



News Analysis (18 Mar, 2020)

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Regulating Payment Aggregators and Gateways

Why in News

The **Reserve Bank of India (RBI)** has released **guidelines** for regulating activities of **Payment Aggregators (PAs)** and **Payment Gateways (PGs)** in the country.

PAs and PGs are intermediaries playing an important function in **facilitating payments in the online space**.

Payment Aggregators and Payment Gateways

- **Payment Aggregators facilitate e-commerce sites and merchants in accepting payment instruments from the customers** for completion of their payment obligations without the need for merchants to create a separate payment integration system of their own. **Example:** Billdesk.
- **Payment Gateways** are entities that **provide technology infrastructure** to route and facilitate processing of an online payment transaction without any involvement in handling of funds. PGs in India mainly include **banks**.
- A Payment Gateway allows the merchants to deal in a specific payment option put on the portal, whereas a Payment Aggregator allows one to have multitudes of options for payment. Thus, **a Payment Aggregator covers a payment gateway in its ambit**.

Guidelines

- **Authorisation**

- **Non-bank PAs** will require authorisation from the RBI under the Payment and Settlement Systems Act, 2007 (PSSA). A PA should be a company incorporated in India under the Companies Act, 1956 / 2013.
- **Banks provide PA services** as part of their normal banking relationship and **do not therefore require a separate authorisation from RBI.**
- **E-commerce marketplaces** (e.g. flipkart, Paytm) providing PA services **should separate PA services from the marketplace business** and they should apply for authorisation on or before 30th June, 2021.
- PGs will be considered as 'technology providers' or 'outsourcing partners' of banks or non-banks, as the case may be.

- **Capital Requirement**

- **Existing PAs** have to achieve a net worth of ₹15 crore by 31st March, 2021 and a net worth of ₹25 crore on or before 31st March, 2023. The net worth of ₹25 crore has to be maintained at all times thereafter.
- **New PAs** should have a minimum net worth of ₹15 crore at the time of application for authorisation and have to attain a net worth of ₹25 crore by the end of the third financial year of the grant of authorisation. The net worth of ₹25 crore has to be maintained at all times thereafter.

- **Disclosure Requirements**

- PAs need to disclose **comprehensive information** regarding merchant policies, customer grievances, privacy policy and other terms and conditions on the website and / or their mobile application.
- They need to undertake **background and antecedent checks of the merchants** to ensure that such merchants do not have any malafide intention of duping customers, and do not sell fake / counterfeit / prohibited products.

Source: TH

Permanent Commission for Women in Indian Navy

Why in News

Recently, the Supreme Court upheld **the right of serving Short Service Commission (SSC) women officers of the Navy to be granted Permanent Commission (PC)** on a par with their male counterparts.

- The judgment was based on a case filed by 17 women SSC officers who were denied PC and discharged despite completing 14 years of service as SSC officers.
- The verdict comes after the top court had **opened the doors for similarly-placed women officers in the Army.**

NOTE

A **permanent commission** entitles an officer to serve in the Navy **till he/she retires** unlike **Short Service Commission (SSC), which is currently for 10 years** and can be **extended by four more years**, or a total of 14 years.

Key Points

- **PC for Women :**
 - SC has directed that SSC women officers found suitable for the grant of PC shall be entitled to **all consequential benefits, including arrears of pay, promotions and retirement benefits as and when due.**
 - The grant of PCs will be subject to availability of vacancies in the stabilised cadre, suitability of the candidate and recommendation by the chief of Naval Staff.
- **Criticism of Government's View:**

