

The Hindu

Front Page

Centre offers to sweeten Agnipath deal (Page no 1)

(GS Paper 3, Defence)

Amid continuing protests and violence over the new Agnipath scheme for recruitment of soldiers into the armed forces, the Centre has offered a slew of support measures to accommodate Agniveers in various government departments after their four-year service.

Defence Minister Rajnath Singh has approved reservation for Agniveers for jobs within the ambit of the Defence Ministry. Several other Union Ministries have also promised the same.

Mr. Singh gave his nod to a proposal to reserve 10% of the job vacancies in the Defence Ministry for Agniveers meeting the eligibility criteria.

The 10% reservation will be implemented in the Coast Guard and defence civilian posts, and all the 16 defence public sector undertakings (DPSUs).

This reservation would be in addition to existing reservation for ex-servicemen. The announcement was made after Mr. Singh chaired a meeting with the three Service chiefs at his residence.

Necessary amendments to relevant recruitment rules will be undertaken to implement these provisions, the Ministry said adding, "DPSUs will be advised to make similar amendments to their respective recruitment rules. Necessary age relaxation provision will also be made.

400 under scanner for helping Chinese firms (Page no 1)

(GS Paper 3, Economy)

The Union government has recommended disciplinary action against 400 chartered accountants (CAs) and company secretaries (CSs) for their alleged role in incorporating Chinese shell companies in metropolitan cities by flouting norms and rules.

The stringent action is among a series of measures taken by the government against Chinese business entities after the 2020 Galwan incident when 20 soldiers were killed in clashes with the Chinese People's Liberation Army (PLA).

Though the Foreign Direct Investment (FDI) from Chinese companies has come to naught in the past two years due to various regulatory measures initiated by the government, the trade between the two countries hit a record \$125 billion last year.

In April-June 2020, FDI from China (counted from the year 2000) stood at ₹15,422 crore while in the first quarter of 2022 it has come down to ₹12,622 crore, according to Department for Promotion of Industry and Internal Trade (DPIIT) data.

States

New species of bamboo-dwelling bat found in Meghalaya (Page no 3)

(GS Paper 3, Environment)

Scientists have discovered a new species of bamboodwelling bat in Ri Bhoi district of Meghalaya. The species, found near the forested patch of Nongkhylllem Wildlife Sanctuary, has been named *Glischropus meghalayanus*.

The present discovery is the first report of a thickthumbed bat not only from India but also from South Asia.

Small in size The scientists behind the discovery are Uttam Saikia from the Zoological Survey of India, who collected the specimen from the forested patch in the summer of 2020; Gabor Csorba of the Hungarian Natural History Museum and Manuel Ruedi of the Natural History Museum of Geneva.

Thick-thumbbed bats of the genus *Glischropus* are currently composed of four recognised species from Southeast Asia. The newly discovered species is small in size and has a dark brown colour with sulphur yellow belly.

Two recently collected *Glischropus* specimens from Meghalaya in northeastern India extend the known distribution range of the genus westward into South Asia by ca. (approximately) 1,000 km.

Morphological examination of these specimens and comparison with all known species in this genus revealed marked differences in colouration, dental characters and bacular traits. We therefore describe the Meghalaya specimens as a new species.

News

COVID worsened matters in Sundarbans: UN report (Page no 9)

(GS Paper 3, Health)

A study on the impact of COVID-19 funded by the UNDRR (United Nations Office for Disaster Risk Reduction) across five locations, including the Indian Sundarbans, has pointed out that the pandemic and measures to contain it had not only triggered cascading effects throughout societies but also reinforced pre-existing vulnerabilities.

The report titled “Understanding and managing cascading and systemic risks: lessons from COVID-19” published recently presents cross-cutting findings from five case studies across the world.

Along with looking into a multi-hazard perspective in the Indian Sundarbans, the study looks at the fragile setting in Bangladesh’s Cox’s Bazaar; challenges on all fronts at the national scale in Indonesia; densely populated, urban setting in Guayaquil, Ecuador; and rural-urban and national-international interlinkages in the maritime region Togo.

In the Sundarbans, the people had to deal with the double burden of COVID-19 and Cyclone Amphan. The first months of the outbreak of COVID-19 from March to May coincided with one of the severest tropical cyclones that made landfall on May 20, 2020, with sustained wind speeds of 170 kmph, gusts of up to 190 kmph and storm surges of up to five metres.

Hybrid work model catching on in India (Page no 9)

(GS Paper 3, Economy)

According to a recent survey by people supply chain company TeamLease, a little over 58% of responding organisations from industries ranging from technology to automobile, believe that 2022 is the year offices will become completely in-office.

