

Q.1) Consider the following statements about Tomara dynasty

1. They ruled parts of present-day Delhi and Haryana
2. They were displaced by the Chauhan (Chahamana) kingdom

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.1) Solution (c)

Tomar were an Indian dynasty who ruled parts of present-day Delhi and Haryana during 9th-12th century.

Tomara dynasty, one of the minor early medieval ruling houses of northern India. The family is known from scattered sources, and it is impossible to reconstruct its history in any detail. Puranic evidence (writings of the Puranas) gives its early location in the Himalayan region. According to bardic tradition, the dynasty was one of the 36 Rajput tribes. The history of the family spans the period between the reign of Anangapala, who founded the city of Delhi in the 11th century CE, and the incorporation of Delhi within the Chauhan (Chahamana) kingdom in 1164. Although Delhi subsequently became decisively a part of the Chauhan kingdom, numismatic and comparatively late literary evidence indicates that Tomara kings such as Anangapala and Madanapala continued to rule as feudatories, presumably until the final conquest of Delhi by the Muslims in 1192–93.

Source: <http://www.thehindu.com/todays-paper/tp-opinion/the-lake-of-the-sun/article22787311.ece>

Q.2) Forest owl is found in which of the following states?

- a) Maharashtra
- b) Kerala
- c) West Bengal
- d) Punjab

Q.2) Solution (a)

It is endemic to central India.

Source: <http://www.thehindu.com/sci-tech/energy-and-environment/ancient-climatic-changes-and-central-indias-rare-forest-owlet/article22784367.ece>

Q.3) Consider the following statements about 'Darshak' app

1. It allows real-time museum visitors gather all details about objects or artefacts simply by scanning a QR code placed near the object
2. It is developed by Centre for Development for Advanced Computing (C-DAC)

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.3) Solution (c)

Centre for Development for Advanced Computing (C-DAC), has developed software named "Jatan" that is set to revolutionize museum experience. The latest technology will help online visitors get a 3-Dimensional (3D) view of hundreds of artefacts displayed at the museums. The software will enable virtual tours to museums. The group has developed "Darshak", a mobile-based application, aimed at improving the museum visit experience among the differently-abled. It allows real-time museum visitors gather all details about objects or artefacts simply by scanning a QR code placed near the object.

Source: <http://indianexpress.com/article/india/now-smart-museums-to-give-virtual-tours-and-3d-view-of-rare-artifacts-5064538/>

Q.4) Consider the following statements about Atal Bhujal Yojana

1. It is conceived to arrest the rampant overuse of groundwater in India
2. It is supported by the World Bank
3. It is a sub-scheme under National Groundwater Management Improvement Scheme (NGMIS)

Select the correct statements

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- a) 1 and 2
- b) 2 and 3
- c) 1 and 3
- d) All of the above

Q.4) Solution (a)

Atal Bhoojal Yojana is an ambitious plan aimed at efficient management of available water resources. Atal Bhujal Yojana will focus on demand side management (how to meet requirements by minimum use of water). The emphasis of the scheme will be on recharge of ground water sources and efficient use of water by involving people at the local level. The half of the fund of 6000 crore will be supported by a world bank loan of 3000 crore and the rest will be funded by central government. It would initially be implemented with community participation in Gujarat, Maharashtra, Haryana, Karnataka, Rajasthan, Uttar Pradesh and Madhya Pradesh.

The ministry had initially conceptualised the National Groundwater Management Improvement Scheme (NGMIS) in response to the budget announcement of 2016-17. However, the NGMIS was shot down by the expenditure finance committee in May 2017, recommending that the ministry recast the scheme with a composite proposal. The scheme has since been recast and renamed as Atal Bhujal Yojana.

The Centre does not have any control over groundwater. The only law that deals with groundwater – the Indian Easements Act – dates back to 1882. This law states that water below the surface belongs to the land owner. In the past several years, 13 states have bought their own law to regulate groundwater extraction but implementation has been patchy.

Source: <http://www.thehansindia.com/posts/index/National/2018-02-15/Centre-to-implement-Rs-6000-crore--Atal-Bhujal-Yojana-in-78-districts/359212>

Q.5) Consider the following statements about Malacidins

1. They are a class of chemicals made by bacteria found in soil
2. They target only gram-negative bacteria

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2

d) Neither 1 nor 2

Q.5) Solution (a)

US scientists have discovered a new family of antibiotics in soil samples. The natural compounds could be used to combat hard-to-treat infections. Tests show the compounds, called malacidins, annihilate several bacterial diseases that have become resistant to most existing antibiotics, including the superbug MRSA.

Soil is teeming with millions of different micro-organisms that produce lots of potentially therapeutic compounds, including new antibiotics. They used a gene sequencing technique to analyse more than 1,000 soil samples taken from across the US.

Malacidins only target gram-positive bacteria with a very thick cell wall. It is ineffective against gram-negative bacteria which cause cholera, pneumonia, sexually transmitted diseases, and plague. Thus, it does not make it universal cure against all bacteria.

Source: <http://indianexpress.com/article/explained/hunt-for-new-antibiotics-hits-pay-dirt-5064385/>

