

SCIENCE & TECHNOLOGY

1. With reference to Gene therapy, which of the following statements is/are correct?

1. This technique treats a disease by altering the genetic makeup.
2. It introduces molecular tools to change the existing cellular DNA.
3. This therapy is used to treat spinal muscular atrophy.

Select the correct answer using the code given below:

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

2. With reference to CRISPR-CAS9, which of the following statements is/are correct?

1. It is a unique set of DNA sequences present in all the bacteria.
2. CRISPR system can identify and destroy the foreign DNA.
3. It has been used to modify the genomes of a variety of species including fruit flies and yeast.

Select the correct answer using the code given below:

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

3. Which of the following is/are the uses of baking soda?

1. Soda-acid fire extinguishers.
2. Making drinking water free from germs.
3. Oxidising agent in chemical industries.

Select the correct answer using the code given below:

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

4. With reference to convex mirrors, consider the following statements:

1. They are curved outwards hence give a wider view.
2. They always give an erect and diminished image.
3. They are commonly used in vehicles headlights.

Which of the statements given above is/are correct?

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

5. Consider the following pairs:

Petroleum

Constituents

Uses

- | | |
|-----------------|--------------------------|
| 1. Petrol | Solvent for Dry cleaning |
| 2. Paraffin wax | Road surfacing |
| 3. Bitumen | Aviation fuel |

How many pairs given above is/are correctly matched?

(a) Only one pair

(b) Only two pairs

(c) All three pairs

(d) None of the pairs

6. With reference to role of Artificial Intelligence (AI) in agriculture, consider the following statement:

1. It can detect weed affected areas to precisely spray herbicides preventing over use of herbicides.

2. It can monitor soil defects on a real time basis but not the soil nutrient deficiency.

3. Its predictive insights can help farmers reduce impact by weather.

Which of the statements given above is/are correct?

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

7. Which of the following fibre is commonly referred to as 'artificial silk'?

- (a) Rayon (b) Linen
(c) Acrylic (d) Nylon

8. Consider the following statements:

1. Preservatives prevent the growth of microbes in edible commodity.

2. Pasteurised milk can be consumed without boiling.

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

9. The term 'Alpha Fold', sometimes seen in the news in the context of which of the following?

(a) AI based product created by the Google to have real time location sharing with street view mapping.

(b) Warp created in space and time due collision of two black holes.

(c) Dark area of Universe generating huge fluxes of Alpha rays.

(d) AI-based protein structure prediction tool.

10. Which of the following statements is/are correct with respect to Polycyclic Aromatic Hydrocarbons (PAHs):

1. PAHs are a class of chemicals that occur naturally in fossil fuels.

2. Fungus is capable of removing toxic and carcinogenic polycyclic aromatic hydrocarbons from the environment.

3. PAHs can be formed on the exposure of high heat during cooking food.

Select the correct answer using the code given below:

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

(c) 1 only

(d) 1, 2 and 3

HISTORY

11. Copper was sourced by the Indus Valley people from which of the following places?

1. Khetri
2. Oman
3. Malanjkhanda

Select the correct answer using the code given below:

(a) 1 only

(b) 1 and 2 only

(c) 3 only

(d) 2 and 3 only

12. Consider the following pairs about the Rigvedic period: S.N. Term Meaning

1. Panis They were the enemies of the Vedic people.

2. Gomat It was used as a term for a measure of time.

3. Varuna He was the god of thunder and was the rain-maker, who was asked periodically to release the water.

How many pairs given above is/are correctly matched?

(a) One pair only

(b) Two pairs only

(c) All three pairs

(d) None

13. Which of the following sources give the list of the sixteen Mahajanapadas?

1. Anguttara Nikaya
2. Mahavastu
3. Bhagavati Sutra

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

14. Which of the following is the correct chronological order of the following events?

1. Reign of Asoka
2. Invasion of Alexander
3. Arabs conquer Sind
4. Pilgrimage of Xuan Zang

Select the correct answer using the code given below:

(a) 1-3-2-4

(b) 1-2-3-4

(c) 2-1-3-4

(d) 2-1-4-3

15. The term 'Adimai' mentioned in the Sangam Texts refers to which of the following?

(a) Village headman

(b) Landowners

(c) Slaves

(d) Ploughmen

16. Which of the following ancient literature text was composed the earliest?

(a) Ashtadhyayi

(b) Manu Smriti

(c) Sushrut Samhitas

(d) Natyashastra

17. The Buddhist text 'Majjhima Nikaya' belongs to which of the following sect?

(a) Mahayana

(b) Sarvastivadins

(c) Theravada

(d) Vajrayana

18. With reference to Jainism, consider the following statements:

1. Mahavira was the last or the twenty-fourth Tirthankara.

2. Vardhamana Mahavira was the spiritual successor of Rishabhadeva.

3. Mahavira's family was connected with the royal family of Magadh.

Which of the statements given above are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

19. Consider the following statements about the Gupta times:

1. Capital punishment was not given at all.

2. The army was paid in cash.

3. There was a regular department for proper survey and measurement of land.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

20. The words 'Khila' and 'Aprahata', used in the ancient times, refer to which of the following?

(a) A measure for land.

(b) Land the revenue of which went directly to the royal treasury.

(c) Land not under cultivation.

(d) Land which was exempt from taxation.

CURRENT AFFAIRS

21. Which of the following is/are the effects of climate change on women?

1. Displacement due to their social and economic vulnerabilities

2. More vulnerable to food insecurity caused by climate change.

3. Increase in their workload and more risk of physical harm.

4. Women are also more likely to suffer from malnutrition, anaemia, and other health conditions.

Which of the above statements is/are correct?

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

d) 1, 2, 3 and 4

22. Consider the following statements about Pradhan Mantri Kaushal Vikas Yojana, PMKVY 4.0.

1. It was announced during the Union Budget 2023.

2. For PMKVY 4.0, skills relevant to Industry 4.0 such as AI, coding, mechatronics, drones, 3D printing and more would be made available to the youth.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

23. Consider the following:

1. Naseem-Al-Bahr: This is a bilateral naval exercise between India and Oman.

2. Desert Eagle: This is a bilateral military exercise between India and Oman.

3. Al-Nagah: It is a joint military exercise conducted between India and the United Arab Emirates (UAE).

4. Eastern Bridge: It is a joint military exercise conducted between India and Kuwait.

Which of the above is/are matched correctly?

- a) 1, 2, 3 and 4
- b) 1, 2 and 4 Only
- c) 1 and 3 Only

d) 1 and 4 Only

24. Which Indian state announced the establishment of India's first welfare fund for gig workers?

a) Maharashtra

b) Rajasthan

c) Uttar Pradesh

d) Karnataka

25. Consider the following statements about Sendai Framework:

1. As a voluntary agreement, the Sendai Framework is not legally binding.

2. The Sendai Framework serves as the successor to the Hyogo Framework for Action (2005–2015).

Which of the above statements is/are correct?

- a) 1 Only
- b) 2 Only