Daily Current Affairs Prelims Quiz 14-12-2021 - (Online Prelims Test)

1) Consider the following statements regarding Algorithmic Trading:

1. It is the process of computer assisted buying and selling of stocks.
2. Mobile trading which is without human interaction is also a form of Algorithmic trading where orders are executed via Apps.
3. Algorithmic trading increases liquidity in the market since there are more transactions and investments.

Which of the above statement(s) is/are correct?

a. 1 and 3 only

b. 1 and 2 only

c. 2 and 3 only

d. 1, 2 and 3

Answer : d

Background: SEBI is planning to regulate Algo Trading

Algorithmic Trading

- Algorithmic trading or Algo trading is computer assisted buying and selling of stocks.
- It is also known as automated or programmed trading since pre-programmed computer strategies execute buy and sell trades depending on set parameters, instructions or market pattern and conditions.
- Algo trading came to India in 2008 but only savvy traders were using it then.
- Retail traders have started using advanced algos for trading mainly in the past five years.

How does it work?

- The key purpose of algo trading is speed of order execution. It takes several seconds when humans punch buy and sell traders.
- But algos execute orders according to predefined market conditions even before humans can think of executing trades.
- Traders can deploy their preprogrammed algos by connecting them to a broker's trading terminals, which are in turn linked to a stock exchange server.
- Before algos came into play, retail traders had to either call their brokers to execute trades or be physically present at the nearest broker's office.
- Mobile trading is also a form of algo trading where orders are executed via Apps.
- Order execution without human intervention is an advanced form of algo trading.

Why is SEBI trying to regulate Algo Trading?

- SEBI and stock exchanges regulate and monitor broker terminals but the algo programmes

deployed by traders did not require any exchange approvals so far as there were no rules.
- SEBI now believes that unregulated/unapproved algos pose a risk to the market and can be misused for systematic market manipulation as well to lure the retail investors by guaranteeing them higher returns.
- The potential loss in case of failed algo strategy is huge for the retail investors.

2) Consider the following statements regarding Indo-Saracenic Architecture:

1. It refers to the style that is the fusion of Mughal architecture and the Victorian Gothic style architecture.
2. Gothic features were used as the base and the domes and Chhatris were used to produce the external appearances to the buildings.

Which of the above statement(s) is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : c

Indo-Saracenic Architecture

- The colonial architecture culminated into what is called the Indo-Saracenic architecture.
- The colonial architecture exhibited itself through institutional, civic and utilitarian buildings such as post offices, railway stations, rest houses and government buildings.

Indo-Saracenic movement

- At the end of the Victorian era, India entered the era of national awakening and movement.
- The architecture represented the character of the time, a combination of imperial and national urges. It was this urge that led to the movement of Indo-Saracenic.
- This movement drew elements from the indigenous and Indo-Islamic architecture and combined it with the Gothic revival and Neo-classical styles favored in Victorian England.

Salient Features

- Bulbous Domes
  - This is one of the most characteristic feature of Indo-Saracenic buildings.
  - The Bulbous dome is a hemispherical structure evolved from arch, usually forming a ceiling or roof.
  - The Dome is considered as a symbolic representation of the vault of the heaven.
  - Some of the examples with Bulbous Domes are Egmore Railway Station, Chennai Museum.
- Overhanging eaves (Chhajja)
  - It is a protruding structure which provides protection for the lower walls.
  - This feature was common in Mughal architecture. Ex: Tomb of Salim Chishti, Fatepur Sikri, India.
  - This feature became part of the Indo-Saracenic architecture during 19th and 20th Ex: Chhatrapathi Shivaji Terminus, Rashtrapati Bhavan.
- Vaulted roof
  - Vaulted Roofs are ceilings with intersecting arches.
  - These roofs can be seen in mausoleum which was built during the Islamic period.
  - However, this feature was adopted by the British into the monuments they built during

their time in Ex: St.Matthias' Church, Chennai.

- Chhatris
  - Chhatris are an elevated, dome-shaped pavilions used as an element in Indian architecture.
  - The word chhatri is also refer to the small pavilions that mark the corners, roof of entrance of a major building.
  - These pavilions are purely decorative and have no utility, but they are a classic folly which represents the status and wealth. Ex: Tomb of Humayun.
  - This feature can also be found in Indo-Saracenic style. Ex: Rashtrapati Bhavan.
- Minarets
  - It is a tall spire with a conical or onion-shaped crown.
  - Minarets are either free-standing or taller than associated support.
  - The basic form of a minaret includes a base, shaft, and gallery.
  - In Chennai, the Senate house is the best example of Indo-Saracenic architecture with Minarets.
- Pavilion
  - Pavilion refers to the subsidiary building that is positioned separately or as an attachment to a main building.
  - Palaces or other large houses may have one or more subsidiary pavilions that are either freestanding or connected by covered walkways in the buildings of Mughal architecture.
  - These pavilions can be found in the forts, palaces of British architecture in Indo-Saracenic style.
- Cusped arches
  - The cusp in architecture is the intersections of lobed or scalloped forms, particularly in arches (cusped arches) and tracery (ornamental stone work).
  - The monumental cusped arch had become the standard Mughal style component by the end of 17th Century.
  - The British builders also used the cusped shape arch universally and frequently enriched it with representations of leaves, flowers, or even human heads at the tip. Ex: Chennai corporation building, Rashtrapati Bhavan, Chhatrapathi Shivaji Terminus.

3) Consider the following statements with respect to a Reindeer:

1. Reindeers are found in the Arctic region.
2. Reindeer possess something called a counter-current heat exchange which essentially allows them to recycle heat so that the heart doesn't need to work as hard.
3. Reindeer can even see in the ultraviolet and are some of the only mammals to have evolved this ability.

