

Unit- X**Chapter15. Biodiversity and its Conservation****IMPORTANT POINTS**

Biodiversity refers to the variety of microbes, plants and animals of an area. It is the degree of variety in nature. It is the totality of genes, species and ecosystem. Thus it can be defined as the variety and variability of life. There is lot of variations amongst organisms. There can be genetic variations, species variations as well as ecosystem variation. On the basis of it, there are three levels of biodiversity β - genetic, species and ecosystem biodiversity. Species diversity can be categorised as α diversity, diversity, and γ - diversity.

Knowledge of biodiversity is important for systematic study of organisms, ecosystem studies and biogeography studies etc. It provides food, marketable, items etc. It has social and aesthetic value. Information of biodiversity at world level national level and state level is important. The main causes of biodiversity loss are :

- | | |
|-----------------------------------|----------------------|
| 1. Habitat loss and fragmentation | 2. over-exploitation |
| 3. Alien species invasions and | 4. co-extinctions |

conservation of biodiversity means the conservation of gene complexes, species and ecosystem, Biodiversity is essential to global food security and nutrition. The conservation of biodiversity are of two types: 1. In-situ conservation and 2. Ex-situ conservation. In-situ conservation is possible through to declare protected areas, biosphere reserves, national parks and sanctuaries. Ex-situ conservation can be done through botanical gardens, zoos, gene bank, pollen bank, seed bank, tissue culture and cryopreservation.

- Which is the right option for the tallest and the smallest Gymnosperm plant ?
 (a) Eucalyptus and *Zamia pygmaea*
 (b) *Wolffia globosa* and Eucalyptus
 (c) *Sequoia sempervirens* and *Zamia pygmaea*
 (d) *Sequoia sempervirens* and *Wolffia globosa*
- Which one is odd for species diversity ?
 (a) α diversity (b) γ diversity (c) β diversity (d) λ diversity
- How many biosphere reserves are present in India ?
 (a) 41 (b) 34 (c) 14 (d) 43
- Which is the correct option the Amazon rain forest ?
 I. In this rain forest there might be at least two million insects species waiting to be discovered and named.

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- II. This forest is known as lungs of the planet.
 III. In this forest digging of mine is performed by dynamine.
 IV. This forest are destroyed for the cultivation of soyabeans.
 V. This forest contains world famous Biodiversity
- (a) i, ii, iv, v (b) i, ii, iii, iv (c) ii, iii, iv, v (d) iii, v, iv
5. Which micro organism is responsible for synthesis of antibiotics ?
 (a) Bacteria (b) Virus (c) Fungus (d) Algae
6. In which region of South America maximum species of birds can be found ?
 (a) Equador (b) Brazil (c) Colombia (d) Peru
7. Which scientist has classified species diversity ?
 (a) Thoeprustus (b) Lineus (c) Whittaker (d) Treshaw
8. Which group is meant for Endemic species of birds ?
 (a) Nilgiri pipit, Rofous babbler, Lesser-Florican
 (b) Lesser-Florican, Nilgiri wood pigeon, Malabar parakeet
 (c) Malabar parakeet, Niligiri pipit, Rofous babbler
 (d) all the above
9. How many Indian plant species are used to extract essential oils and scents ?
 (a) 50 (b) 500 (c) 50,000 (d) 5000
10. Which is the correct option.
 (a) There is chance in Natural selection in evolution process due to alpha biodiversity
 (b) There is chance in Natural selection in process of evolution due to genetic diversity
 (c) There is chance in Natural selection in process of evolution due to Ecosystem biodiversity
 (d) There is chance in Natural selection in process of due to biocommunity diversity
11. Which is the state plant of Gujarat ?
 (a) Polyalthia (b) Prosopis (c) Ficus (d) Neem
12. Which can be used for cryopreservation at 196°C temprature ?
 (a) liquid N_2 (b) Free N_2 (c) liquid Co_2 (d) Solid N_2
13. How many protected areas are present in India ?
 (a) 89 (b) 581 (c) 492 (d) 34
14. What can be done by the number of species in habitat ?
 (a) Measurement of species diversity in habitat
 (b) Measurement of gene diversity of species in habitat
 (c) Measurement of interaction of biocommunities
 (d) Measurement of function of Ecosystem

