

HIS and Art & Culture/CA/SC&TECH

1. With reference to medieval Sultans in India, consider the following statements:

1. Balban introduced the system of branding horses in his military.
2. Alauddin Khalji introduced the system of 'chehra' or facial recognition in his military.
3. Firoz Tughlaq set up a separate department of slaves.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 1, 2 and 3

(c) 1 and 3 only

(d) 2 and 3 only

2. In the context of Ancient India, 'Kumaramatyas' and 'Ayuktas' were

(a) administrative officials in the Mauryan court.

(b) provincial units in the Gupta Empire.

(c) provincial administrators appointed in the Gupta empire.

(d) officers in-charge of revenue administration in the Chola Period.

3. Which of the following statements is not correct in the context of social and educational reforms introduced by the Mughal emperor Akbar?

(a) Akbar issued a blanket ban on Sati.

(b) He legalised widow remarriages.

(c) He raised the age of marriage to 14 for girls and 16 for boys.

(d) He revised the educational syllabus laying emphasis on secular subjects like mathematics and moral sciences.

4. Consider the following statements with respect to Sangam literature:

1. Sangam texts were predominantly secular in nature.

2. Sangam poems describe the military exploits of the kings and chiefs.

3. Sangam literature provides information about trade with Yavanas (foreigners).

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

5. The terms akam and puram refer to types of

(a) taxes levied in the Vijayanagara kingdom.

(b) fertile land during the Gupta period.

(c) poems in the Tamil language.

(d) celestial forces described by Aryabhata.

6. It is a classical solo dance form ideally suited for performance by women. It is characterized by graceful, swaying body movements with no abrupt jerks which are borrowed from various folk dances like Kaikottikali.

Which of the following dance forms is being described in the above passage?

(a) Kuchipudi

(b) Mohiniyattam

(c) Kathakali

(d) Bharatnatyam

7. Which of the following factors contributed to the rise and growth of the Gupta Empire?

1. Strong army with excellent use of horses.

2. Fertile and iron-rich hinterland

3. Proximity to areas of the silk trade

Select the correct answer using the code given below.

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

8. 'Pung Choloms' and 'Kartal Choloms' are the essential musical instruments used in which of the following performing arts?

(a) Odissi

(b) Bhavai

(c) Manipuri Sankirtana

(d) Kuchipudi

9. Which of the following types of villages were found during the ancient period in South India?

1. Ur

2. Sabha

3. Nagaram

Select the correct answer using the code given below.

(a) **1, 2 and 3**

(b) 2 and 3 only

(c) 1 and 2 only

(d) 1 and 3 only

10. Consider the following statements regarding the Vaiseshika school of philosophy:

1. It is based on the atomic theory.

2. It held that soul was wholly different from the cosmos.

3. It is in general agreement with the entire metaphysical position of the Samkhya.

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

11. Which of the following musical forms are associated with Carnatic Music?

1. Tillana

2. Tappa

3. Tanam

Select the correct answer using the code given below.

(a) 1 and 2 only

(b) 2 and 3 only

(c) **1 and 3 only**

(d) 1, 2 and 3

12. Which of the following temples forms the part of the temple complex at Mahabalipuram?

1. Shore temple

2. Ganesh Rath temple

3. Lad Khan temple

Select the correct answer using the code given below.

(a) **1 and 2 only**

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

13. Hyperspectral imaging is an imaging technique in which electromagnetic radiations of different frequencies can be captured.

Which of the following is/are well-known applications of hyperspectral imaging?

1. Identification of tree species within a forest

2. Mineral exploration

3. Detection of bats by converting very high-frequency signals into low-frequency signals

Select the correct answer using the code given below.

(a) **1 and 2 only**

(b) 2 only

(c) 1, 2 and 3

(d) 1 only

14. Which among the following are the uses of heavy water?

1. Preservation of Oral Polio Vaccines

2. Coolant in nuclear reactors

3. Bleaching agent

Select the correct answer using the code given below.

(a) **1 and 2 only**

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

15. The color of the sun appears reddish during sunset. Which of the following is the reason behind this phenomenon?

(a) Absorption of light rays by the atmosphere

(b) Human eyes are not sensitive to other colors during that part of the day

(c) **Scattering of light rays by atmospheric particles**

(d) The sun emits different wavelengths of light during different times of the day

16. Which among the following best describe the significance of cell division/mitosis?

1. Healing of injuries
 2. Growth of the body
 3. Determination of sex of unborn foetus
- Select the correct answer using the code given below.

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

17. In the context of cosmology, which of the following statements is/are correct?

1. Only 10% of the matter in the universe is comprised of dark matter.
2. Black holes are formed as a result of a split in neutron stars.
3. Dark energy is evenly distributed throughout the universe in space and time.

Select the correct answer using the code given below.

- (a) 3 only**
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) None

18. Which of the following best describes an Internet Cookie?

- (a) It is a warning displayed on a webpage that cautions viewers against the contents of the webpage.
- (b) It is any advertisement on a webpage that charges viewers when they click on it.
- (c) It is a message given to a web browser intended to better guide the viewers through customisation of webpages.**
- (d) It is a highlighted text on a webpage which can lead viewers to another webpage when they click on it.

19. Consider the following statements with regard to the National Genomic Grid:

1. It is a pan India program to study genes of all patients suffering from all types of genetic diseases.
2. The study will utilize the technique of genome sequencing.

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

20. Oxidation is a process in which a chemical substance changes because of the addition of oxygen. Which of the following everyday process is/are result of oxidation?

1. Corrosion of iron
2. Rancidification of food
3. Combustion of hydrocarbons

Select the correct answer using the code given below.

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

21. The term „Founder effect“, in population genetics, is used to indicate

- (a) reduced genetic variation as compared to the original population.**
- (b) increased genetic variation as compared to the original population.
- (c) confinement of successive generations in the geographical area that is the original habitat of the founders.
- (d) retreat of successive generations from the geographical area that is the original habitat of the founders.

22. Which of the following methods can be used for removing the permanent hardness of water?

1. Distillation
2. Adding sodium carbonate
3. Boiling
4. Adding caustic soda

Select the correct answer using the code given below.

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

23. Which of the following is/are Plant hormones?

1. Auxins
2. Gibberellins
3. Cytokinins

Select the correct answer using the code given below.

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

24. Often seen in the news, Human Papillomavirus Vaccines (HPV) provide protection against which one of the following?

- (a) Acquired Immunodeficiency Syndrome (AIDS)
- (b) Cervical Cancer**
- (c) Chickenpox
- (d) Measles and Rubella

25. Consider the following statements regarding 'Teflon' :

- 1. It is chemically inert and resistant to attack by corrosive reagents.
- 2. It is used as a non-stick coating for cookware.

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



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