

December 18, 2017

Q.1) Cabinet recently approved Agreement with UNESCO on establishment of International Training Centre for Operational Oceanography. It will be located in

- a) Mumbai
- b) Mangaluru
- c) Kochi
- d) Hyderabad

Q.1) Solution (d)

Source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=174372>

Q.2) Consider the following statements about Pavagada Solar Park

1. Solar Energy Corp. of India (SECI) is the implementing agency.
2. It is located in Maharashtra

Selected the correct statements

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

Q.2) Solution (d)

Pavagada Solar Park is a solar park spread over a total area of 13,000 acres (53 km²) in Pavagada taluk, Tumkur district, Karnataka. 500 MW of power may be commissioned by December 2017, and a further 1,500 MW by September 2018. The total investment required to build 2,000 MW of capacity was estimated at ₹14,800 crore (US\$2.3 billion). By the end of 2018, the park is planned to have a total capacity of 2,700 MW. When completed, Pavagada Solar Park may be the largest photovoltaic power station in the world.

The park's development is anchored by the Karnataka Solar Power Development Corp. Ltd (KSPDCL), an entity formed in March 2015 as a joint venture between Karnataka Renewable Energy Development Ltd (KREDL) and Solar Energy Corp. of India (SECI).

Q.3) Consider the following statements about 'Ilkal saree'

December 18, 2017

1. It has been accorded Geographical Indication (GI) tag
2. It is completely woven out of cotton
3. It uses Kasuti form of embroidery

Select the correct statements

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

Q.3) Solution (c)

It is a traditional form of saree which is a common feminine wear in India. Ilkal saree takes its name from the town of Ilkal in the Bagalkot district of Karnataka state, India. Ilkal sarees are woven using cotton warp on the body and art silk warp for border and art silk warp for pallu portion of the saree. In some cases instead of art silk, pure silk is also used. Ilkal saree has been accorded Geographical Indication (GI) tag.

The distinctive feature of Ilkal sarees is the use of a form of embroidery called as Kasuti. The designs used in Kasuti reflect traditional patterns like palanquins, elephants and lotuses which are embroidered onto Ilkal sarees.

The peculiar characteristic of the saree is joining the body warp with the pallu warp which is locally called as TOPE TENI. This technique is only used exclusively at Ilkal. If anyone requires Ilkal saree one must prepare a warp for every saree. Warp threads for body is prepared separately. Similarly pallu warp is prepared separately either with art silk or pure silk depending upon the quality required. Thirdly border portion of warp is prepared as like the pallu warp either art silk or pure silk and the colour used for pallu and on border will be one and the same. In general, the length of the pallu will range 16" to 27". The pallu threads and body threads are joined in loop technique, a typical method which is locally called as TOPE TENI.

Q.4) 'Exercise Ekuverin' is a bilateral military exercise between India and

- a) Maldives
- b) Sri Lanka
- c) Cambodia
- d) Vietnam

Q.4) Solution (a)

It is being conducted every year alternatively in India and Maldives. 8th annual exercise will be conducted in Belagavi, Karnataka

Source: <http://www.thehindu.com/news/national/karnataka/exercise-ekuverin-in-belagavi-from-today/article21665847.ece>

Q.5) Consider the following statements about 'Bioluminescence'

1. It is the production and emission of light by a living organism
2. The principal chemical reaction in bioluminescence involves the luciferin and the luciferase

Select the correct statements

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

Q.5) Solution (c)

Luciferase is a generic term for the class of oxidative enzymes that produce bioluminescence, and is usually distinguished from a photoprotein. The name was first used by Raphaël Dubois who invented the words luciferin and luciferase, for the substrate and enzyme, respectively.

Luciferases are widely used in biotechnology, for microscopy and as reporter genes, for many of the same applications as fluorescent proteins. However, unlike fluorescent proteins, luciferases do not require an external light source, but do require addition of luciferin, the consumable substrate.

News: Scientists have recently found a way to induce plants to give off dim light by embedding specialised nanoparticles into their leaves.

Scientists embed 3 components in to a different type of nanoparticle carrier -

- It includes luciferase, luciferin and co-enzyme A.
- Luciferase is an enzyme. It is used by the fireflies that give their glow.
- Luciferase acts on a molecule called luciferin, causing it to emit light.

IASbaba's Daily Quiz

December 18, 2017

- Co-enzyme A molecule helps the process along by removing a reaction by-product that can inhibit luciferase activity.

Particles releasing luciferin and coenzyme A were designed to accumulate in the extracellular space of the mesophyll, an inner layer of the leaf, while the smaller particles carrying luciferase enter the cells that make up the mesophyll.

This technology could also be used to provide low-intensity indoor lighting, or to transform trees into self-powered streetlights

Source: <http://www.thehindu.com/todays-paper/tp-in-school/now-plants-can-glow/article21764731.ece>