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15. Which type of relation is found in between richness of species and variety of phylum ?
 (a) Hyperbola (b) Circular hyperbola
 (c) Rectangular hyperbola (d) Reciprocal
16. Which is the right option for national animal and bird of India ?
 (a) Peacock & Lion (b) Flamingo & Tiger
 (c) Peacock & Tiger (d) Flamingo & Lion
17. Which is the right sequence for Ecological diversity ?
 (a) Biomes → habitat → Ecosystem → population
 (b) Biomes → Ecosystem → habitat → niches
 (c) Biomes → Ecosystem → population → niches
 (d) Biomes → habitat → niches → Ecosystem
18. Which one is maintained in botanical garden of Waghai in Gujarat ?
 (a) Fibrous plants (b) Etable plants (c) Economical plants (d) medicinal plant
19. Where the knowledge of biodiversity is applicable ?
 (a) To study, classification of animals and plants. (b) To study, Ecosystem
 (c) To study, Biogeological region (d) all the given
20. How many botanical gardens are registered in IABG ?
 (a) 1500 (b) 80,000 (c) 800 (d) 900
21. Which information is correct for our country ?
 (a) India is one of the twelve mega biodiversity countries of the world.
 (b) India comprises 2.4% biodiversity of world.
 (c) India contains more than 7 % plant species of world.
 (d) India stands at 7th rank in traditional crop varieties.
22. Species diversity is responsible for which phenomena ?
 (a) process of Evolution
 (b) speciation
 (c) For alternative types (allele) of gene.
 (d) For stability and normal function of Ecosystem
23. Which is the wild flower of symbol of Gujarat state ?
 (a) Calotropis procera (b) Eicchornia crespis
 (c) Indian laburnum (d) Oscimum sanctum
24. Which statement is correct for buffer zone of biosphere reserve ?
 (a) It is legally protected
 (b) Authority takes cooperation with local people.
 (c) Environmental Education is facilitated by this zone.
 (d) Hunting and felling of trees occur in this zone.

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25. Biodiversity of which organism is more in Eastern Ghat in comparison to Western Ghat ?
(a) Reptilia (b) Amphibian (c) Aves (d) Mammals
26. What is Ecosystem diversity ?
(a) similarity of species diversity in Ecosystem
(b) Variation in species diversity in Ecosystem
(c) Mutation in species diversity in Ecosystem
(d) Homozygosity in species diversity in Ecosystem
27. How can the biodiversity can be conserved ?
(a) By maintenance of different species
(b) By maintenance of genes of different species.
(c) By maintenance of different Ecosystem
(d) all of the given
28. Which regions are included in Biodiversity Hot-spot ?
(a) Sanctuary (b) National park
(c) Only Hotspot (d) all the given
29. How many mangroves species are founds in marine bio diversity of India?
(a) 45 (b) 341 (c) 54 (d) 431
30. Which one is odd for India ?
(a) 7th rank in agriculture species.
(b) origin place of 166 species of crop plants.
(c) Primary centre for domestication of ginger, turmeric, citrus, cardamom.
(d) It contains 12 mega biodiversity region.
31. Which one is the correct pair ?
(a) Bali Tiger – Endangered species (b) Caspian Tiger – Extinct species
(c) Javan Tiger – Rare species (d) all the given.
32. Which one is correct for tropical forest of Gujarat ?
(a) Thorn forest (b) Moist deciduous forest
(c) Dry deciduous forest (d) all the given
33. For which animal sunderbans is declared as a National Park ?
(a) Lion (b) Rhino (c) Tiger (d) Wild ass
34. Which one is odd for Amzon rain forest ?
(a) Africa (b) Russia (c) Mauritius (d) Java
35. Among the recently extinct animal, Guagga is of which country ?
(a) Mammals-472 (b) Reptile-427 (c) Birds-1300 (d) piceis-3000

