Sociobiologist
 - Psychologist
 - None of the above
- 'Biodiversity' was popularized (Pg. 259, E)
 - To describe the combined diversity
 - to describe individual diversity
 - To describe plant diversity
 - None of the above
- Types of Biodiversity is/are- (Pg. 259, E)
 - Genetic diversity
 - Species diversity
 - Ecological diversity
 - All of these
- The genetic variation shown in (Pg. 259, E)
 - Rauwolfia vomitoria*
 - Rice
 - Mango
 - All of the above
- Active chemical in *Rauwolfia vomitoria* (Pg. 259, E)
 - Terpine
 - Reserpine
 - Asprine
 - None of the above
- Which one is correct about Genetic diversity (Pg. 259, E)
 - Genetic variation shown by *Rauwolfia vomitoria*
 - Genetic variation shown in western ghats.
 - India has less than 5000 genetically different strain of rice
 - India has 1,000 varieties of rice
- India has more than..... genetically different strains of rice, andvarieties of Mango. (Pg. 259, E)
 - 50,000, 1,000
 - 1,000 & 50,000
 - 5,000, 1,000

- 1,000 & 5,000
- The diversity at the species level is c/a (Pg. 259, E)
 - Ecological diversity
 - Genetic diversity
 - Species diversity
 - None of these
- TheGhats have a greater amphibian species diversity than the Ghats. (Pg. 259, E)
 - Eastern, Western
 - Western, Eastern
 - Western, Southern,
 - Eastern, Southern
- Ecological diversity is in (Pg. 259, E)
 - Deserts
 - Rain forests, Mangroves
 - Coral reefs, Wetlands
 - All of the above
- Biodiversity and its conservation is of (Pg. 259, E)
 - national concern
 - concern in some states of india
 - international concern
 - all of these

15.1.1 How many species are there on Earth How many in India.

- IUCN stands for- (Pg. 259, E)
 - International unity for conservation of Nature
 - Indian union for conservation of Nature
 - Italian union for conservation at Nature
 - International Union for conservation of Nature and Natural Resources
- Robert may estimates the global species diversity at about (Pg. 259, E)
 - 7 billion
 - 70 million
 - 7 million
 - 70 billion
- Most species rich taxonomic group are (Pg. 260, E)
 - Crustaceans
 - Insects
 - Molluscs
 - None of the above

16. In all available species more than 70% of all the species recorded are _____ which _____ comprise no more than 22% of the total **(Pg. 260, E)**
 A) Invertebrates, Plants
 B) Plants, Animal
 C) Animal, Plants
 D) Plant, Invertebrates
17. Highest variation of species in plants is in- **(Pg. 260, E)**
 A) Fungi B) Mosses
 C) Algae D) Lichens
18. In vertebrates maximum No. of species found in **(Pg. 260, E)**
 A) Birds B) Mammals
 C) Fishes D) Reptiles
19. Problem behind no given figures about prokaryotes is **(Pg. 260, E)**
 A) Conventional taxonomic methods are not suitable for identifying microbial species
 B) Many species are simply not culturable under laboratory conditions
 C) Because prokaryotes are non-living
 D) A & B both are correct
20. India has only percent at the world's land area. Its share of the global species diversity in an impressive....percent. **(Pg. 261, E)**
 A) 2.4, 8.1 B) 8.1, 2.4
 C) 4.1, 8.2 D) 8.4, 2.1
21. India is one of themega diversity countries of the world. **(Pg. 261, E)**
 A) 13 B) 14
 C) 12 D) 11
22. How may plant species found in India roughly **(Pg. 261, E)**
 A) 1,00,000 B) 45,000
 C) 3,00,00 D) None of the above
23. According to May's global estimate there are probably.....plant species & more thananimal species. **(Pg. 261, E)**
 A) 3,00,000 & 1,00,000
 B) 30,000 & 10,000
 C) 1,00,000 & 3,00,000
 D) 10,000 & 30,000
24. Species diversity decreases as **(Pg. 261, E)**
 A) We move away from the equator towards the poles
 B) We move away from the poles towards equator
 C) We move hill to plane area
 D) None of the above
25. How many species of birds found in India? **(Pg. 261, E)**
 A) 1500 B) 1400
 C) 1200 D) 1700
26. Greatest biodiversity on earth is found in **(Pg. 261, E)**
 A) Sundarbans
 B) Amazon rain forest
 C) Congo rain forest
 D) None of the above
27. Amazon Rainforest situated in **(Pg. 261, E)**
 A) North America B) North India
 C) South America D) West America
28. Choose the correct option **(Pg. 261, E)**
- | | | | |
|---|----------|-----|--------|
| 1 | Plant | i | 378 |
| 2 | Fishes | ii | 40,000 |
| 3 | Birds | iii | 427 |
| 4 | Mammals | iv | 3,000 |
| 5 | Reptiles | v | 1,300 |
- 1 2 3 4 5
 A) ii iv v iii i
 B) iii ii v I iv
 C) ii iv v I iii
 D) None of the above
29. How many insect species waiting to be discovered & named. **(Pg. 261, E)**
 A) 2 million B) 20,000
 C) 2,000 D) 2,00,000
30. Which one is wrong about species found in Amazon rainforest. **(Pg. 261, E)**
 A) Reptiles-378 B) Fishes-3,000
 C) Birds-1300
 D) All of the above are correct
31. More.....Energy available in tropics, which contributes to higher productivity **(Pg. 262, E)**
 A) Solar
 B) Thermal
 C) Nuclear
 D) None of the above