It rejected the submissions of the Centre stating that **certain sea-sailing duties are ill-suited for women officers** as there is no return to the base, unlike in the Army and the Air Force.
- **Stand against Discrimination:**
 - The Court **denied the discrimination on the grounds of physiology, motherhood and physical attributes** of the women officers in the Indian Navy.
 - Thus the judgement ensured the **right to fair and equal treatment with constitutional entitlement to dignity at the workplace for women.**
- **Previous Notifications for PC of Women :**
 - The Court stated that the government had already drawn up **policies in 1991 and 1998 to give Permanent Commission to women in the Navy.**
 - The 1991 notification lifted the restriction on the appointment or enrolment of women for specified cadres/branches of the Navy.
 - The 1998 notification made women eligible for appointment as officers in all the branches of the Indian Navy.
 - It also directed that the stipulation in a **policy letter dated September 26, 2008**, making the grant of PC prospective and restricting its application to specified cadres/branches of the Navy **shall not be enforced.**

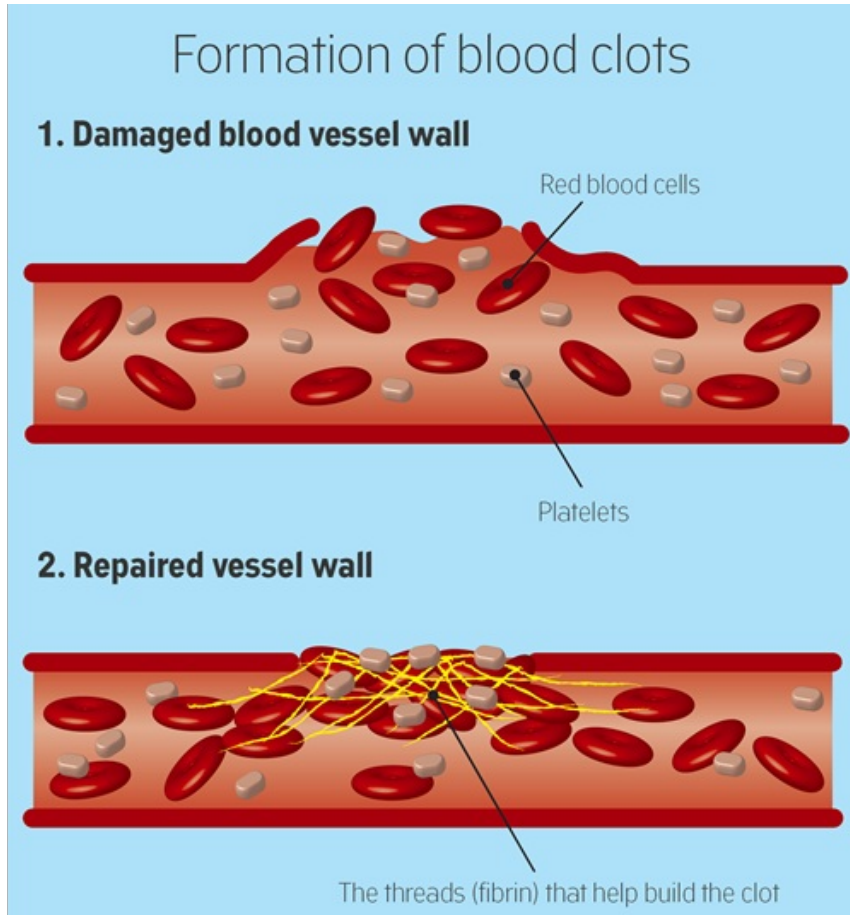
Source:TH

Starch-based Materials to Stop Blood Loss

Why in News

Recently, scientists from the **Institute of Nano Science and Technology (INST)** have developed a **starch-based 'hemostat' material** that **concentrates the natural clotting factors in blood by physically absorbing excess fluid.**

Hemostat materials absorb excess fluid by concentrating the natural clotting factors in the blood that are critical for stopping the blood flow.



Key Points

- The product is made by microparticles known as '**calcium-modified carboxymethyl-starch**'.
- When the microparticles combine, they create an **adherent gel** that can remain on the wound until slowly dissipating as healing proceeds.
- These microparticles are prepared by **modifying some of the chemical hydroxyl groups on starch to carboxymethyl groups** while also incorporating the beneficial calcium ions, which encourages the aggregation of red blood cells and platelets and their activation to generate the fibrin protein network that forms a stable blood clot.
- **This modification increases the ability of the molecules to interact with water.** This is the basis of its impressive ability to absorb fluid from the blood and hence concentrate the clotting factors.

