

**PUBLIC HEALTH (SCIENCE)**

**The new virus sub-variants**

- ❖ **CONTEXT:** Over the last seven days, an average 15,277 new Covid-19 cases have been recorded every day. For comparison, 4,207 cases were recorded a day on average during the first week of June. The surge has been driven by sub-variants of Omicron.
- ❖ **What are these sub-variants?**
  - The current surge in cases is because of the BA.2 sub-variant of Omicron — which also drove the third wave in January 2022, along with BA.1—and another sub-variant that has branched off from it, called BA.2.38.
  - Delhi reported its first couple of cases of the BA.5 sub-variant of Omicron. This was one of the sub-variants that led to an increase in cases in South Africa .
  - The first BA.5 case in India was reported in late May 2022 in Telangana. Cases of such sub-variants, which are driving surges at many places globally, are on the rise in India as well, but they currently account for only a small percentage of cases. Importantly, according to experts there is no clinical significance of this change
- ❖ **What do we know so far about these and other sub-variants that are circulating around the world?**
  - **BA.2.38:** This recently re-classified, and has now been established that it leads to milder disease, just like its parent sub-variant BA.2.
  - **BA.2:** This is the sub-variant that drove the winter surge in India, along with BA.1. BA.2 soon overtook its cousin BA.1, showing that it had a competitive advantage. Although the disease pattern was not different for the two, BA.2 seemed to be more transmissible.
  - **BA.4 & BA.5:** These sub-variants were detected by South Africa in January and February respectively. The variants triggered a surge of infections, and became dominant by May this year. They are now spreading to Europe, with BA.5 becoming the dominant variant in Portugal.
  - BA.4 and BA.5 have around 13% to 15% transmission advantage over BA.2, and can also circumvent some of the immunity.
  - These variants have two mutations that were thought to be of concern by researchers: F486V that lab studies have associated with the ability of the virus to evade some of the existing immunity, and L452R that was found in the Delta variant and has been associated with the ability to infect the lungs. However, experience from other countries shows that the variants do not lead to an increase in severe disease, hospitalization, and deaths.
  - **BA.2.12.1:** This sub-variant, which was first detected in New York, is thought to be 23% to 27% more transmissible than the BA.2 sub-variant. It is also thought to evade some of the immunity gained through previous infection and vaccination
- ❖ **How much has each sub-variant contributed to the current surge?**
  - Genome sequences uploaded to the global data base GISAID show that BA.2.38— which branched off from BA.2— is dominant in the country, accounting for 30% of all sequences over the last 30 days. This was followed by the BA.2 sub-variant itself, accounting for 28% of samples, shows an analysis of the GISAID data.
  - Although BA.4 and BA.5 were detected in the country at almost the same time, BA.5 has been spreading faster, accounting for 7% of the sequences uploaded to the global database in the last 30 days.
  - India has reported at least 120 sequences of the BA.5 sub-variant, most of them in Tamil Nadu and Karnataka. As for the other sub-variant that led the Covid-19 surge in South Africa — BA.4—33 cases have been identified, which account for less than 1% of sequences uploaded to the global data base over the last 30 days.
  - BA.2.12.1 has accounted for 5% of sequences over the last 30 days. At least 190 sequences of this sub-variant have been uploaded to the global data base—most of them coming from Telangana (69), Karnataka (46), and Tamil Nadu (45)

❖ **What has changed between the January wave and the current wave?**

- According researchers the biggest difference, is that there is no cluster formation with any of the emerging sub-variants. When Omicron was on the rise in December-end and January, there was clear cluster formation.

❖ **Should we be worried?**

- According to scientists the emerging sub-variants are not creating cluster formations as the sub-variants during the December-January wave had done.
- Not have seen any changes in the symptom serrate of hospitalization so far.
- Although BA.2.38 was recently re-classified and is now present in many samples, it has not been found any epidemiological evidence to suggest any change in the disease patterns.