15.1.2 Patterns of Biodiversity

32. The relation b/w species richness & area for a wide variety of taxa turns out to be a

(Pg. 262, E)

- A) Linear
- B) Sigmoid
- C) Rectangular Hyperbola
- D) None of the above

33. Correct equation of species-Area relationship

(Pg. 262, E)

- A) $\log A = \log S + Z \log C$
- B) $\log S = \log C + Z \log A$
- C) $\log S = \log Z + C \log A$
- D) $\log S = \log C - Z \log A$

34. In species area relationship equation, Z stands for-

(Pg. 262, E)

- A) Slope of the line
- B) Regression coefficient
- C) species richness
- D) Both a & B are correct

35. Value of Z is

(Pg. 262, E)

- A) 20-30
- B) 1 - 2
- C) 0.1 - 0.2
- D) None of the above

36. The value of Z in the entire continents

(Pg. 262, E)

- A) 0.8 - 1.8
- B) 0.6 - 1.2
- C) 0.1 - 0.2
- D) None of the above

37. The value of Z for frugivorous birds & mammals in the tropical forests of different continents

(Pg. 262, E)

- A) 2.15
- B) 0.5
- C) 1.15
- D) 0.8

38. Concept of species-Area relationship given by

(Pg. 262, E)

- A) Robert Frost
- B) Paul Ehrlich
- C) Alexander hook
- D) Alexander Von Humboldt

39. Alexander von Humboldt is a

(Pg. 262, E)

- A) German naturalist
- B) Philosopher
- C) Geographer
- D) Both A & C are correct

40. According to Alexander species richness

(Pg. 262, E)

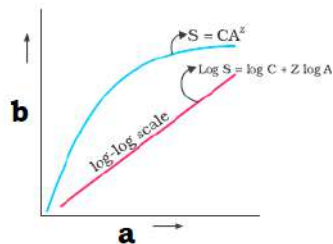
- A) Increased with increasing explored area, but only up to a limit
- B) Decreased with increasing explored area, but only up to a limit

C) Increased with decreasing explored area, but there are no limitations

D) None of the above

41. Find out A and B and also select the correct answer

(Pg. 262, E)



A) a = species richness

b = Area

B) a = area

b = species richness

C) a = Area

b = Regression coefficient

D) none of these

42. In species-area relationship equation

(Pg. 262, E)

A) S = species richness

B) A = area

C) C = Y - intercept

D) All of these

43. Which one is correct about a stable community?

(Pg. 262, E)

A) Should not show too much variation in productivity from year to year

B) It must be either resistant or resilient on surface disturbance

C) It must also be resistant to invasions by alien species

D) All of these are correct

44. Find out correct option about David Tilman's long term ecosystem experiments

(Pg. 263, E)

A) Plots with more species showed less year-to-year variation in total biomass

B) Plots with more species show too much variation in productivity

C) Increased diversity contributed to higher productivity

D) Both A & C are correct

45. 'Rivet popper hypothesis' is given by

(Pg. 263, E)

A) Alexander von Humboldt

B) Paul Ehrlich

- C) Tilman
D) Robert hook
46. Paul Ehrlich is a **(Pg. 263, E)**
A) Stanford ecologist
B) Stanford psychologist
C) Stanford micrologist
D) Stanford geologist
47. In Rivet popper hypothesis, rivets depict as **(Pg. 263, E)**
A) Ecosystem B) Extinct species
C) Species D) Plants
48. According to Ehrlich's rivet popper hypothesis loss of rivets on the wings affects in ecosystem as- **(Pg. 263, E)**
A) Loss of key species that drive major ecosystem function
B) Proper functioning of ecosystem
C) Species to become extinct
D) None of these
49. According to rivet popper hypothesis, which one is not correct **(Pg. 263, E)**
A) Rivet – species
B) Airplane – Ecosystem
C) Rivets to take home – species to become extinct
D) All of these are correct

