

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 (IPMV) 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 CO₂ 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.](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/expained-what-is-menstrual-leave-and-which-countries-allow-it-1066679.html>
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.>