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36. Which reason is responsible for extinction of host fish and parasites.
 (a) co-extinctions (b) Alien species invasions
 (c) over exploitation (d) loss of habitat
37. Which rock species of Western Ghat is extinct due to quarrying?
 (a) Tectona and Terminalia (b) Bamboo and Boswelia
 (c) Bignonia and Habanera (d) Madhuela and Acacia
38. Which organisation is active for conservation of biodiversity at world level?
 (a) WWF (b) WCU (c) a and b both (d) EE
39. Which statements are true.
 1. At present there are 14 biosphere reserves in India.
 2. Biospheres includes 3 zones.
 3. Bandipur, Periyar, Kaziranga and Hazirabaugh are biosphere reserve
 4. UNO has formulated the concept of biosphere reserve.
 5. Core Zone is the inner most region of biosphere reserve.
 (a) 1, 2, 4 (b) 3, 5, 2 (c) 1, 3, 4, 5 (d) 1, 2, 5
40. Find odd one out :-
 (a) Project Elephant (b) Tiger Project
 (c) Gir Lion Project (d) Project Wild ass
41. Which one is correct for individual of the same species ?
 (a) Population (b) Biotic Community
 (c) Ecosystem (d) All the given
42. Which animal is remnant gene pool in the world ?
 (a) Flamingo (b) Painted Frog
 (c) Wild ass (d) Spring tailed Lizard
43. Find odd one out :
 (a) Nanda devi (b) Great Nicobar (c) Mannar (d) Thar
44. Animals and plants are used as a food that means.....
 (a) Destruction value of biodiversity (b) Utility value of biodiversity
 (c) Ecosystem services (d) all the given
45. Which option is correct for endemism..
 1. Any group which can be found in small region.
 2. Any group which can be found in large region.
 3. Group of species which can be found in definite region.
 4. Any group which can be not found anywhere else.
 5. Endemic species which can be found everywhere.
 (a) 1, 2, 3 (b) 1, 3, 4 (c) 2, 3, 5 (d) only 2 and 5

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46. In which zone there is no disturbance. (AFMC-2002)
 (a) Buffer zone (b) Core Zone (c) Transition zone (d) All the given
47. Which is the example of ex-situ conservation ? (Orrisa – 2002)
 (a) National park (b) Sanctuary (c) Biosphere reserve (d) Zoo
48. Which type of information is obtained form Red-List ? (Kerala – 2002)
 (a) Red coloured fishes (b) Red eyed birds
 (c) Endangered plants and animals (d) Red coloured insects
49. Which is true for wild life conservation ? (CPMT – 2002)
 (a) Hunting of prey (b) ex-situ conservation
 (c) In-situ conservation (d) B and C both
50. Which is the main cause of extinction of wild life ? (CBSE – 1999)
 (a) Destruction of habitat (b) Hunting for flesh
 (c) Pollution of medicine and water (d) All the given
51. At which place animals and plants are most protected ?
 (a) Botanical gardens (b) National Park (c) Zoos (d) Sanctuary
52. For which animal Gir National Park is famous ? (BV-2001)
 (a) Tiger (b) Asiatic Lion (c) Leopard (d) Deer
53. Which is not applicable institute conservation ? (KCET – 2007)
 (a) National Park (b) Sanctuary (c) Botanical Garden (d) Biosphere reserve
54. Which one is protected in national park ? (Maharashtra CET – 2008)
 (a) Micro organism (b) Only plants (c) Plants and animals (d) None
55. What is called the biodiversity of different ecosystem of geographical area ? (Kerala-2007)
 (a) α diversity (b) δ – diversity (c) β diversity (d) γ diversity
56. What is called the area which is remain around the core zone of biosphere region ? (HPPMT 2006)
 (a) Buffer (b) Transition zone (c) Developed zone (d) Peripheral zone
57. Which is the Hot spot of India ? (AIPMT – 2006)
 (a) Gangatic plain (b) Western Ghat (c) Eastern Ghat (d) Arravali mountain
58. Which is included in types of biodiversity ? (AMU – 2004)
 (a) Genes (b) Species (c) Ecosystem (d) All the given
59. Which is the most appropriate method for conservation of wild life ? (JharkhandCEE-2008)
 (a) Vaccination (b) Hybridization
 (c) conservation in natural habitat (d) Killing of predator

