Prelim Bits 13-05-2022 | UPSC Daily Current Affairs

Protected Mobility Vehicles

The Army has floated a Request for Information (RFI) to purchase Protected Mobility Vehicles for high-altitude areas above the height of 4000 metres and for deserts and plains.

- The Protected Mobility Vehicle (PMV) is essentially a wheeled armoured personnel carrier.
- It provides protection to the soldiers travelling inside the vehicle from mine blasts and sudden attack by small arms.
- **Technical specifications** - The Army-requested PMVs should be able to carry ten personnel excluding the driver and co-driver with each person carrying a combat load of not less than 30 kg.
- The PMVs must have ballistic protection and should be able to protect the vehicle from grenade and mine blasts.
- It should have a maximum speed of 90 km on road and 40 kmph on cross country terrain.
- They should be able to operate in temperature range of 40 ˚C to (-) 15 ˚C in high-altitude areas.
- They are required to have a weapon mount to enable a Light Machine Gun (LMG) to be fitted and a turret with 360 degree rotation for a LMG.
- The PMV should be able to ford in water with depth of 1000 mm without any special preparation.
- Earlier this year (2022), the Tata Advanced Systems Limited (TASL) handed over the first of such Infantry Protected Mobility Vehicles (IPMVs) to the Army.
- It was co-developed with the Defence Research & Development Organisation (DRDO).

Reference

1. https://www.hindustantimes.com/india-news/army-needs-1-200-protected-mobility-vehicles-101652381037937.html
2. https://indianexpress.com/article/explained/explained-what-are-the-protected-mobility-vehicles-that-the-army-wants-to-purchase-7913981/
3. https://www.thehindu.com/news/national/tata-firm-hands-over-indigenously-developed-infantry-vehicles-to-army-chief/article65315246.ece

India Hypertension Control Initiative

The India Hypertension Control Initiative (IHCI) project finds that nearly 23% out of 2.1 million Indians have uncontrolled blood pressure.

> Hypertension is defined as having systolic blood pressure level greater than or equal to 140 mmHg or diastolic blood pressure level greater than or equal to 90 mmHg or/and taking anti-hypertensive medication to lower his/her blood pressure.

- In 2017, the IHCI is a **5-year multi-partner initiative** to strengthen the hypertension treatment component till community level.
- It was begun by the Health Ministry, the Indian Council of Medical Research, Resolve to Save Lives, State Governments, and WHO-India.
- It aims to strengthen the Government of India's program by strengthening the management of diagnosed hypertension in primary health care settings.
- The IHCI Strategies are based on the WHO HEARTS package.
- India has committed to a '25 by 25' goal, which aims to reduce premature mortality due to non-communicable diseases (NCDs) by 25% by 2025.
- One of the nine voluntary targets includes reducing the prevalence of high blood pressure by 25% by 2025.

Prevalence of hypertension

- Southern States have a higher prevalence of hypertension than the national average, according to the latest edition of the National Family Health Survey.
- While 21.3% of women and 24% of men aged above 15 have hypertension in the country, the prevalence is the highest in Kerala, followed by Telangana.
- About one-fourth of women and men aged 40 to 49 years have hypertension.
- Even at an earlier age, one in eight women and more than one in five men aged 30 to 39 years have hypertension.
- The prevalence of hypertension is higher among Sikhs (37% for men and 31% for women), Jains (30% for men and 25% for women), and Christians (29% for men and 26% for women) than the rest.

Reference

1. https://www.thehindu.com/sci-tech/health/the-india-hypertension-control-initiative/article65407635.ece?homepage=true
2. https://cdn.who.int/media/docs/default-source/searo/mhs/ihci-simple-app---or.pptx?sfvrsn=4a5245ee_2
3. https://onlinelibrary.wiley.com/doi/10.1111/jch.14141

Proton Exchange Membrane Electrolysis

In line with the National Hydrogen Mission, GAIL (India) Ltd has awarded a contract to set up a Proton Exchange Membrane (PEM) Electrolyser in India.

- Proton exchange membrane (PEM) electrolysis is industrially important as a green source of high-purity hydrogen, for chemical applications as well as energy storage.
- PEM electrolyzers can **produce hydrogen fuel using renewable electricity**.
- PEM electrolysis technologies can potentially be advanced in new directions and high efficacies by the application of molecular catalysts, including CO_2 reduction catalysts for production of carbon-based fuels.
- Currently, only noble metal catalysts can be used in PEM electrolyzers.
- However, molecular catalysts may bring new opportunities as a replacement.
- Most of these catalysts **tolerate high acidity** as they were initially developed, evaluated, and deeply studied under such conditions.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1824727

2. https://www.sciencedirect.com/science/article/pii/S2542435120302385#:~:text=Proton%20exchange%20membrane%20(PEM)%20electrolyzers,to%20the%20solar%20electricity%20grid.
3. https://www.intechopen.com/chapters/62151

Menstrual Leave

- Menstrual leave is a type of leave where women may have the option of taking a paid or unpaid leave from their workplace when they are menstruating.
- Having a measure like menstrual leave at their disposal allows women to be at the comfort of their home instead of at the office.
- **Countries** - Menstrual leaves are allowed to women in some Southeast Asian countries, including Indonesia, Japan, South Korea, and Taiwan.
- In Zambia, women are legally entitled to take a day off each month due to their menstrual leave policy, which is known as "Mother's Day".
- **Menstrual leave in India** - There is no legal infrastructure in India to allow women the right to take menstrual leave.
- Bihar is the only state in the country that has government-approved period leaves.
- In 1992, Bihar declared that all women employees would get two consecutive days of leave every month, apart from their usual offs.
- In 2017, the 'Menstruation Benefits Bill, 2017' in Parliament introduced.
- Under the Bill, women employed by both public and private establishments registered with the Central and/or state governments, would have been entitled to 2 days of menstrual leave every month, which would amount to 24 days of leave annually.

Reference

1. https://www.firstpost.com/world/explained-what-is-menstrual-leave-and-which-countries-allow-it-1066679html
2. https://www.thenewsminute.com/article/tv-channel-news7-tamil-announces-period-leave-employees-161761

Virtual Private Network

Virtual private network (VPN) companies in India must collect and maintain customer data for at least 5 years, according to the Computer Emergency Response Team (CERT-In).

> The mandate applies to Virtual Private Server (VPS) providers, VPN service providers, cloud service providers, data centers. It is aimed at maintaining accurate information on customer registrations details.

- A Virtual Private Network (VPN) is an **encrypted connection** over the Internet from a device to a public network.
- The encrypted connection helps ensure that sensitive data is safely transmitted.
- It prevents unauthorized people from eavesdropping on the traffic and allows the user to conduct work remotely.
- VPN technology is widely used in corporate environments.
- **Working** - A VPN extends a corporate network through encrypted connections made over the Internet.
- VPNs encrypt your internet traffic and disguise your online identity.

- Because the traffic is encrypted between the device and the network, traffic remains private as it travels.
- This makes it more difficult for third parties to track your activities online and steal data. The encryption takes place in **real time**.

Reference

1. https://www.thehindu.com/sci-tech/technology/vpn-providers-in-india-mandated-to-collect-customer-data/article65387420.ece
2. https://www.cisco.com/c/en/us/products/security/vpn-endpoint-security-clients/what-is-vpn.html
3. https://www.kaspersky.com/resource-center/definitions/what-is-a-vpn#:~:text=VPN%20stands%20for%20%22Virtual%20Private,activities%20online%20and%20steal%20data.

