



News Analysis (09 Oct, 2018)

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NOBEL PRIZES 2018

The will of the Swedish scientist Alfred Nobel established the five Nobel prizes in 1895.

- The Nobel Prizes are a set of recognition given to fields of Chemistry, Literature, Peace, Physics, and Physiology or Medicine by The Nobel Foundation.
- The Nobel Foundation is a private institution established in 1900, has ultimate responsibility for fulfilling the intentions in Alfred Nobel's will.
- The prizes in Chemistry, Literature, Peace, Physics, and Physiology or Medicine were first awarded in 1901.

Who selects the Nobel Laureates?

- In his last will and testament, Alfred Nobel specifically designated the institutions responsible for the prizes he wished to be established:
 - The Royal Swedish Academy of Sciences for the Nobel Prize in Physics and Chemistry,
 - Karolinska Institutet for the Nobel Prize in Physiology or Medicine,
 - The Swedish Academy for the Nobel Prize in Literature, and
 - A Committee of five persons to be elected by the Norwegian Parliament (Storting) for the Nobel Peace Prize.
- In 1968, the Sveriges Riksbank established the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.
 - The Royal Swedish Academy of Sciences was given the task to select the Laureates in Economic Sciences starting in 1969.
- While the five Nobel Prizes are based on a fund set up from the wealth bequeathed by Alfred Nobel, the Economic Prize is based on a donation received by the Nobel Foundation in 1968 from Sveriges Riksbank.

Nobel Prize in Medicine

- The 2018 Nobel Prize in Physiology or Medicine has been jointly awarded to James P. Allison from the US and Tasuku Honjo from Japan.
- By stimulating the inherent ability of our immune system to attack tumor cells Nobel Laureates established an entirely **new principle for cancer therapy**.
- Tasuku Honjo discovered a protein on immune cells and revealed that it also operates as a brake, but with a different mechanism of action.
- James P. Allison studied a **protein that functions as a brake on the immune system**. He realized the potential of releasing the brake and unleashing our immune cells to attack tumors. He developed this concept into a new approach for treating patients.

Nobel Prize in Physics

- **Three scientists Arthur Ashkin of the U.S., Gerard Mourou of France and Donna Strickland of Canada won the Nobel Physics Prize.**
- Mr. Ashkin, 96, was honored for his invention of **“optical tweezers”** that grab particles, atoms, viruses and other living cells with their laser beam fingers.
- He is the oldest winner of a Nobel prize.
- In 1987 Mr. Ashkin used the tweezers to capture living bacteria without harming them.
- Mr. Mourou and Ms. Strickland won for helping develop a method to generate **ultra-short optical pulses**, “the shortest and most intense laser pulses ever created by mankind”.
- Mrs. Strickland is the third women ever and the first woman in 55 years to receive the prestigious award.
- Their technique is now used in corrective eye surgery and in making surgical stents. Recently, attosecond lasers have even made it possible to observe individual electrons.

Nobel Prize in Chemistry

- **Ms. Frances Arnold US, Mr. George Smith, both from the US and Mr. Gregory Winter of Britain were awarded the prize for pioneering science in enzymes and antibodies.**
- For the first time, scientists **harnessed the power of evolution to produce novel proteins** used in everything from environmentally friendly detergents and biofuels to cancer drugs.
- Ms. Arnold is the fifth woman to win a chemistry Nobel. Her research on enzymes led to the development of better industrial chemicals and pharmaceuticals.
- Mr. Smith developed a method using a virus that infects bacteria to produce new proteins while Mr. Winter used the same technique for the directed evolution of antibodies

Nobel Peace Prize

- Who is awarded?

“to the person who shall have done the most or the best work for fraternity between nations, the abolition or reduction of standing armies and for the holding and promotion of peace congresses.” (Excerpt from the will of Alfred Nobel)
- The Nobel Peace Prize for 2018 has been awarded to **Congolese gynecologist Dr. Denis Mukwege and Yazidi human rights activist Nadia Murad** for their efforts to end the use of sexual violence as a weapon of war and armed conflict.
- Dr. Denis Mukwege has helped in the treatment of women who were raped by rebels during the civil war in Democratic Republic of Congo.
- Ms. Murad is one of an estimated 3,000 Yazidi girls and women who were victims of rape and other abuses by the Islamic State.

Nobel Memorial Prize in Economic Sciences

- Who is awarded?

The Nobel memorial prize in economics sciences rewards the design of methods that address pressing issues of our time: sustainable growth in the global economy and welfare.
- **William Nordhaus** and **Paul Romer**, from the US, won the 2018 Nobel Economics Prize for work in integrating climate change and technological innovation into economic analysis,
- William D. Nordhaus was awarded for **integrating climate change into the long-run macroeconomic analysis.**
- William Nordhaus was the first person to create a quantitative model that described the interplay between the economy and the climate.
- Paul M. Romer **integrated technological innovations into the long-run macroeconomic analysis.**
- Paul Romer has shown how economic forces govern the willingness of firms to produce new ideas and innovations, laying the foundations for a new model for development, known as endogenous growth theory.