15.1.4 Loss of Biodiversity

50. The colonization of tropical pacific islands by humans is said to have led to the extinction of more than _____ of native birds **(Pg. 263, E)**
A) 2000 species B) 1200 species
C) 20000 species D) 200 species
51. According to red list (2004) No. of total extinct species in last 500 years **(Pg. 263, E)**
A) 504 species B) 387 species
C) 478 species D) 784 species
52. How many species of invertebrates become extinct in last 500 years **(Pg. 263, E)**
A) 87 species B) 784 species
C) 359 species D) None of these
53. According to recent extinction which one is incorrect option – **(Pg. 263, E)**
A) Dodo – Mauritius
B) Steller's sea cow – USA
C) Quagga – Africa
D) Thylacine – Australia
54. Subspecies of tiger which become recently extinct **(Pg. 263, E)**
A) Bali B) Caspian
C) Javan D) All of these
55. The last 20 years alone have witnessed the disappearance of _____ **(Pg. 263, E)**
A) 300 species B) 10 species
C) 27 species D) 1000 species
56. Match the following- **(Pg. 264, E)**
- | | Species | | % of threat of extinction |
|---|-------------|---|---------------------------|
| a | Birds | 1 | 23% |
| b | Mammals | 2 | 32% |
| c | Amphibians | 3 | 12% |
| d | Gymnosperms | 4 | 31% |
- A) a-1, b-3, c-2, d-4
B) a-3, b-1, c-2, d-4
C) a-3, b-1, c-4, d-2
D) a-3, b-4, c-1, d-2
57. Select the correct statement about 'Sixth Extinction' **(Pg. 264, E)**
A) The extinction rates are estimated to be 100 - 1000 times faster than in the pre-human times.
B) Human activities are responsible for the faster rates.
C) Half of all the species on Earth might be wiped out within the next 1000 years.
D) Both A and B option are correct.
58. Loss of biodiversity in a region may lead to **(Pg. 264, E)**
A) decline in plant production,
B) lowered resistance to environmental perturbations such as drought.
C) Increased variability in ecosystem process.
D) All of these.
59. 'The Evil Quartet' is the term used to describe **(Pg. 264, E)**
A) Causes of habitat losses
B) Causes of biodiversity losses.
C) Causes of water losses
D) All of these.
60. The accelerated rates of species extinctions are largely due to **(Pg. 264, E)**

- A) Natural activities
 - B) Machines activities
 - C) human activities
 - D) none of these
61. Which one is not involved in the evil quartet? **(Pg. 264, E)**
- A) Habitat loss and fragmentation
 - B) Alien species invasions
 - C) over - exploitation
 - D) all are involved
62. The most important cause of animals and plants to extinction **(Pg. 265, E)**
- A) Over exploitation
 - B) Alien species invasions
 - C) Co-existence
 - D) Habitat loss and fragmentation.
63. Lungs of the planet term used for **(Pg. 265, E)**
- A) Tropical rain forest,
 - B) Amazon rainforest,
 - C) temperate reason,
 - D) none of these.
64. The Amazon rainforest harboring probably millions of species to is being cut and cleared for. **(Pg. 266, E)**
- A) For cultivating soya beans.
 - B) Conversion to grassland for raising beef cattle.
 - C) Cultivating new forest.
 - D) Both A and B are correct.
65. When large habitats are broken up into small fragments due to various _____, mammals and birds requiring large territories and certain animals with migratory habits are badly affected, leading to _____. **(Pg. 266, E)**
- A) a – Nature activities,
b – Population declines
 - B) a – Human activities,
b – Population declines
 - C) a – Human activities,
b – Population increasing
 - D) none of these
66. Once covering more than _____ percent of Earth's land surface, these rain forests now cover no more than _____ percent. **(Pg. 264, E)**
- A) 6, 14
 - B) 14, 8