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60. Where Mangroves forest found ? (Orissia – 2003)
 (a) Dry region (b) Coastal region (c) Open area (d) tropical region
61. Where is the genes of rare plants species to stored ? (AIPMT 2000)
 (a) Gene bank (b) Gene Library (c) Herberium (d) none of them
62. Which is the Hotspot region ? (PMT 2005)
 (a) Region which is having volcanoes
 (b) Region which is having possibility of earth quake
 (c) Coastal region which is having species diversity
 (d) Region which is having Tsunami
63. For which animal Project Gir is famous ? (AIIMS 1996)
 (a) Elephant (b) Hangul (c) Tiger (d) Lion
64. MAB means (CBSE 1997)
 (a) Man and biosphere programme
 (b) Mammal and biological programme
 (c) Mammal and biosphere programme
 (d) Men and biological programme
65. Who publish Red-list ? (KCET 1997)
 (a) WWF (b) IUCN (c) MAB (d) IBWL
66. In India different types of mangoes species are example of (AIIMS 2005/2008)
 (a) species diversity (b) Genetic diversity
 (c) Induced mutation (d) Breeding
67. Which pair contains maximum diversity and endemic species in India ? (AIIMS -2008)
 (a) Sunderban and runn of Kutch (b) Eastern Ghat and West Bangal
 (c) East Himalaya and Western Ghat (d) Kerala and Punjab
68. Which number is correct for Indentified popular species ? (PUMET 2010)
 (a) 1.1 to 1.1 million (b) 0.5 to 1.0 million
 (c) 2.5 to 3.0 million (d) 1.7 to 1.8 million
69. IUCN means (DUMET 2010)
 (a) International union for conservation of nature and natural resources
 (b) Indian union for conservation of nature and natural resources
 (c) International union for conservation of nature and nutrients resources
 (d) Indian Union chemical nomenclature
70. In India, which example has maximum varieties ?
 (a) Wheat (b) Rice (c) Mango (d) Tea

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71. In India, Western ghat is known as Hot-spot because of (KCET 2007)
 (a) Evergreen forest (b) High endemism
 (c) more height (d) Topical climate
72. What is important of gene diversity ? (HP PMT 2006)
 (a) Maintenance of species (b) speciation
 (c) Research of genetic code (d) Maintenance and research of spices
73. How many plant species are there in India ? (DPMT 2008)
 (a) 40,000 (b) 80,000
 (c) 58,000 (d) 45,500
74. What is called the biodiversity of habitat ? (JIPMER – 2007)
 (a) α diversity (b) β diversity
 (c) γ diversity (d) Biosphere
75. Which is the modern concept of conservation ?
 (a) Biosphere reserve (b) sanctuary
 (c) National park (d) Protected forest

Column type Questions :-

76. Match the following.

Column – 1

- (p) Tulsi
 (q) Akdo
 (r) Asopalav
 (s) Khejdo

- (a) (q - i),
 (b) (s - i),
 (c) (s - i),
 (d) (q - i),

- (r - ii),
 (p - ii),
 (q - ii),
 (s - ii),

Column – 2

- (i) Calotropis procera
 (ii) Prosopis cineria
 (iii) Polyalthia longifolia
 (iv) Osimum saltum

- (s - iii), (p - iv)
 (r - iii), (q - iv)
 (p - iii), (r - iv)
 (r - iii), (p - iv)

77. Match the following.

Column – 1

- (p) Shool paneshwar
 (q) Ratan mahal
 (r) Velavadar
 (s) Narayan sarovar

- (a) (r - i),
 (b) (q - i),
 (c) (q - i),
 (d) (p - i),

- (p - ii),
 (p - iii),
 (p - iii),
 (q - ii),

Column – 2

- (I) Sloth Bear
 (ii) chinkara
 (iii) Flying squirrel
 (iv) Black Buck

- (s - iii), (q - iv)
 (s - iv), (r - ii)
 (s - ii), (r - iv)
 (s - iii), (r - iv)

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78. Match the following.

Column – 1

- (p) Rare species
 (q) Extinct species
 (r) Recently extinct species
 (s) Endemic species

- (a) (q - i), (r - ii),
 (b) (p - i), (q - ii),
 (c) (r - i), (p - ii),
 (d) (p - i), (s - ii),

Column – 2

- (i) Guagga
 (ii) Painted Frog
 (iii) Passenger Pigeon
 (iv) Malabar Parakeet

- (s - iii), (p - iv)
 (s - iii), (r - iv)
 (q - iii), (s - iv)
 (r - iii), (q - iv)

79. Match the following.

Column – 1

- (p) Assam
 (q) Uttar Pradesh
 (r) Gujarat
 (s) Madhya Pradesh

- (a) (p - i), (q - ii),
 (b) (r - i), (s - ii),
 (c) (s - i), (q - ii),
 (d) (q - i), (r - ii),