**PRELIMS**

**1. iGOT Karmayogi**

❖ **CONTEXT: Ministry of Road Transport and Highways (MoRTH) has urged its officials to register for the service of the e-learning platform iGOT Karmayogi.**

- Integrated Government Online Training (iGOT) platform is an online training platform launched by the Department of Personnel and Training.
- It was launched for the capacity building of frontline workers to tackle the pandemic.
- It is hosted on the Digital Infrastructure Knowledge Sharing (DIKSHA) platform of the Human Resources Development Ministry.
- iGOT Karmayogi is an e-learning platform developed as an integral part of the Digital India stack for capacity building of all government employees.
- It is designed for providing necessary digital infrastructure to upload courses and conduct online training.
- It will allow the ministry to provide training resources and opportunities to its employees at a hitherto impossible scale.
- Mission Karmayogi is the biggest bureaucratic reform initiative that was launched in 2020.
- It is aimed at building capacity to make government employees more creative, proactive, professional and technology-enabled, ending the culture of working in silos and ensuring transparency.

**2. Financial Stability Report (FSR)**

❖ **CONTEXT: Reserve Bank of India's (RBI) released the Financial Stability Report (FSR) which said that the Bank NPA ratios are at 6-year low**

- It is published by RBI bi-annually on behalf of the Financial Stability and Development Council, an umbrella group of regulators which gives an overview of the health of India's financial system.
- It reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC) on risks to financial stability and the resilience of the financial system in the context of contemporaneous issues relating to development and regulation of the financial sector.
- The RBI looks at the state of both the global as well as domestic economy.
- It focuses on public and private banks with the following aspects:
  - Capital availability for working
  - Cost of NPAs and whether they are manageable
  - Credit flow in different sectors of the economy
  - Credit flow at personal levels (households)
  - Macro-financial risks in the economy
  - Macro-financial risks refer to the risks that originate from the financial system but affect the wider economy as well as risks to the financial system that originate in the wider economy.
  - Stress tests are also performed by RBI as part of FSR

❖ **Significance**

- The report helps in assessing the health of the financial systems of the economy.
- It helps as an Early Warning System in case of any financial issues.
- Coming from the Central Bank, it is reliable and the growth or fallouts can be trusted.
- Making the fallouts in the Report as points to work on will give the country a direction towards growth.

### **3. Ease of doing business index**

- The ease of doing business index is released by the World Bank Group. The World Bank has discontinued the practice of issuing 'Doing Business report' following an investigation reported "data irregularities".
- The report was above all a benchmark study of regulation.
- A nation's ranking on the index was based on an average of 10 sub indices:
  - **Starting a business** – Procedures, time, cost, and minimum capital to open a new business
  - **Dealing with construction permits** – Procedures, time, and cost to build a warehouse
  - **Getting electricity** – procedures, time, and cost required for a business to obtain a permanent electricity connection for a newly constructed warehouse
  - **Registering property** – Procedures, time, and cost to register commercial real estate
  - **Getting credit** – Strength of legal rights index, depth of credit information index
  - **Protecting investors** – Indices on the extent of disclosure, the extent of director liability, and ease of shareholder suits
  - **Paying taxes** – Number of taxes paid, hours per year spent preparing tax returns, and total tax payable as a share of gross profit
  - **Trading across borders** – Number of documents, cost, and time necessary to export and import
  - **Enforcing contracts** – Procedures, time, and cost to enforce a debt contract
  - **Resolving insolvency** – The time, cost, and recovery rate (%) under a bankruptcy proceeding.

### **4. Artificial Photosynthesis**

- ❖ **CONTEXT: Scientists have devised a way to grow plants in complete darkness and create food plants in the dark using "artificial photosynthesis".**
- The researchers grew these plants in **complete darkness** in an "**acetate**" medium, which replaces the biological photosynthesis.
- They used a two-step electro-catalytic process to convert carbon dioxide, electricity and water into acetate.
- The food-producing plants then consumed this acetate to grow.
- To convert raw materials like carbon dioxide into acetate, CO<sub>2</sub> electrolyzers were used.
- This technology can also be used to grow food-producing organisms in the dark including green algae, yeast and fungal mycelium that produce mushrooms.
- **Significance** - By removing the dependence on the sun, artificial photosynthesis opens possibilities for growing food under the difficult conditions that we could see in the future due to climate change.
- Potentially, droughts, floods and reduced land availability would be less of a threat to global food security if crops could be grown in such controlled and efficient environments.

