

1- In the context of the development in Bio informatics, the term 'Transcriptome', sometimes seen in the news , refer to

a.A range of enzymes used in genome editing

b.The full range of mRNA molecules expressed by an organism

c.The description of the mechanism of gene expression

d.A mechanism of genetic mutations taking place in cells

2- Consider the following statements :

1.Biodiversity is normally greater in the lower latitudes as compared to the higher latitudes.

2.Along the mountain gradients, biodiversity is normally greater in the lower altitudes as compared to the higher altitudes.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

3- The acidification of oceans is increasing. Why is this phenomenon a cause of concern?

1.The growth and survival of calcareous phytoplankton will be adversely affected.

2.The growth and survival of coral reefs will be adversely affected.

3.The survival of some animals that have phytoplanktonic larvae will be adversely affected.

4.The cloud seeding and formation of clouds will be adversely affected.

Which of the statements given above is /are correct?

(a)1, 2 and 3 only

(b)2 only

(c)1 and 3 only

(d) 1, 2, 3 and 4

4- The Millennium Ecosystem Assessment describes the following major categories of ecosystem services provisioning, supporting, regulating, preserving and cultural. Which one of the following is supporting service?

(a)Production of food and water

- (b)Control of climate and disease
- (c)Nutrient cycling and crop pollination
- (d)Maintenance of diversity**

5-What is the difference between the antelopes Oryx and Chiru?

(a)Oryx is adapted to live in hot and arid areas whereas Chiru is adapted to live in steppes and semi-desert areas of cold high mountains

- (b)Oryx is poached for its antlers whereas Chiru is poached for its musk
- (c)Oryx exists in western India only whereas Chiru exists in north-east India only
- (d)None of the statements (a), (b) and (c) given above is correct

6- The formation of ozone hole in the Antarctic region has been a cause of concern. What could be the reason for the formation of this hole ?

- (a)Presence of prominent tropospheric turbulence; and inflow of chlorofluorocarbons.
- (b)Presence of prominent polar front and stratospheric clouds; and inflow of chlorofluorocarbons.**
- (c)Absence of polar front and stratospheric clouds; and inflow of methane and chlorofluorocarbons.
- (d)Increased temperature at polar region due to global warming.

7-Consider the following :

- 1.Photosynthesis
- 2.Respiration.
- 3.Decay of organic matter
- 4.Volcanic action.

Which of the above add carbon dioxide to the carbon cycle on earth ?

- (a)1 and 4 only
- (b)2 and 3 only
- (c)2, 3 and 4 only**
- (d)1 and 4

8- Which of the following can be threats to the biodiversity of a geographical area?

- 1.Global warming
- 2.Fragmentation of habitat

3. Invasion of alien species

4. Promotion of vegetarianism

Select the correct answer using the codes given below :

(a) 1, 2 and 3 only

(b) 2 and 3 only

(c) 1 and 4 only

(d) 1, 2, 3 and 4

9- Three of the following criteria have contributed to the recognition of Western Ghats, Sri Lanka and Indo Burma regions as hotspots of biodiversity :

1. Species richness

2. Vegetation density

3. Endemism

4. Ethno-botanical importance

5. Threat perception

6. Adaption of flora and fauna to warm and humid conditions

Which three of the above are correct criteria in this context?

(a) 1, 2 and 6

(b) 2, 4 and 6

(c) 1, 3 and 5

(d) 3, 4 and 6

10- Two important rivers—one with its source in Jharkhand (and known by a different name in Odisha), and another, with its source in Odisha—merge at a place only a short distance from the coast of Bay of Bengal before flowing into the sea. This is an important site of wildlife and biodiversity and a protected area. Which one of the following could be this ?

(a) Bhitarkanika

(b) Chandipur-on-sea

(c) Gopalpur-on-sea

(d) Simlipal

11- Which of the following are the reasons for high anti-biotic resistance in India?

1. Overuse of antibiotics in livestock for promoting growth.
2. Bad sanitation practices
3. Incomplete antibiotic dosage

Select the correct answer using the code given below:

- (a) 1 and 3 only
(b) 2 and 3 only
(c) 3 only

(d) 1, 2 and 3

12- Consider the following statements about Acute Respiratory Infection:

1. The infection prevents the body from getting oxygen and can result in death.
2. The early symptoms of acute respiratory infection usually appear in the nose and upper lungs.
3. The infection is caused only by bacteria

Which of the statements given above is/are correct?