Column – 2

- (i) Corbatt National Park
 (ii) Marine National Park
 (iii) Kaziranga National Park
 (iv) Kanha National Park

- (s - iii), (r - iv)
 (q - iii), (p - iv)
 (r - iii), (p - iv)
 (p - iii), (s - iv)

80. Match the following.

Column – 1

- (p) Biosphere reserve
 (q) Hot-spot
 (r) Biodiversity of Gujarat
 (s) Greatest biodiversity

- (a) (r - i), (p - ii),
 (b) (r - i), (q - ii),
 (c) (p - i), (r - ii),
 (d) (q - i), (s - ii),

Column – 2

- (i) Eastern Himalayan
 (ii) Amazon
 (iii) Great Nicobar
 (iv) Marine National Park

- (s - iii), (q - iv)
 (p - iii), (s - iv)
 (q - iii), (s - iv)
 (p - iii), (r - iv)

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81. Match the following.

Column – 1

- (p) Endemic species
 (q) Alien species
 (r) Habitat loss
 (s) over exploitation

Column – 2

- (i) Sping Tailed Lizard
 (ii) Nilgiri pipit
 (iii) African cat fish
 (iv) Lion tailed Macaque

- (a) (p - i), (q - ii), (r - iii), (s - iv)
 (b) (q - i), (r - ii), (s - iii), (p - iv)
 (c) (q - i), (r - ii), (p - iii), (s - iv)
 (d) (s - i), (p - ii), (q - iii), (r - iv)

82. Match the following.

Column – 1

- (p) Keoladeo Ghana Sanctuary
 (q) chilka sarovar sanctuary
 (r) Sultanpur sanctuary
 (s) Thol sanctuary

Column – 2

- (i) Gujarat
 (ii) Rajasthan
 (iii) Orrisa
 (iv) Hariyana

- (a) (p - i), (r - ii), (s - iii), (q - iv)
 (b) (r - i), (s - ii), (p - iii), (q - iv)
 (c) (q - i), (p - ii), (r - iii), (s - iv)
 (d) (s - i), (p - ii), (q - iii), (r - iv)

83. Match the following.

Column – 1

- (p) National Bureau of Plant

Genetic Resources

- (q) World Wild life Fund

- (r) National Bureau of fish

Genetic Resources

- (s) National Bureau of Animal

Genetic Resources

Column – 2

- (I) Conservation of biodiversity

- (ii) Conservation of gene of domesticated animal

- (iii) Conservation of gene of crop plant

- (iv) Conservation of gene of Economically valuable species

- (a) (r - i), (p - ii), (q - iii), (s - iv)
 (b) (r - i), (q - ii), (p - iii), (s - iv)
 (c) (r - i), (p - ii), (s - iii), (q - iv)
 (d) (q - i), (s - ii), (p - iii), (r - iv)

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84. Match the following.

Column – 1

- (p) Bhal region
 (q) Forest of Vijaynagar
 (r) Narayan Sarovar
 (s) Marine Wild life

- (a) (r - i), (s - ii),
 (b) (s - i), (p - ii),
 (c) (r - i), (s - ii),
 (d) (s - i), (r - ii),

Column – 2

- (i) Mangrove diversity
 (ii) Gugal
 (iii) Indigenous variety of Wheat
 (iv) White Musli

- (q - iii), (p - iv)
 (r - iii), (q - iv)
 (p - iii), (q - iv)
 (p - iii), (q - iv)

85. Match the following.

Column – 1

- (p) α diversity
 (q) β diversity
 (r) γ diversity

- (a) (p - i), (r - ii), (q - iii),
 (b) (p - i), (q - ii), (r - iii),
 (c) (q - i), (p - ii), (e - iii),
 (d) (r - i), (q - ii), (p - iii),

Column – 2

- (i) Richness of different species in a habitat
 (ii) Richness of different species along with a gradient from one habitat to another habitat within the community
 (iii) Richness of different species in different habitat

Question number 86 to 95 are Statement (A) and reason (R) type question.

Options for due no 86 to 95.