- C) 14, 6
 - D) 12, 8
67. Species extinct in the last 500 years due to over exploitation by humans. **(Pg. 265, E)**
- A) Steller's sea cow
 - B) Cichlid fish
 - C) Passenger pigeon
 - D) A & C both are correct
68. How many species of cichlid fish is extinct due to introduction of Nile perch in lake victoria? **(Pg. 265, E)**
- A) 2
 - B) 20
 - C) 200
 - D) 2000
69. The environmental damage caused and threat posed to our native species by invasive weed species like. **(Pg. 265, E)**
- A) Carrot grass
 - B) water hyacinth
 - C) Lantana
 - D) all of these.
70. African catfish _____ is posing as threat to the indigenous catfishes. **(Pg. 265, E)**
- A) Parthenium
 - B) *Clarias garlepinus*
 - C) *Clarias branchiostoma*
 - D) None of these
71. Which one is correct statement about co-extinction? **(Pg. 265, E)**
- A) When a species become extinct, the plant and animal species associated with it in an obligatory way also become extinct.
 - B) When a host becomes extinct, it's unique assemblage of parasites also meets the same fate
 - C) In the plant pollinator mutualism, where extinction of one invariably leads to the extinction of the other.
 - D) All these statements are correct.
72. Which one is not an example of Alien species invasions? **(Pg. 265, E)**
- A) Parthenium
 - B) Steller's sea cow
 - C) Catfish
 - D) Lantana
73. Purpose of introducing the African cat fish in the Indian River. **(Pg. 265, E)**
- A) For Aquaculture
 - B) For ornamental purpose
 - C) For agriculture
 - D) None of these.

15.2 Biodiversity Conservation

74. Reason behind conserving the biodiversity.

(Pg. 265, E)

- A) Narrowly utilitarian.
- B) Broadly utilitarian.
- C) Ethical
- D) All of these

75. More than 25% of the drugs currently sold in the market worldwide are derived from ___i___ and ___ii___ species of plants contribute to the traditional medicines used by native peoples around the world.

(Pg. 265, E)

- A) i- plants, ii- 25,000
- B) i- Animals, ii- 25,000
- C) i- Animals, ii- 25,00
- D) i- plants, ii- 25,00

76. How much oxygen is produced by Amazon Forest through Photosynthesis?

(Pg. 266, E)

- A) 20% of the total oxygen.
- B) 30% of the total oxygen.
- C) 25% of the total oxygen.
- D) None of these.

77. Select the correct option about ethical argument.

(Pg. 266, E)

- A) In ethical argument of conserving biodiversity relates to what we are to million of plant, animals and micro species with whom we share this planet.
- B) We need to realize that every species has an intrinsic value.
- C) We have a moral duty to care for their well being and pass on our biological legacy in good order to future generation.
- D) All these statements are correct.

15.2.2 How do we conserve biodiversity?

78. Species confined to that region and not found anywhere else is called as-

(Pg. 266, E)

- A) In situ
- B) Exotic
- C) Endemic
- D) None of these

79. Initially ___i___ biodiversity hotspots were identified, but after some time ___ii___ more have been added and the total number of biodiversity hotspot in the world to ___iii___ .

(Pg. 266, E)

- A) i- 25, ii- 9
- B) ii- 8, iii- 30
- C) i- 23, iii- 34
- D) none of these

80. Match the following (Pg. 266, E)

	Column I		Column II
a	Biosphere reserve	1	448
b	National parks	2	14
c	Wildlife centuries	3	90

- A) a-2, b-3, c-1
- B) a-1, b-2, c-3
- C) a-2, b-1, c-3
- D) a-1, b-3, c-2

81. Sacred groves are/is found in (Pg. 267, E)

- A) Khasi and Jaintia hills in Meghalaya
- B) Aravalli hills of Rajasthan
- C) Western ghat region of Karnataka
- D) All of these are correct

82. In which sacred growth the last refugees for a large number of rare and threatened plants are there?

(Pg. 267, E)

- A) In Rajasthan
- B) In western ghat
- C) In Meghalaya
- D) In Karnataka.

83. 'Biodiversity hotspots' is a region where-

(Pg. 267, E)

- A) Very high level of species richness and high degree of endemism
- B) Very high level of species richness and low degree of endemism
- C) Very low level of species richness and also low degree of endemism
- D) None of these

84. Which one is not a characteristic of biodiversity hotspots? (Pg. 267, E)

- A) High level of species richness.
- B) Endemism
- C) 38 in numbers
- D) Accelerated habitat loss protection