Only about 5% of respondents said that they intend to stay a virtual-only organisation for the foreseeable future. For most companies, the journey to move from being 100% in office to 100% virtual had been reasonably smooth.

The fact that this lasted for a long time and many believed work forever could be in this model. However, most underestimated that coming to work is not just about doing work.

Humans needed social infrastructure, and given that a large part of time was spent at work, the office fulfilled that need.

The best companies were ensuring they keep some advantages of working virtual and at the same time build and keep the advantage of having people at work (engagement, productivity, culture, teamwork and so on).

As companies make this transition, some employees, some roles, some teams will definitely move more hybrid than others and some may completely.

At the same time, some employees, both current and prospective, may feel that they are better off choosing one model over the other.

Talent catchment areas have increases and this changed will lead to better and more diverse (not just gender) talent pool and we know that better diversity of talent delivers superior business results.

Amrit Sarovar mission could boost infrastructure projects (Page no 9)

(GS Paper 3, Infrastructure)

In a move that could expedite the implementation of railway and highway projects across the country, the Centre has asked the Ministry of Railways and the National Highways Authority of India (NHAI) to use the soil or silt excavated from ponds and tanks in all districts under the Amrit Sarovar mission for their infrastructure projects.

The water conservation mission launched by Prime Minister Narendra Modi on April 24 aims at developing and rejuvenating 75 waterbodies in each district in all States as part of the celebrations of Azadi ka Amrit Mahotsav.

At least 50,000 waterbodies are expected to be rejuvenated during the nationwide programme that would culminate on August 15, 2023.

Since the project would involve excavation of several thousands of tonnes of earth in the form of soil or silt, the Ministry of Rural Development has told the Ministry of Railways and the NHAI to map its infrastructure projects with the Amrit Sarovar sites in all States and UTs.

World

Tunisians oppose Constitution referendum (Page no 10)

(GS Paper 3, Infrastructure)

Thousands of protesters took to the streets of Tunis on Saturday in opposition to a referendum on a new Constitution called by President Kais Saied that would cement his hold on power.

The protest led by Abir Moussi, leader of the Free Constitutional Party, reflected growing opposition to Mr. Saied since he seized executive power last year, dissolving Parliament and ruling by decree in a move opponents called a coup.

Thousands marched from Bab Souika Square in the capital towards Kasbah Square, waving Tunisian flags.

Tunisians are starving, public finances are collapsing, but Saied does not care. He only focuses on a personal project to impose his Constitution.

Mr. Saied is seeking to overhaul the Constitution to give the presidency more powers, against the backdrop of a tanking economy and fears of a public finance crisis. He intends to put the new Constitution to a referendum on July 25.

Science and Tech

What drives sustained growth of monkeypox cases (Page no 10)

(GS Paper 3, Science and Tech)

As of June 15, a total of 1,882 monkeypox cases have been lab-confirmed from more than 30 countries across the world. With 1,158 confirmed cases from 22 countries, Europe has reported the highest number of cases so far, according to the European Centre for Disease Prevention and Control.

The U.S. has reported 83 cases across 19 States as of June 16. While monkeypox has been endemic in about a dozen countries in Central and West Africa, the virus is not endemic in people.

Nearly all monkeypox outbreaks in these countries have been due to the virus jumping across the species barrier from animals to humans. Sustained human-to-human transmission in the endemic countries has been “rare”.

Outbreaks in the endemic countries in Africa have witnessed only a “limited” proportion of cases spread among humans, with sustained transmission observed only up to seven generations.

And the basic reproduction number (R0) for monkeypox in the endemic countries has been less than one, even among populations that have not received smallpox vaccination.

The basic reproduction number being less than one would mean that “outbreaks would fade out if without continuous introductions from animals.

Quantum diamond microscope to image magnetic fields (Page no 10)

(GS Paper 3, Science and Tech)

Researchers from the Indian Institutes of Technology (IIT) at Mumbai and Kharagpur have built a microscope that can image magnetic fields within microscopic two-dimensional samples that change over milliseconds.

This has a huge potential for scientific applications, such as in measuring biological activity of neurons and dynamics of vortices in superconductors.

The work, led by IIT Bombay professor Kasturi Saha, from the Department of Electrical Engineering, has been published in Scientific Reports.