- (a) Both A and R are true and R is correct explanation of A
 (b) Both A and R are true but R is not correct explanation of A
 (c) A is true but R is false
 (d) A is false but R is true

86. Statement A :- Wile ass sanctuary is a unique habitat of Indian Wild ass.

Reason R :- It is the remnant gene pool in the world

- (a) (b) (c) (d)

87. Statement A :- There is threat to the indigenous cat fish in our rivers

Reason R :- African cat fish (alien species) produces toxic effect for agriculture

- (a) (b) (c) (d)

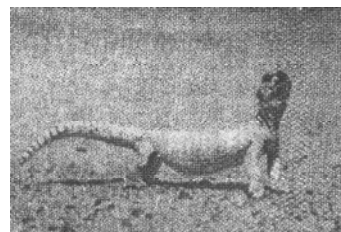
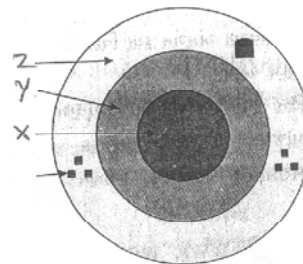
88. Statement A :- In-situ conservation is a type of biodiversity conservation.

Reason R :- It is the conservation of resources out side their natural habitat.

- (a) (b) (c) (d)

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89. Statement A :- Biodiversity is important to maintain ecosystem and biosphere of the world
Reason R :- Biodiversity provides food for mankind and their pets
(a) (b) (c) (d)
90. Statement A :- Gene bank is important for conservation of crop variety and Wild genetic resources.
Reason R :- Their utility in future crop improvement and forestation programmes
(a) (b) (c) (d)
91. Statement A :- In National Park Wild life is strictly protected
Reason R :- In National Park, activity such as forestry, grazing, cultivation are not allowed
(a) (b) (c) (d)
92. Statement A :- Biogonia and Hebenaria are extinct species of Western Ghat.
Reason R :- There is continues quarrying activity in Western Ghat
(a) (b) (c) (d)
93. Statement A :- In seed bank seeds are stored for a long time.
Reason R :- Gene bank is option for conservation of rare genes
(a) A (b) B (c) C (d) D
94. Statement A :- some activities are allowed in sanctuaries.
Reason R :- There are four marine sanctuaries in Gujarat.
(a) A (b) B (c) C (d) D
95. Statement A :- The biodiversity is not uniform throughout the world
Reason R :- biodiversity increases as we move from equator to polar region
(a) A (b) B (c) C (d) D
96. Which is the correct one regarding to bird sanctuaries in Gujarat ?
(a) Thol, Nalsarovar, Narayan sarovar (b) Nalsarovar, Shoolpaneshwar, Vansda
(c) Thol, Narayan sarovar, Velavadar (d) Ratanmahal, Nalsarovar, Vansda
97. Which option is correct for the 'z' in given figure.
(a) There is no disturbance
(b) Different activities are perform for conservation
(c) Indicated zone is buffer.
(d) All the given
98. Which region is shown 'y' indicated zone above figure ?
(a) core zone
(b) Transition zone
(c) buffer zone
(d) Internal Area



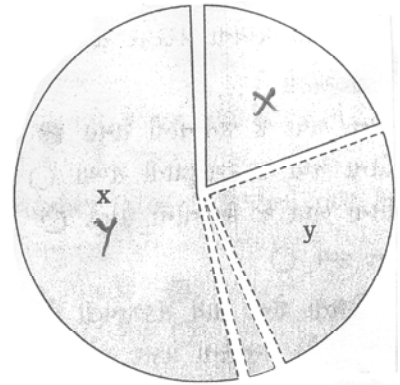
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99. Which one is correct option for the given figure?

- (a) Nalsarovar
- (b) Thol sarovar
- (c) Narayan sarovar
- (d) Sultanpur sarovar

100. What is indicated by 'x' and 'y' in given figure ?

- (a) $x = 3 \text{ lac species of plant}$
 $y = 40,000 \text{ species of vertebrates}$
- (b) $x = 8,00,000 \text{ species of insects}$
 $y = 3,00,000 \text{ species of plants}$
- (c) $x = 8,00,000 \text{ species of insects}$
 $y = 3,00,000 \text{ species of plant}$
- (d) $x = 3,00,000 \text{ species of plant}$
 $y = 8,00,000 \text{ species of insects}$



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ANSWER KEY

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

