

09 Aug 2020: UPSC Exam Comprehensive News Analysis

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Category: GOVERNANCE

1. Is there a case for issuing immunity certificates?

Context:

- The article analyzes the arguments both in favour of and against the issuing of immunity certificates.

Background:

Immunity certificate:

- An immunity certificate is a document attesting that its bearer is immune to a contagious disease.
- These certificates are granted following a serological test demonstrating that the bearer has antibodies making them immune to a disease.
- The concept of immunity certificate has drawn much attention during the **COVID-19 pandemic**.

Natural infection-induced immunity and vaccine-induced immunity:

- Antibodies can either be produced naturally by recovering from the disease, or triggered through vaccination.

Natural infection induced immunity	Vaccine induced immunity
<p>Immune protection:</p> <ul style="list-style-type: none"> Some experts have pointed out that Immune protection after infection/disease is always much more robust than most vaccines. <p>Safety aspects:</p> <ul style="list-style-type: none"> There has been emerging evidence of long-term health complications in those who have had COVID-19. 	<ul style="list-style-type: none"> Some of the vaccines undergoing clinical trials are mostly directed at a single or a couple of proteins (spike) of the virus. This leads to concerns that these vaccines might not offer the same protection as natural infection would offer In case of vaccines that use the inactivated coronaviruses, the person's immune system would be exposed to a whole range of viral proteins, much like natural infection and can produce immune responses comparable to natural infection. Given the vaccines are tested for their safety; the vaccines will have minimal or no adverse health consequences.

Arguments in favour of immunity certificates:

Balancing economic growth and public health:

- Immunity certificates could be used to exempt holders from quarantine and social distancing restrictions, permitting them to work and travel. Hence immunity certificate would provide a potential way to contain the pandemic while **permitting faster economic recovery**.

No cases of re-infection:

- While the quantum and duration of protection conferred by natural infection is still not known, not a single case of **true reinfection or reactivation** has been documented thus far.

Arguments against immunity certificates:

- The concept of immunity certificate would be relevant only if the following conditions are satisfied:
 - Recovered patients have protective immunity that prevents them from being reinfected.
 - The protective immunity is long-lasting
 - The pathogen mutates sufficiently slowly for immunity to work against most strains
 - Immunity tests have low false-positive rates

Lack of scientific studies:

- There is a lack of comprehensive scientific studies about the specific kinds of immune responses and its duration to guarantee the accuracy of an immunity certificate.

Public health risk:

- There is also a public health risk of issuing immunity certificates.
 - The issuance of immunity certificates would create an **incentive for people whose livelihoods have been affected to intentionally infect themselves**. They would be encouraged to adopt risky behaviour so as to get infected rather than taking precautions to stay protected. This would lead to a sharp increase in cases across the country and crumbling of the health-care systems.

Antibody tests:

- A major aspect which would have to be addressed is whether immunity certificates are to be given to people who have had asymptomatic infection based on antibody tests as this would lead to the following challenges.
 - There are concerns on whether people who have experienced asymptomatic infection would show robust immune responses like those who have recovered from moderate or severe disease.
 - Requiring immunity certificates for work or travel could force people into taking tests and the move to issue immunity certificates would encourage the people to get antibody tests. The **increased demand for testing** would further strain the labs.
 - The dependence on antibody testing might also create **an access problem**. The poor and vulnerable will have limited access to such testing. There are concerns that an immunity certificate will further divide the society with different 'haves' and 'have-nots'.

- Concerns associated with the reliability of antibody testing:
 - **Antibody tests do not quantify the amount of antibodies** and hence give no estimate of the protection they would offer.
 - **The antibody tests are not 100% reliable.** Not everyone infected produces antibodies, and not everyone who has antibodies would have developed them specifically against SARS-CoV-2.

For more related information refer to: [CNA 21st June 2020](#).

Category: GOVERNMENT SCHEMES

1. Ration card portability yet to gain pace

Context:

- One nation, One ration card scheme.

Details:

- Under the **One nation, One ration card scheme** eligible beneficiaries under the **National Food Security Act (NFSA)** would be able to avail their entitled food grains under NFSA from any fair price shop in the country using the same ration card.

For detailed information on the one nation, one ration card scheme refer to: [CNA 2nd May 2020](#).

Challenges:

- Only a negligible fraction of the eligible population has actually been able to make use of it. Fewer than 2,000 inter-State transactions have been carried out under the scheme, benefiting less than 13,000 people.
- Recently three more States —Manipur, Nagaland and Uttarakhand — and the Union Territory of Jammu and Kashmir have integrated into the scheme. With this, **the facility is available in 24 States**. However, there are still 12 States and Union Territories yet to join the scheme, including Delhi with its large migrant population.
- Ration card portability requires integration with Aadhaar and electronic point of sale machines using **biometric authentication**.