This is the first time that such a tool has been built to image magnetic fields that change within milliseconds. The ideal frame rate to capture a changing magnetic field is one that captures data at twice the frequency of the changing field. Signals in nature exhibit a range of frequencies — magnetism in geological rock samples and rare earth magnets can be constant over months; magnetic nanoparticle aggregation inside living cells takes place in minutes; action potentials in neurons are fast, taking milliseconds, whereas precession of atomic spins in complex molecules takes only microseconds. The instrument that this team has built works in the millisecond range. The key aspect of this sensor is a “nitrogen vacancy (NV) defect centre” in a diamond crystal. Such NV centres act as pseudo atoms with electronic states that are sensitive to the fields and gradients around them (magnetic fields, temperature, electric field and strain)

How marine heatwave fuelled super cyclone Amphan (Page no 10)

(GS Paper 3, Environment)

Rising greenhouse gas emission is the primary factor for anthropogenic (human-induced) climate change. The increase in carbon dioxide concentration can trap the radiation into the atmosphere and not let it go into space.

This trapping of the extra energy increases the average surface air temperature and warms the climate that we know as global warming.

As the capacity of the atmosphere to absorb the heat is very less, more than 90% of the extra heat that has been trapped in the climate system has been absorbed by the oceans since 1970, according to IPCC AR5, and IPCC AR6 reports.

Due to this, oceans are warming globally from the surface to deeper depths. The warming of the oceans has severe consequences such as increasing intensity and frequency of extreme events, rising sea levels, melting glaciers, and changing the weather pattern across the globe.

Previous studies have shown that due to global warming, the tropical Indian Ocean, at the surface, is warming at a faster rate as compared to the rest of the global ocean.

The high sea surface temperatures are more susceptible to generating extreme temperature conditions that persist over days to months and are termed as Marine Heatwaves (MHWs).

This intense warming of the ocean due to MHW has severe socio-economic consequences such as fish mortality, and coral bleaching, and also has the potential to interact and modify other extreme events such as tropical cyclones.

FAQ

Are the unemployment numbers reliable? (Page no 10)

(GS Paper 3, Economy)

National Statistical Office (NSO), which functions under the Union Ministry of Statistics and Programme Implementation, released the annual report on the basis of the Periodic Labour Force Survey (PLFS) conducted during July 2020-June 2021.

Though conducted amid the first lockdown, the survey said unemployment rate saw a decrease from 4.8% in 2019-20 to 4.2% in 2020-21, meaning that 4.2% of adults who looked out for jobs could not get any work in rural and urban areas of the country in 2020-21.

In rural areas, the rate is 3.3% while in urban areas the unemployment rate was recorded at 6.7%. This report, which also gave details of internal migration, said 11.8 people out of 100 samples migrated to other States during the period of survey.

The fieldwork of PLFS was suspended twice during the survey in March, 2020 and in April, 2021 due to COVID-19. A rotational panel sampling design has been used in urban areas, which means each selected household in urban areas is visited four times.

There was, however, no revisit in rural areas and the samples were drawn randomly in the form of two independent sub-samples. The sample size for the first visit during July 2020-June 2021 in rural and urban areas was 12,800 first-stage sampling units (FSUs) consisting of 7,024 villages and 5,776 urban frame survey blocks.

Out of this, 12,562 FSUs (6,930 villages and 5,632 urban blocks) were surveyed for canvassing the PLFS schedule. The number of households surveyed, according to the NSO report, was 1,00,344 (55,389 in rural areas and 44,955 in urban areas) and number of persons surveyed was 4,10,818 (2,36,279 in rural areas and 1,74,539 in urban areas).

The PLFS gives estimates of key employment and unemployment indicators like the Labour Force Participation Rates (LFPR), Worker Population Ratio (WPR) and Unemployment Rate (UR).

Business

5G deployment to start in Aug.-Sept.: Vaishnaw (Page no 14)

(GS Paper 3, Economy)

Telecom minister Ashwini Vaishnaw on Saturday said 5G deployment would commence in 20-25 cities and towns by the year end, and indicated that India, with its current data prices significantly lower than the global average, would continue to set rate benchmarks as new services were rolled out.

The 5G deployment would start from August-September, Mr. Vaishnaw said. The minister said India was developing 4G and 5G stacks, and was set to bolster its position as a trusted source for the world, in digital networks.

To address the issue of unsolicited calls, an “important” regulation was in the works, which would enable KYC-identity name of a caller to be displayed, when someone calls.

5G deployment will start in at least 20-25 cities and towns by year end. Asked about the pricing for 5G services, Mr. Vaishnaw observed that even today data rates in India were at about \$2, against the global average of \$25.

We are already the lowest in the world, at least by a factor of 10X... we are cheaper than the world, that same trend will be in other areas too,” he said. As India prepares to usher in 5G services, it has also developed 4G and 5G technology stacks.