### **5. Financial Services Institutions Bureau (FSIB)**

- ❖ **CONTEXT: The Appointments Committee of the Cabinet(ACC) has approved a government resolution for establishing the Financial Services Institutions Bureau(FSIB)in place of the Banks Board Bureau(BBB)**
- Amendments were needed, because in 2021 Delhi High Court in its order maintained that, BBB is not a competent body for selecting Directors and General Managers of state-owned general insurers. Due to this, newly-appointed directors of insurers had to leave their positions.

- Appointments Committee of the Cabinet (ACC) had asked Department of Financial Services for bringing necessary modifications in Nationalized Banks (Management and Miscellaneous Provisions) Scheme, after getting approval of finance minister and then notify government resolution to establish "FSIB" as a single entity.
- The Financial Services Institutions Bureau will make recommendations for appointments of full-time directors as well as non-executive chairman of banks and financial institutions.
- Guidelines to select general managers and directors of public sector general insurance companies is also a part of FSIB now.
- The ACC has approved the appointment of Bhanu Pratap Sharma as initial chairperson of FSIB. He has been appointed for two years. He was the former Chairman of BBB.
- ❖ **Bank Board Bureau**
- Cabinet had approved the constitution of BBB as a body of eminent officials and professionals in 2016. BBB was constituted to make recommendations for appointment of full-time directors and non-executive chairperson of state-owned chairperson and public sector banks (PSBs).
- It was provided with task of engaging with board of directors of all PSBs for formulating appropriate strategies related to their growth and development.

### ANSWER WRITING

**Q. Discuss the factors for localisation of agro-based food processing industries of North-West India.**

#### ❖ INTRODUCTION

Agro-based food processing industry, aptly recognised as 'sunrise industry', is described as one that adds value to agricultural raw materials. This value addition converts the raw agricultural products into marketable, easy-to-use or edible products like corn flakes, chips, ready to serve drinks, etc.

- The Indian food processing industry accounts for 32% of the country's total food market. It is one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth.
- However, the North-West India showcases a better-developed agro-based food processing industry. The factors for this localisation are as follows:
- **Geography:** The region is blessed with a diverse agro-climatic zones, fertile soil and undulating plains. These support a multitude of crops, vegetables and fruits round the year which provide ample raw material.
- **Raw material:** Availability of diverse raw materials viz. cereals, fruits, vegetables and livestock provide attractive base for food processing industry in this region. For instance, Punjab accounts for 17% of rice and 11% of wheat production of India. This region also has the distinction of having the largest population of livestock and largest producer of milk in India.
- **Infrastructure:** Well-connected transportation network, subsidised electricity, irrigation facilities (such as Indira Gandhi canal and Bhakhra Nangal) and ample warehousing and storage facilities contribute to flourishing agro-based industries in the region.
- **Agricultural marketing:** This region has well-developed agri-export zones, market yards, organised APMCs and mandis, etc. which have provided a conducive environment for the establishment of agro-based industries.
- **Socio-economic status:** The population of the region has good literacy rate, including financial literacy, and enjoys an efficient banking network. This helps channel easy availability of credit and capital investment.
- **Policy support:** The Punjab government operates an agricultural mega project policy to facilitate investment in the food processing sector. Additionally, large landholdings, single



window clearance, permission to set up private sub e-markets, amendment to APMC Act, etc. have enabled agro-based industries in this region to flourish.

- **Capacity building and R&D:** Capacity building of the manpower in food processing sector in India is spearheaded by the National Institute of Food Technology Entrepreneurship and Management which is located in Sonapat, Haryana. Likewise, a prominent institution for research and development to improve agricultural productivity and business opportunities is the Indian Institute of Maize Research located in Ludhiana, Punjab.