85. Which one is not included under in situ conservation? (Pg. 267, E)

- A) Biosphere reserves
B) National parks
C) Zoological parks
D) Sacred groves
86. Which one is not the hotspot in India? **(Pg. 267, E)**
A) Western ghats B) Indo Burma
C) Eastern Ghats D) Himalaya
87. Sacred groves are that- **(Pg. 267, E)**
A) Place which are protected for animals.
B) Place where all people are worship.
C) Place where religion and cultural traditions that emphasized protection of nature
D) None of these
88. Sacred groves, Khasi and Jaintia hills located in- **(Pg. 267, E)**
A) Meghalaya B) Manipur
C) Mizoram D) Madhya Pradesh
89. What is endangered or threatened? **(Pg. 267, E)**
A) Organisms facing a very high risk of death due to environment.
B) Organisms facing a very high risk of extinction, in the near future.
C) Organism facing a very high risk of danger from other organisms.
D) None of these.
90. Which one of the following is not an example of Ex-situ conservation? **(Pg. 267, E)**
A) Zoological parks
B) Botanical Gardens
C) Biosphere reserves
D) none
91. Gametes of threatened species can be preserved in variable and fertile condition for long period using **(Pg. 267, E)**
A) Heat B) Cryopreservation
C) Both D) None of these
92. Threatened plant species can be propagated by- **(Pg. 267, E)**
A) Tissue Culture B) Aquaculture
C) Cryopreservation D) None of these
93. The Earth's summit held in Rio de Janeiro in. **(Pg. 267, E)**
A) 2000 B) 1990
C) 1992 D) 2002
94. The world's summit on sustainable development held in 2002 in. **(Pg. 267, E)**
A) Johannesburg, South Africa.
B) Cape town South Africa.
C) Rio de Janeiro.
D) East America
95. How many countries pledged in world summit held in 2002 in Johannesburg? **(Pg. 267, E)**
A) 200 B) 180
C) 170 D) 190
96. In which type of conservation threatened animals and plants are taken out from their natural habitat and placed in special setting place where they can be protected and given a special care? **(Pg. 267, E)**
A) Cryopreservation
B) Ex-situ conservation
C) In-situ conservation
D) None of these
97. Seeds of different genetic strains of commercially important plants can be kept for long period in **(Pg. 267, E)**
A) Cryopreservation
B) Tissue culture
C) Seed bank
D) None of these
98. Which are involved in In-situ conservation? **(Pg. 267, E)**
(i) Biosphere reserve
(ii) Cryopreservation
(iii) Tissue culture
(iv) Seed bank
(v) National park
(vi) Zoological park
(vii) Sacred groves
(viii) Safari parks
A) iii, vii, v B) ii, iii, i
C) i, v, vii D) iv, vi, i
99. Pledge of Earth Summit held in Rio de Janeiro. **(Pg. 267, E)**
A) All nations to take appropriate measure for conservation of

biodiversity and sustainable utilization of its benefit.

B) All nations are free to utilize natural resources and also harm the ecosystem.

C) Significant reduction in the current rate of biodiversity loss at global, regional and local levels.

D) None of these

100. What is correct about the historic convention on biological diversity?

(Pg. 267, E)

(i) It held in Rio de Janeiro

(ii) In 1992

(iii) Also called the earth summit

(iv) 190 states Pledged in this summit

(v) Commitment to achieve by 2020

A) i, ii, iv

B) i, ii, iii

C) iii, iv, I

D) all

101. In recent years, which type of conservation has advanced beyond keeping threatened species in enclosures? **(Pg. 267, E)**

A) In-situ conservation

B) Ex-situ conservation

C) None of these

D) Both A & B

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ANSWER KEY

BIODIVERSITY AND CONSERVATION

Q	1	2	3	4	5	6	7	8	9	10
Ans	C	B	A	D	D	B	A	A	C	B
Q	11	12	13	14	15	16	17	18	19	20
Ans	D	C	D	C	B	C	A	C	D	A
Q	21	22	23	24	25	26	27	28	29	30
Ans	C	A	C	A	C	B	C	A	A	D
Q	31	32	33	34	35	36	37	38	39	40
Ans	A	C	B	D	C	B	C	D	D	A
Q	41	42	43	44	45	46	47	48	49	50
Ans	B	D	D	D	B	A	C	A	D	A
Q	51	52	53	54	55	56	57	58	59	60
Ans	D	C	B	D	C	B	D	D	B	C
Q	61	62	63	64	65	66	67	68	69	70
Ans	D	D	B	D	B	C	D	C	D	B
Q	71	72	73	74	75	76	77	78	79	80
Ans	D	B	A	D	A	A	D	C	A	A
Q	81	82	83	84	85	86	87	88	89	90
Ans	D	C	A	C	C	A	D	A	B	C
Q	91	92	93	94	95	96	97	98	99	100
Ans	B	A	C	C	D	B	C	C	A	D
Q	101									
Ans	B									

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