- The **product has increased absorption capacity and adhesion, it is inexpensive, non-toxic, biocompatible as well as biodegradable.**
- Presently, no single hemostatic agent exists that can work in all situations and current hemostat materials are very expensive and available mostly in developed countries.

Blood Clotting

- Clotting is a necessary process that can **prevent too much loss of blood when there is cut or injury.**
- A blood clot is a **clump of blood** that has changed from a liquid to a gel-like or semisolid state.
- Blood clots are healthy and lifesaving when they stop bleeding. But unnecessary clotting causes serious medical problems which include a heart attack, stroke, etc.
E.g If a clot formed inside one of veins breaks free and travels through veins to heart and lungs, it can get stuck and prevent blood flow.
- An injury or a trauma stimulates the **platelets (also called thrombocytes)** in the blood to release certain factors which activate the mechanism of clotting.
Calcium ions, Fibrinogens, a protein and Vitamin K are also needed for clotting.

Starch

- Starch is a **carbohydrate** extracted from agricultural raw materials.
- The starch molecule consists of a large number of glucose units joined by glycosidic bonds.
- It is the most important carbohydrate in the human diet.
- Because it is renewable and biodegradable it is also a perfect raw material as a substitute for fossil-fuel components in numerous chemical applications such as plastics, detergents, glues etc.

Institute of Nano Science and Technology (INST)

INST is an **autonomous institution** of the **Department of Science and Technology**, Government of India under the **Society Registration Act, 1960.**

Source: PIB

National Guidelines on Infant and Young Child Feeding

The National Guidelines on Infant and Young Child Feeding (IYCF) were released by the **Ministry of Human Resource Development in 2004.**

- These are in line with the adoption of the **Global Strategy on Infant and Young Child Feeding** by the **55th World Health Assembly** in **May 2002** and adoption of the **Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Amendment Act, 2003** by the **Parliament of India**.
- The **National Nutrition Policy** adopted by the Government of India under the aegis of the **Department of Women and Child Development in 1993** laid due emphasis on nutrition and health education of mothers on infant and child feeding.
- According to the guidelines, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health.
Thereafter to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond.
- **Objectives:**
 - To advocate the cause of infant and young child nutrition and its improvement through optimal feeding practices nationwide.
 - To disseminate widely the correct norms of breastfeeding and complementary feeding throughout the nation in regional languages.
 - To help plan efforts for raising awareness and increasing commitment of the concerned sectors of the government, national organisations and professional groups for achieving optimal feeding practices for infants and young children.
- **Steps taken by the Government of India to ensure Infant and Young Child Feeding:**
 - Promotion of breastfeeding practices under Mothers' Absolute Affection (MAA).
 - Observation of the **Village Health Sanitation and Nutrition Days** (VHSNDs) for provision of maternal and child health services and creating awareness on maternal and child care.
 - Counselling to pregnant and lactating mothers under the **Anganwadi Services Scheme**.
 - Schemes such as Revised **Mother and Child Protection Card**, **Pradhan Mantri Matru Vandana Yojana** (PMMVY), **POSHAN Abhiyaan**, etc.

Source: PIB

Nanocomposite Coatings

Why in News

A group of scientists at the **International Advanced Research Centre for Powder Metallurgy & New Materials (ARCI)**, an **autonomous R&D center of the Department of Science & Technology (DST)** have developed a process for size-selective deposition of

nanocomposite coatings.

Key Points

- Nanocomposite coatings are formed by mixing two or more dissimilar materials at nanoscale to **improve the physical, chemical and physicochemical properties** of the new materials.
- The scientists have found that **nickel tungsten-based coatings** with infusion of **particular sized Silicon Carbide (SiC) submicron particles** using a **pulsed electroplating** can provide an excellent combination of **wear and corrosion resistance**.