Nobel Prize in Literature Controversy

- In 2018, the Nobel Prize for literature was not awarded due to allegations of sexual misconduct on Frenchman Jean-Claude Arnault, married to an Academy member, and the head of an influential cultural club in Stockholm.
- An internal Academy probe also revealed conflicts of interest between him and the institution, which had funded his club for years.
- There were also allegations of financial malpractice and repeated leaks

- The Academy has been deeply divided over how to deal with Arnault and on the reforms, it needs to undertake.
- Paralyzed and ridiculed around the world the Academy announced in May that it would postpone by one year the 2018 Nobel Literature Prize, a first in 70 years.

Sovereign Gold Bonds

Government of India, in consultation with the Reserve Bank of India, has decided to issue Sovereign Gold Bonds-2018-19. The Sovereign Gold Bonds will be issued every month from October 2018 to February 2019

- Sovereign Gold Bonds are government securities denominated in grams of gold. They are substitutes for holding physical gold.
- The sovereign gold bond scheme was launched in November 2015 to reduce the demand for physical gold and shift a part of the domestic savings, used for the purchase of gold, into financial savings.
- Gold and crude oil have significant role in India's widening current account deficit. The government, however, chose not to increase import duty on gold when it raised duty on non-essential imports to narrow the current account deficit, fearing a surge in gold smuggling.
- The main objective of the scheme is to develop a financial asset as an alternative to purchasing metal gold.

Sl. No.	Item	Details
1	Issuance	By Reserve Bank India on behalf of the Government of India.
2	Eligibility	Restricted for sale to resident entities including individuals, Hindu Undivided Families (HUFs), Trusts, Universities, and Charitable Institutions.
3	Denomination	The Bonds will be denominated in the multiples of gram(s) of gold with a basic unit of 1 gram.
4	Tenor (time to maturity of a bond)	The tenor of the Bond will be for a period of 8 years with exit option in 5th, 6th year and 7th year.
5	Minimum size	The minimum permissible investment will be 1 gram of gold.

6	Maximum limit	The maximum limit of subscribed shall be 4 KG for the individual, 4 Kg for HUF and 20 Kg for trusts and similar entities per fiscal (April-March).
7	Sales channel	Bonds will be sold through banks, Stock Holding Corporation of India Limited (SHCIL), designated post offices and National Stock Exchange of India Limited and Bombay Stock Exchange, either directly or through agents.
8	Interest rate	The investors will be compensated at a fixed rate of 2.50 percent per annum payable semi-annually on the nominal value.
9	Collateral	Bonds can be used as collateral for loans
10	Payment	<p>Payment can be made through demand draft, cheque, and electronic banking.</p> <p>Cash payment is allowed up to a maximum of Rs 20,000.</p> <p>The issue price of the Gold Bonds will be Rs 50 per gram less for those who subscribe online and pay through digital mode.</p>
11	Tax treatment	The interest on Gold Bonds shall be taxable as per the provision of Income Tax Act, 1961 (43 of 1961). The capital gains tax arising on redemption of SGB to an individual has been exempted.
12	Tradability	Bonds will be tradable on stock exchanges within a fortnight of the issuance on a date, as notified by the RBI.

Important Facts for Prelims (09th October 2018)

Zika Virus Disease Cases in Rajasthan

- Recently, few cases of Zika virus disease have been reported in Jaipur, Rajasthan.

- The mosquito borne flavivirus was first identified in Uganda in 1947 in monkeys through a network that monitored yellow fever. It was later identified in humans in 1952 in Uganda and the United Republic of Tanzania.
- Zika Virus is also transmitted from mother to fetus during pregnancy, through sexual contact, transfusion of blood and organ transplantation.

Ghagra River as National Waterway

- Development work of Ghagra river as National Waterway (NW)-40 is to start from Basti in Uttar Pradesh, under the Sagarmala Programme of Ministry of Shipping.
- The waterway from Manjhighat at Ganga-Ghaghra river confluence to Faizabad/Ayodhya along Ghagra River for a length of 354 km was declared as NW-40 during the year 2016.
- This waterway is being classified as class-III waterway which envisages movement of up to 1000 ton capacity vessels. Besides cargo and passenger movement, NW-40 will provide a connectivity to tourist and pilgrimage places along river Ghaghra and Ganga.
- Ghaghra is the largest tributary of the Ganges by volume and the second longest tributary of the Ganges by length after Yamuna.

Sagarmala Project

- Sagarmala project aims at holistic port infrastructure development along the 7,500-km long coastline through modernisation, mechanisation and computerisation. Under this port led development framework government hopes to increase its cargo traffic three-fold.
- It also includes establishment of rail / road linkages with the port terminals, thus providing last mile connectivity to ports; development of linkages with new regions, enhanced multi-modal connectivity including rail, inland water, coastal and road services.

Andaman and Nicobar Command

- Recently the Andaman and Nicobar Command has celebrated its 18th Raising Day recently.
 - It is the only joint tri-services operational Command of the country.
 - The joint tri-services operational Command was created in 2001 to safeguard India's strategic interests in the Andaman and Nicobar region.
 - The Command has been doing regular exercises with the neighbouring countries as part of India's Act East Policy.
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