Which of the above statement(s) is/are **incorrect**?

a. 1 only

b. 2 only

c. 2 and 3 only

d. None of the Above

Answer : d

Biology of Reindeer

Warmth

- Reindeer live in the Arctic, where temperatures on long winter nights often plummet below -30 degrees C.
- Unlike most mammals, which only have one layer of fur, reindeer have two: a dense underfur

beneath a blanket of hollow guard hairs.

- Reindeer can have up to 2,000 hairs packed into a single square centimetre, making it ten times as dense as human hair.
- This double layer traps air and creates a cover of insulation that keeps reindeer from losing heat, and stops snow from reaching and cooling the skin.
- Reindeer possess something called a counter-current heat exchange which essentially allows them to recycle heat so that the heart doesn't need to work as hard.
- The arteries and veins carrying blood to and from the heart are intertwined, allowing heat from warm arterial blood to pass to the cold venous blood.
- A lot of this heat exchange happens in the specialized nasal bones of the reindeer, where plenty of cold air is inhaled through the nostrils.
- The highly concentrated blood vessels in their nostrils often give reindeer a red nose, just like Rudolph.

Fitness

- Reindeer lichen — an organism that is formed from a symbiotic relationship between algae and fungi — is the main thing reindeer eat during the winter.
- Lichens are the crusty looking things that you often see living on tree trunks and rocks.
- Lichens are plentiful in the Arctic — an ideal food source that reindeer can find wherever they go.
- This means reindeer don't need to store body fat and unlike many other animals.
- Reindeer are actually the only mammals capable of digesting lichen, thanks to specialized bacteria in their gut.

Sight

- Reindeer eyes change colour from gold to blue in the winter, letting in more of the small amount of light available and improving their vision.
- Reindeer can even see in the ultraviolet.
- Although this amazing sense is common in birds and insects, reindeer are some of the only mammals to have evolved this ability.
- This means that objects that would blend into the background when seen through human eyes are much more visible to reindeer.

Steadiness

- To walk in snow without sinking or getting frostbite, reindeer have evolved wide, crescent-shaped hooves.
- These keep them stable, but they can also be used as shovels to dig down to find lichen under the snow.
- The hoof pads shrink and harden over winter, allowing the reindeer to walk on the sharp edges of their hooves.
- As well as reducing the area of the hoof exposed to the cold ground, the hoof rims cut into the ice and snow to prevent slipping.

Transport

- Reindeer are the only domesticated species of deer, and people have been using them to get around since the Stone Age.
- Reindeer migrate up to 5,000km a year — further than any other land mammal — and they regularly cover 55km in a day.
- They are surprisingly fast too, reaching speeds of up to 80km per hour.

4) The Log4Shell Vulnerability is associated with which of the following fields:

a. Cyber Security
b. Health and Family Welfare
c. Space Science and Astronomy
d. Environment

Answer : a

Log4j Vulnerability

- A new vulnerability named Log4Shell is being touted as one of the worst cyber security flaws to have been discovered.
- The vulnerability is based on an open-source logging library used in most applications by enterprises and even government agencies.
- The exploits for this vulnerability are already being tested by hackers.
- The vulnerability is dubbed Log4Shell and is officially CVE-2021-44228 (CVE number is the unique number given to each vulnerability discovered across the world).
- The problem impacts Log4j 2 versions which is a very common logging library used by applications across the world.
- Logging lets developers see all the activity of an application.
- Tech companies such as Apple, Microsoft, Google all rely on this open-source library, as do enterprise applications from CISCO, Netapp, CloudFare, Amazon and others.
- The vulnerability is serious because exploiting it could allow hackers to control java-based web servers and launch what are called 'remote code execution' (RCE) attacks.
- In simple words, the vulnerability could allow a hacker to take control of a system.

5) Consider the following statements Vertical Launch Short Range Surface to Air Missile (VL-SRSAM):

1. The missile has been designed to strike at the high-speed airborne targets at the range of 40 to 50 km and at an altitude of around 15 km.
2. The missile has the capability of neutralizing various aerial threats at close ranges including sea-skimming targets.

Which of the above statement(s) is/are **incorrect**?

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : d

Background: The Vertical Launch Short Range Surface to Air Missile (VL-SRSAM) designed for Indian Naval warships was successfully flight tested.

Vertical Launch Short Range Surface to Air Missile (VL-SRSAM)

- VL-SRSAM has been designed and developed jointly by three facilities of the Defence Research and Development Organisation for deployment of Indian Naval warships.
- The missile has the capability of neutralising various aerial threats at close ranges including sea-skimming targets.
- The tactic of sea skimming is used by various anti-ship missiles and some fighter jets to avoid being detected by the radars onboard warships.

- For this, these assets fly as close as possible to sea surface and thus are difficult to detect and neutralise.

Design of VL-SRSAM

- The missile has been designed to strike at the high-speed airborne targets at the range of 40 to 50 km and at an altitude of around 15 km.
- DRDO officials have said its design is based on Astra missile which is a Beyond Visual Range Air to Air missile.
- Two key features of the VL-SRSAM are cruciform wings and thrust vectoring.
- The cruciform wings are four small wings arranged like a cross on four sides and give the projective a stable aerodynamic posture.
- The thrust vectoring is an ability to change the direction of the thrust from its engine controls the angular velocity and the attitude of the missile.
- VL-SRSAM is a canisterised system, which means it is stored and operated from specially designed compartments.
- In the canister, the inside environment is controlled, thus making its transport and storage easier and improving the shelf life of weapons.