1. Arrange the following air pollution episodes chronologically:  
   (i) Great Smog of London  
   (ii) Meuse Valley Fog  
   (iii) Donora Smog  
   (iv) Delhi Pollution Emergency  
   Select the correct answer using the codes given below:  
   (A) (ii)-(i)-(iii)-(iv)  
   (B) (i)-(ii)-(iii)-(iv)  
   (C) (iii)-(ii)-(i)-(iv)  
   (D) (ii)-(iii)-(i)-(iv)

Answer 71. (A) (ii)-(i)-(iii)-(iv)

Explanation:

* The Meuse Valley Fog occurred in 1930 and is one of the earliest recorded industrial pollution disasters.
* The Great Smog of London happened in 1952, causing massive mortality due to air pollution.
* The Donora Smog occurred in 1948, a major smog event in the USA.
* The Delhi Pollution Emergency represents recent severe pollution episodes occurring in the 2010s and onward.

1. Arrange the following Elephant Reserves of Assam according to their notification:  
   (i) Kaziranga-Karbi Anglong Elephant Reserve  
   (ii) Sonitpur Elephant Reserve  
   (iii) Dhansiri-Lumding Elephant Reserve  
   (iv) Chirang-Ripu Elephant Reserve  
   (A) (ii)–(i)–(iv)–(iii)  
   (B) (i)–(ii)–(iii)–(iv)  
   (C) (iv)–(iii)–(i)–(ii)  
   (D) (iii)–(ii)–(i)–(iv)

Answer 72. (A) (ii)–(i)–(iv)–(iii)

Explanation:

* Sonitpur Elephant Reserve was notified first among these in the early 2000s.
* Kaziranga-Karbi Anglong followed soon after as a key elephant habitat.
* Chirang-Ripu and Dhansiri-Lumding were notified subsequently, with Dhansiri-Lumding being the latest.

1. Match List-I with List-II:  
   List-I                              List-II  
   a. Ecological footprint                       1. Measure of human impact on earth  
   b. Habitat fragmentation                                     2. Breaking up of continuous habitat  
   c. Red Data Book                                      3. List of threatened species  
   d. Invasive species                      4. Non-native species causing harm  
   Select the correct answer using the codes given below.  
   (A) abcd 1234  
   (B) abcd 3412  
   (C) abcd 4321  
   (D) abcd 2143

Answer 73. (A) abcd 1234

Explanation:

* Ecological footprint quantifies total human demand on nature’s resources.
* Habitat fragmentation describes the division of large habitat into smaller patches, affecting biodiversity.
* The Red Data Book is a compendium of threatened and endangered species.
* Invasive species are non-native organisms that adversely affect ecosystems.

1. According to climate impact modeling, which crop in Assam is most affected by rising temperature and rainfall variability?  
   (A) Rice (Sali variety)  
   (B) Maize  
   (C) Mustard  
   (D) Sugarcane

Answer 74. (A) Rice (Sali variety)

Explanation:

* Sali rice, cultivated during monsoon, is sensitive to temperature rise and irregular rainfall affecting growth and yield.
* It is the dominant crop in Assam’s agrarian landscape, making its vulnerability critical.
* Other crops have different climatic tolerances and are less impacted comparatively.

1. The use of cyanobacteria for the remediation of industrial wastewater is an example of  
   (A) phycoremediation  
   (B) mycoremediation  
   (C) entomoremediation  
   (D) bioventing

Answer 75. (A) phycoremediation

Explanation:

* Phycoremediation employs algae and cyanobacteria to remove pollutants from water, effective in treating industrial effluents.
* Mycoremediation uses fungi, entomoremediation involves insects, and bioventing enhances microbial degradation in soil.

1. The concept of "100-year GWP" involves:  
   (A) Calculating energy trapped over 100 years relative to water vapor  
   (B) Measuring the heat energy trapped compared to CO2 integrated over 100 years  
   (C) Predicting global temperature rise over 100 years  
   (D) Estimating the decay rate of greenhouse gases

Answer 76. (B) Measuring the heat energy trapped compared to CO2 integrated over 100 years

Explanation:

* Global Warming Potential (GWP) over 100 years quantifies cumulative heat trapped by a greenhouse gas relative to that trapped by CO2.
* It facilitates comparison of different gases’ climate impacts over century-long horizons.

1. Which of the following soil horizons is most important for plant root development and nutrient availability?  
   (A) A horizon  
   (B) B horizon  
   (C) O horizon  
   (D) R horizon

Answer 77. (A) A horizon

Explanation:

* The A horizon is the topsoil rich in organic matter and nutrients suited for root growth and plant nutrition.
* The B horizon is a subsoil zone with accumulation of minerals; the O horizon is organic litter; the R horizon is bedrock.

1. The Kasturirangan Committee recommended involvement of which of the following sectors in eco-sensitive zones?  
   (i) Agriculture  
   (ii) Tourism  
   (iii) Mining  
   (iv) Industrial development  
   Select the correct answer:  
   (A) (i) and (ii) only  
   (B) (iii) and (iv) only  
   (C) (i), (ii), and (iii) only  
   (D) All of the above

Answer 78. (A) (i) and (ii) only

Explanation:

* The committee advocated restricting mining and large-scale industrial activity in eco-sensitive zones.
* It suggested sustainable agriculture and eco-tourism as compatible land uses promoting conservation and livelihoods.

1. The Foreign Exchange Management Act (FEMA) replaced which earlier act in India?  
   (A) Foreign Exchange Regulation Act (FERA)  
   (B) Companies Act  
   (C) Banking Regulation Act  
   (D) Securities Contracts Regulation Act

Answer 79. (A) Foreign Exchange Regulation Act (FERA)

Explanation:

* FEMA (1999) replaced FERA (1973) to liberalize and manage foreign exchange more flexibly in tune with globalization.
* Other acts focus on company law, banking, and securities regulation.

1. The policy significance of MPI lies in:  
   (A) Focusing solely on income poverty  
   (B) Highlighting multidimensional deprivations for targeted interventions  
   (C) Ignoring regional disparities in poverty  
   (D) Working independently of other poverty measurement frameworks

Answer 80. (B) Highlighting multidimensional deprivations for targeted interventions

Explanation:

* The Multidimensional Poverty Index (MPI) integrates various deprivations including health, education, and living standards to more precisely target poverty alleviation efforts.
* It goes beyond income measures and considers regional variations and other poverty aspects.