Need for Nanocomposite Coatings:

- Several **aerospace, defence, automobile, space devices** need to reduce friction, wear, and tear to enhance the life of components.
- Lubricating these dynamic systems add to the **cost, complexity, and weight** of these systems.
- The coating **could help in reducing the friction** of such devices.

Advantages of the Process

- The nanocomposite coating demonstrated excellent **tribological behavior** (science and engineering of interacting surfaces in relative motion, which includes principles of friction, lubrication, and wear) compared to other wear-resistant coatings.
- The coatings **withstood 1000 hours of salt spray (corrosion)** without degradation when compared to conventional wear-resistant coatings.
- The process is **highly economical without environmental constraints**.

Electroplating

- Electroplating or electrodeposition is a process that employs an electrical signal provided by an external power source to reduce cations of a desired metal in solution and produce a **metallic coating**.
- It involves the metal parts to be immersed in an electrolyte bath solution.
- In this case, it is typically prepared by dissolving crystals of Nickel (Ni) and Tungsten (W) salts in a mix of distilled water and other additives.
- A Direct Current (DC) is passed through the solution, and the resulting reaction leaves a deposit of Ni-W alloy on the piece being plated.

Size-Selective Electrodeposition:

For size-selective electrodeposition, Pulse Current (PC) electrodeposition – **intermittent application of current** is used in place of conventional Direct Current (DC) deposition.

Source: PIB

Anti-HIV Drugs for COVID-19

Why in News

The **Ministry of Health and Family Welfare** has issued revised guidelines on the '**Clinical Management of COVID-19**'.

- COVID-19 patients may present with **mild, moderate, or severe illness** and the early recognition of suspected patients allows for timely initiation of infection, prevention and control.
- The Ministry has recommended use of **drug combinations Lopinavir and Ritonavir** (sold under the brand name **Kaletra**) depending upon the severity of the condition of a person having **coronavirus** infection, on a case-to-case basis.

Key Points

- Lopinavir-Ritonavir is recommended for **high-risk groups of patients** aged above 60 who are suffering from diabetes mellitus, renal failure, chronic lung disease and are immuno-compromised.
- Lopinavir-Ritonavir is used widely for controlling **Human Immunodeficiency Virus (HIV) infection.**
However, the use of Lopinavir-Ritonavir is also **associated with significant adverse events** which many times have led to discontinuation of therapy.
- There is **no current evidence** from randomised controlled trials to recommend any **specific treatment for suspected or confirmed COVID-19 patients.**
No specific antivirals are recommended for treatment of those suffering from respiratory ailment due to lack of adequate evidence from medical literature.
- The use of this drug combination is suggested by an expert committee comprising doctors from the **All India Institutes of Medical Sciences (AIIMS)**, experts from **National Centre for Disease Control (NCDC)** and **World Health Organisation (WHO).**

Source: TH

ISRO's Assistance in Fishing

Why in News

Recently, the Minister of State for Fisheries, Animal Husbandry and Dairying replied in Lok Sabha on ISRO's Assistance in finding Rich Fishing Areas.

Key Points

- **Indian Space Research Organization (ISRO)** has developed the methodology for the generation of fishery advisories and transfer to **Indian National Centre for Ocean Information Services (INCOIS)** since 2002 as an operational service for providing **Potential Fishing Zone (PFZ)** advisories.
- This INCOIS utilizes data on **chlorophyll concentration (Chl)** obtained from **ISRO's Oceansat-2 satellite** and the **sea surface temperature from National Oceanic Atmospheric Administration (NOAA / USA satellites)**.
- The **INCOIS** uses these satellite datas to prepare the **PFZ** advisories on the potential rich fishing areas and provide to the sea faring fishermen in all states.

Benefits

- PFZ advisories helped fishermans in avoiding the unwanted search for fish shoals. This reduces their fuel consumption.
- Reduction in fuel consumption reduces carbon emission and hence pollution.