Category: NUTRITION

1. 'Lockdown has hit nutritional services'

Context:

- COVID-19 induced food insecurity.

Background:

- According to a Lancet study of the 10.4 crore under-5 deaths in India in 2017, as many as **7,06,000 deaths could be attributed to malnutrition**. On average, every day 1,934 children under five die with malnutrition as the underlying cause.

Details:

- There is COVID-19 induced **food insecurity**.
 - Increase in joblessness, fall in income and poverty due to the pandemic and the lockdowns will lead to a rise in hunger as well as malnutrition in the country.
- Due to COVID-19 induced food insecurity, **malnutrition will only go up**.
- The extended lockdown has **hit many nutritional services** like the ones mandated by the National Food Security Act, 2013.

Way forward:

- There is a need for reverting to pre-COVID levels of **investment of resources in nutritional services**.
- There is also the need for **higher community engagement**.
- COVID-19 sensitive strategies** must be developed to ensure the continuity of nutritional services.

C. GS 3 Related

Category: SCIENCE AND TECHNOLOGY

1. Sun's coronal magnetic field measured

Context:

- An international team of solar physicists have measured **the global magnetic field of the sun's corona**, or outer atmosphere, for the very first time.

Details:

- This development could help answer some of the solar phenomena.

Temperature profile of the sun:

- The core of the Sun is at a temperature of about 15 million degrees, while its outer layer, the photosphere is only 5700 degrees hot. The **sun's corona or outer atmosphere**, which stretches up to several million kilometres beyond its surface, is much hotter than the surface (one million degrees or more).
- This is unusual given that while the surface is cooler than the interior, **the atmosphere of the Sun (corona)** rises substantially.
- Popular explanations with respect to the **coronal heating** involve the magnetic field of the corona.

Solar eruptions:

- The surface of the Sun is dynamic. There are multiple mechanisms of eruptions of the Sun, such as **solar flares and coronal mass ejections**.
 - A solar flare is a sudden flash of increased brightness on the Sun, usually observed near its surface.
 - A coronal mass ejection is a significant release of plasma and accompanying magnetic field from the solar corona.

Magnetic reconnection:

- Magnetic reconnection is a process where **opposite polarity magnetic field lines connect and some of the magnetic energy is converted to heat energy and also kinetic energy** which leads to the generation of heating, solar flares, solar jets, etc.

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: INTERNATIONAL RELATIONS

1. Pakistan map and border disputes

Context:

- The announcement of a new political map of Pakistan.

Background:

- On August 4, Pakistan Prime Minister announced a new political map of Pakistan.
- The new political map of Pakistan has claimed the **entire region of Jammu and Kashmir**. The map also **claims Junagadh and Manavadar**, a former princely State and territory, respectively that are part of present-day Gujarat.

For more information on this refer to: [CNA 5th Aug 2020](#).

Concerns:

A step backwards:

- The new territorial claims of Pakistan **challenge many of the past understandings and treaties between the two neighbours**.

China factor:

- The new political map leaves out a claim line at the eastern end of J&K indicating Pakistan's willingness to make China a third party in the Kashmir issue. This runs counter to the **Simla Agreement** which treated Kashmir as a bilateral matter.

- The Simla Agreement was signed between India and Pakistan on 2 July 1972 following the Bangladesh Liberation war of 1971.

Kutch arbitration case:

- Pakistan has claimed the entire territory and water bodies that fall in **the Sir Creek region**.
 - Sir Creek is a 96-km strip of water disputed between India and Pakistan in the **Rann of Kutch marshlands**.
 - The Creek opens up in the Arabian Sea and roughly divides the Kutch region of Gujarat from the Sindh Province of Pakistan.
- The **Kutch arbitration case of 1966-69** had granted the entire Rann and its marshy areas to India while leaving the solid land across the Rann to Pakistan. By claiming Sir Creek region, Pakistan appears to be going back on the spirit of the Rann of Kutch arbitration.

Kashmir issue:

- By laying claim to the entire Jammu and Kashmir region (including Jammu), Pakistan is changing the main features of its Kashmir discourse which was based on the valley region only.

Bilateral relations:

- The map will eventually trigger diplomatic battles with India as it negates previous understandings. The new political map is only likely to **further up the tensions between India and Pakistan**.