- (a) 1 and 2 only
(b) 2 only
(c) 1 and 3 only
(d) 2 and 3 only

13- Consider the following statements about National Aerospace Laboratories (NAL):

1. It has indigenously developed SARAS Mk2 which is a fighter jet capable of launching nuclear missiles.
2. NAL is a constituent of the Council of Scientific and Industrial Research (CSIR).
3. NAL's mandate is to develop aerospace technologies with strong science content, design and build small, medium sized civil aircraft and support all national aerospace programmes.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) None of the above

14- Consider the following statements regarding Indian Data Relay Satellite System:

- 1.It will be placed in Low Earth Orbit.
- 2.It will ensure real-time continuous communications with various Indian satellites in space.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

15- Consider the following statements about GSAT-30:

- 1.GSAT-30 is communication satellite launched in the Lower Earth Orbit.
- 2.GSAT-30 will be primarily used for DTH services
- 3.GSAT-30 is to serve as replacement to INSAT-4A spacecraft services with enhanced coverage.

Which of the statements given above is/are correct?

(a)1 only

(b)1 and 2 only

(c)2 and 3 only

(d)1 and 3 only

16- Which of the following are correctly matched?

- 1.Giant meter wave Radio Telescope: Sholapur
- 2.Chandra X Ray telescope: Hanle, Ladakh

Select the correct answer using the code given below;

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

17- Consider the following statements related to ""IndiGen"" Project:

- 1.This project aims at carrying out the Whole Genome Sequencing of the entire population of the country free of cost.

2.It is being implemented by Council of Scientific & Industrial Research (CSIR).

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

18- Consider the following statements related to Whole Genome Sequencing:

1.It involves the sequencing of only exome which provide instructions for making proteins in the body for its healthy functioning.

2.The Genome Sequencing finds application only in the field of curative medicine and not in the field of preventive medicine.

Which of the statements given above is/are correct?

(a)1 only

(b)2 only

(c)Both 1 and 2

(d)Neither 1 nor 2

19- Consider the following statements with reference to "Truenat MTB":

1.It is a diagnostic test to identify TB and HIV co-infections

2.It diagnoses only pulmonary TB

3.It can identify drug resistant TB strain Select the correct answer using the code given below:

(a)1 and 2 only

(b)2 only

(c)3 only

(d)1, 2 and 3

20- Consider the following statements about Dhanush guns:

1.It is a short range artillery gun having a range of 200 km only.

2.It is an upgraded version of Bofors Gun of Russia.

3. It has inertial navigational system having GPS technology.

4. It has an automated gun sighting system equipped with camera, thermal imaging and laser range finder

Which of the statements given above are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 3 and 4 only

(d) 2 and 4 only

21- With reference to Pinaka Mark (Mk) -1 Missile, consider the following statements:

1. The missile was first used successfully in the Indo-Pak war of 1971.

2. The enhanced version of Pinaka Mk-1 has been designed recently by the Armament Research and Development Establishment (ARDE), Pune.

Which of the statements given above is/are not correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

22. Saffir-Simpson Scale remains in the news. It is used to measure?

(a) Amplitude of Tsunami waves

(b) Wind speed of Hurricanes

(c) Intensity of Earthquake in Polar region

(d) Solar intensity for establishing solar PV cells

23. With reference to Leishmaniasis, consider the following statements:

1. It is transmitted through the bite of sand flies.

2. Kala Azar is one of its types prevalent in India.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

24. With reference to Tele-Law, consider the following statements:

1. It is launched by the Ministry of Law and Justice.
2. It is a service that uses ICT for access to courts.
3. It seeks to further implement Article 39 A of Indian Constitution.

Which of the statements given above is/are correct?

(a) 3 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

25. Consider the following statements about the Academic Freedom Index (AFI)?

1. The AFI is published by the Global Public Policy Institute.
2. Australia and Brazil are the top performers in the index.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2