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VL-SRSAM Missile System

- Vertical Launch **Short Range** Surface to Air Missile (VL-SRSAM) was launched by Defence Research & Development Organisation (DRDO).
- It is indigenously designed and developed by **DRDO**, along with Research Centre Imarat, and the Pune-based Research and Development Establishment (Engineers).
- Once deployed, the VL-SRSAM system will prove to be a force multiplier for the **Indian Navy**.
- With an effective Weapon Control System (WCS), it would neutralize various aerial threats at close ranges including sea-skimming targets.
- [Sea-skimming targets have the capability to avoid detection by radar or infrared sensors.]

Progress MS-16 Cargo Ship

- Progress MS-16 or Progress 77 cargo ship has delivered water, propellant and other supplies to the International Space Station (ISS).
- Progress MS-16 is an **unmanned** Russian cargo ship launched by Russian Space Agency, **Roscosmos**.

International Space Station

- It is the only active modular space station (habitable artificial satellite) in the Earth's Orbit.
- It is the largest artificial object in space and the largest satellite in low Earth orbit, visible to the naked eye from Earth's surface.
- It is a joint project between five participating space agencies - NASA (USA), Roscosmos, Japan Aerospace Exploration Agency (JAXA), European Space Agency, and Canadian Space Agency.

International Atomic Energy Agency

- Iran will continue to give access to International Atomic Energy Agency (IAEA) to its declared nuclear sites for three months.
- IAEA's genesis was U.S. President Eisenhower's "Atoms for Peace" address to the United Nations General Assembly in 1953.
- It was established in 1957 as an autonomous organization which is not under

direct control of the UN.

- Head quartered in Vienna, IAEA seeks to promote the peaceful use of nuclear energy, and to inhibit its use for any military purpose.
- But it reports to both the United Nations General Assembly (UNGA) and United Nations Security Council (UNSC).
- IAEA Safeguards are a set of technical measures applied by IAEA and countries accept them through the conclusion of safeguards agreements.
- It is an essential component of Non-Proliferation of Nuclear Weapons Treaty (NPT), which states that each Non-Nuclear Weapon State is required to conclude a safeguards agreement with the IAEA.

Scheme of Fund for Regeneration of Traditional Industries

- Fifty **artisan-based clusters** were inaugurated through the Scheme of Fund for Regeneration of Traditional Industries (SFURTI) in 18 States.
- Ministry of MSME is implementing a SFURTI with a view to **organize traditional industries and artisans** into clusters to make them competitive and increase their income.
- The clusters are part of the government's strategy of keeping villages at the core of the economic policy.
- There are 371 artisan-based Clusters which have are being funded by the Ministry of MSME, which aims to support at least one cluster in each district in the future.
- SFURTI clusters are of two types i.e.,
    1. Regular Cluster (500 artisans) with Government assistance of up to Rs.2.5 crore and
    2. Major Cluster (more than 500 artisans) with Government assistance up to Rs.5 crore.
- The artisans are organized into SPVs which can be
    1. Society registered under Societies (Registration) Act, 1860,
    2. Co-operative Society under an appropriate statute,
    3. Producer Company under Section 465 (1) of Companies Act, 2013,
    4. Section 8 Company under the Companies Act, 2013 or
    5. It can also be a Trust.
- Under the Scheme, the Ministry supports various interventions including setting up of infrastructure through Common Facility Centers (CFCs), procurement of new machineries, design intervention, etc.
- Besides, the scheme focuses on strengthening the **cluster governance systems** with the active participation of the stakeholders.

Non-Alcoholic Fatty Liver Disease

- Ministry of Health & Family Welfare is going to integrate Non-Alcoholic Fatty Liver Disease (NAFLD) with NPCDCS.
- [NPCDCS - National Programme for Prevention & Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke]

- Non-Alcoholic Fatty Liver Disease (NAFLD) is emerging as an important cause of liver disease in India (9-32%).
- **Conditions** - It is a distinct hepatic condition where there is accumulation of excess fat in the liver of people who drink little or no alcohol, causing fatty liver.
- Non-alcoholic steatohepatitis (NASH) is a more serious condition that may lead to severe liver cell inflammation and scarring, and cirrhosis.
- **Symptoms** - Abdominal pain, fatigue, slightly enlarged liver, patchy, dark discoloration of the skin (acanthosis nigricans) over the neck and under the arm.
- **Causes** - NAFLD is a part of the metabolic syndrome characterized by diabetes, or pre-diabetes (insulin resistance), being overweight or obese, elevated blood lipids such as cholesterol and triglycerides, and high BP.
- Several factors that may contribute to the development of NASH are:
    1. Oxidative stress (between pro-oxidant and anti-oxidant chemicals imbalance that lead to liver cell damage)
    2. Release of toxic inflammatory proteins (cytokines) by the patient's own inflammatory cells, liver cells, or fat cells
    3. Liver cell necrosis or death, called apoptosis
    4. Adipose tissue inflammation and infiltration by white blood cells
    5. Gut microbiota (intestinal bacteria) causing liver inflammation

- **Screening/Diagnosis** - Blood testing or radiologic investigations such as abdominal ultrasound or CT scan.
- **Treatment** - Weight reduction, controlling diabetes and treating elevated cholesterol levels, decrease in the amount of liver inflammation through anti-oxidant, anti-apoptotic and anti-cytokine medications.

African Swine Fever Virus

- Chinese scientists have found a natural mutation in the African swine fever virus (ASFV) that could be less deadly than the strain that ravaged the world's largest pig herd in 2018 and 2019.
- ASFV is an intra cytoplasmically-replicating DNA arbovirus, which is the sole member of the family Asfarviridae.
- ASF is a severe viral disease that affects wild and domestic pigs resulting in a highly lethal haemorrhagic fever, but doesn't affect humans.
- It has almost 100% case fatality rate (CFR).

- **Transmission** of the ASFV could be through,
    1. Direct contact with an infected or wild pig (alive or dead),
    2. Indirect contact through ingestion of contaminated material such as feed or garbage, or through biological vectors like ticks.
- **Symptoms** - High fever, depression, loss of appetite, haemorrhages in the skin, anorexia, vomiting, diarrhoea and sudden deaths in pigs.
- **Diagnosis** - Laboratory testing to differentiate it from Classical Swine Fever (CSF), whose signs may be similar to ASF.
- Even so, while ASF is lethal, there is no approved vaccine, which is also a reason why animals are culled to prevent the spread of infection.

Source: PIB, The Hindu, The Indian Express

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