The initiatives taken at the Union level like permitting 100% FDI through the automatic route in food processing sector and Scheme for Mega Food Parks under the Ministry of Food Processing Industries are conducive steps. However, the challenges for the industry remain such as fluctuations in the availability of raw material due to climate change, inadequate implementation of the APMC Act, multiplicity of ministries and laws to regulate food value chain, etc.

### MCQs

1. Which of the following can be the benefits of Ease of Doing Business Rank?

1. improvement in Global Market
2. Liberalisation of Businesses
3. Encourages countries to built business in the top-ranking countries
4. Helps in future plans for development
5. Growth of Industries in countries at higher ranks

Choose the correct answer using the codes given below

- a) 1,2 and 4 only
- b) 2,3,4 and 5 only
- c) 1,4, and 5 only
- d) All of the above

2. Which of the following statement is incorrect regarding iGOT Karmayogi?

- a) **Integrated Government Online Training (iGOT) platform is an online training platform launched by Ministry of Road Transport and Highways .**
- b) It was launched for the capacity building of frontline workers to tackle the pandemic.
- c) It is hosted on the Digital Infrastructure Knowledge Sharing (DIKSHA) platform.
- d) iGOT Karmayogi is an e-learning platform developed as an integral part of the Digital India stack for capacity building of all government employees.

3. Consider the following statement with regards to “Artificial photosynthesis”

1. This technology can also be used to grow food-producing organisms in the dark including green algae, yeast and fungal mycelium that produce mushrooms
2. Artificial photosynthesis was first anticipated by the Italian chemist Giacomo Ciamician

Choose the correct statement using the codes given below

- a) 1 only
- b) 2 only
- c) **Both 1 and 2**
- d) Neither 1 nor 2

4. **With reference to recently released Financial Stability Report (FSR) by Reserve Bank of India’s (RBI) consider the following statements**

1. It is published by RBI annually
2. It consider both public and private banks assessment

Choose the correct statement using the codes given below

- a) 1 only
- b) **2 only**
- c) Both 1 and 2
- d) Neither 1 nor 2

5. Consider the following statements

1. Bank Boards Bureau is a statutory body established under RBI Act of 1934

2. It is headed by RBI governor
  3. Bank Boards Bureau decisions are advisory in nature
- Which of the above statement/s is/are correct?
- a) 1 and 2 only
  - b) 2 only
  - c) 2 and 3 only
  - d) 3 only**
6. Consider the following statements:
1. This species is found in all states of North-East India.
  2. They are categorized as Endangered by IUCN.
  3. They are the only species of apes found in India.
- Identify the species.
- a) Chimpanzee
  - b) Western Hoolock Gibbons**
  - c) Mallard
  - d) Eastern Hoolock Gibbons
7. Which of the following best describes the term 'import cover', sometimes seen in the news?
- a) It is the ratio of value of imports to the Gross Domestic Product of a country
  - b) It is the total value of imports of a country in a year
  - c) It is the ratio between the value of exports and that of imports between two countries
  - d) It is the number of months of imports that could be paid for by a country's international reserves**
8. Which among the following agency issues notification for the ban of export of commodities?
- a) Ministry of Commerce and Industry
  - b) Ministry of Finance
  - c) Federation of Indian Export Organization
  - d) Directorate General of Foreign Trade (DGFT)**
9. Triple test formula frequently seen in news is related to which of the following?
- a) Reservation of backward classes**
  - b) Elephant corridor
  - c) Safety standard for Cars
  - d) Import and Export
10. India and US are not the members of which of the following initiatives?
1. Regional Comprehensive Economic Partnership (RCEP)
  2. Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)
  3. Indo-Pacific Economic Framework.
  4. Digital Economic Partnership
- Select the correct answer using the code given below:
- a) 1 and 2 only
  - b) 1, 2 and 4 only**
  - c) 2 and 4 only
  - d) 1, 2 and 3 only