OceanSat-2

- OceanSat-2 **provides service continuity for the operational services of Oceansat-1** with enhanced application potential. It was launched in 2009.
- It's main objectives are to study surface winds and ocean surface strata, observation of chlorophyll concentrations, monitoring of phytoplankton blooms, study of atmospheric aerosols and suspended sediments in the water.

INCOIS

- INCOIS is an autonomous body under the **Ministry of Earth Sciences (MoES)**. It is headquartered at **Hyderabad**.
- It is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvements through systematic and focussed research.

Rashtriya Kishor Swasthya Karyakram

Why in News

Recently, the Ministry of Health and Family Welfare informed the Rajya Sabha about the **Rashtriya Kishor Swasthya Karyakram (RKSK)** while discussing the health and well-being of adolescents in the country.

Key Points

- **Rashtriya Kishor Swasthya Karyakram (RKSK)** was launched by the **Ministry of Health and Family Welfare (MoHFW)** in **2014**.
- It intends to **ensure holistic development of the adolescent population**.
- The RKSK programme defines an **adolescent as a person within 10-19 years of age**, in **urban and rural areas**, includes both **girls and boys, married and unmarried**, poor and affluent, whether they are **in school or out of school**.
- The programme also focuses on reaching out **all adolescents including Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ)**.
- To guide the implementation of this programme, MoHFW in **collaboration with the United Nations Population Fund (UNFPA)** has developed a National Adolescent Health Strategy.
- The **six thematic areas** of RKSK as well as that of the strategy are nutrition, sexual reproductive health, substance misuse, non - communicable diseases, mental health and injuries and violence.
- The programme envisages a **paradigm shift from the clinic-based services to the promotion and prevention and reaching adolescents** in their own environment, such as in schools, families and communities.
- The prime elements of the programme are:
 - **Adolescent Friendly Health Clinics (AFHCs)** across various levels of public health institutions in all the States.
 - **Weekly Iron Folic Acid Supplementation (WIFS) Programme** for school going adolescent boys and girls and out of school adolescent girls across the country.
 - **Peer Educator Programme** in select 200 districts, based on Composite Health Index and identified as High Priority Districts (HPDs).
 - The **Menstrual Hygiene Scheme** that provides funds to the States/UTs for procurement of sanitary napkins for Adolescent Girls (aged 10-19 years).

NBCFDC and NISD

Why in News

The Ministry of Social Justice & Empowerment is exploring the possibilities of a scheme for persons engaged in the act of begging.

- The Scheme would cover identification, rehabilitation, provision of medical facilities, counselling, education, skill development with the support of State Governments/UTs and Voluntary Organizations, etc.
- The Ministry also provides funds to the **National Backward Classes Finance & Development Corporation (NBCFDC)** and the **National Institute of Social Defence (NISD)** for the development of members of beggars' community.

National Backward Classes Finance & Development Corporation

- NBCFDC is a **Government of India Undertaking** under the aegis of **Ministry of Social Justice and Empowerment**.
- It was incorporated under **Section 25 of the Companies Act 1956** on 13th January 1992 as a Company not for profit.
- Its objective is to promote economic and developmental activities for the benefit of Backward Classes and to assist the poorer section of these classes in skill development and self-employment ventures.

National Institute of Social Defence

- The National Institute of Social Defence (NISD) is an **Autonomous Body** and is **registered under Societies Act XXI of 1860 with the Government of National Capital Territory (NCT), Delhi**.
- It is a central advisory body **for the Ministry of Social Justice and Empowerment**.
- It is the **nodal training and research institute** in the field of social defence.
- The institute currently focuses on **human resource development** in the areas of drug abuse prevention, welfare of senior citizens, beggary prevention, transgender and other social defence issues.
- The mandate of the institute is to provide inputs for the **social defence programmes of the Government of India through training, research & documentation**.

Source: PIB