F. Tidbits

1. G.C. Murmu takes charge as new CAG

- Former Jammu & Kashmir (J&K) Lieutenant-Governor (L-G), Girish Chandra Murmu has taken charge as the new Comptroller and Auditor General (CAG).
- The Comptroller and Auditor General (CAG) was sworn in by the President.

2. How can 'tabletop' airports be safer?

- Recently, an Air India Express flight on a special 'Vande Bharat' repatriation flight from Dubai to Kozhikode overshot the runway and fell into a valley resulting in fatalities.

Tabletop airports:

- Tabletop airport is an airport located and built on top of a plateau or hilly surface, with one or both ends of the runway overlooking a drop.
- Tabletop airports in India:
 - Lengpui (Mizoram)
 - Shimla and Kullu (Himachal Pradesh)
 - Pakyong (Sikkim)

- Mangaluru (Karnataka)
- Kozhikode and Kannur (Kerala).

Steps for improving the safety of tabletop airports:

Safety assessment:

- Proper safety assessment is to be carried out to assess the risk associated with the operation in such airports.
- Runways will have to meet the required Navigation Performance approach.

Safety features:

- Safety features like the **RESA**, or **Runway End Safety Area** are mandatory. This helps to limit the consequences when there is an aircraft overrun during landing, a rejected take-off, or even undershoots the landing area.
- **Engineered Materials Arrestor/Arresting System**, made of engineered lightweight and crushable cellular cement/concrete can be used at the runway ends where it can act as a safety barrier and successfully stop an aircraft overrun.
- **Ground arresting systems for aircraft** like the one used in the airfields of the Indian Air Force' can be used.

Aids to the pilot:

- Technical upgrades like making the runways of such airports **Instrument Landing System (ILS) enabled**. This removes the possibility of human errors.
- Appropriate visual aids have to be provided to the pilots. This could involve a visual reference system to alert the pilot (while landing) of the remaining distance to be covered.

Rigorous training:

- Appropriate **Crew Resource Management training** for all pilots should be strictly enforced.
- This could include classroom and simulator training. The training done on the simulator for landing in low visibility, heavy rain and winds should be emphasized on.

Stand by rescue facilities:

- The role of the **Rescue and Fire Fighting service** should not be neglected despite all the precautions taken.

G. Prelims Facts

1. Centre releases Rs.553 cr. for farm mechanisation

- The Centre has released Rs.553 crore to States under the **Sub-Mission on Agricultural Mechanisation (SMAM)** to promote mechanisation in the agriculture sector.

- The Sub-Mission on Agricultural Mechanisation (SMAM) was introduced in April 2014 with an aim to have **inclusive growth of farm mechanisation** to boost productivity.
- **Individual farmers are provided a subsidy** for procurement of machinery under the scheme.

2. Flying high, flying straight

- The **Andean condors (*Vultur gryphus*) are the world's heaviest soaring birds.**
- Condors spend 99% of all flight time in soaring/gliding flight. Currents of warm rising air and streams of air pushed upward by ground features help these birds soar. Ability to ride air currents allows them to travel long distances with minimal exertion.

3. Studying P. vivax malaria

- The **parasite Plasmodium vivax**, is responsible for **malaria**.

H. UPSC Prelims Practice Questions

Q1. Which of the following statement/s is/are correct?

1. Article 148 of the Indian Constitution provides for the office of Comptroller and Auditor General (CAG).
2. There are no qualifications prescribed for the post of CAG
3. CAG holds office for a period of 6 years or up to the age of 65, whichever is earlier.

Options:

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1,2 and 3

Answer: d

Explanation:

- Article 148 of the Indian Constitution provides for the office of Comptroller and Auditor General (CAG).
- Neither the Indian constitution nor the CAG's (Duties, powers and conditions of service) act, 1971 prescribe any qualifications for the post of CAG.
- CAG holds office for a period of 6 years or upto the age of 65, whichever is earlier.

Q2. Which of the following statement/s is/are correct?

1. Madhya Pradesh has the largest tribal population in India
2. Among the 75 listed Particularly Vulnerable Tribal Groups (PVTG) the highest numbers are found in Chhattisgarh.

Options:

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

Answer: a**Explanation:**

- Total population of Scheduled Tribes is 84,326,240 as per the Census 2001 which accounts for 8.2% of the total population of the country.
- Madhya Pradesh has the highest Scheduled Tribe population.
- Among the 75 listed Particularly Vulnerable Tribal Groups (PVTG's) the highest number are found in Odisha (13), followed by Andhra Pradesh (12).

Q3. Which of the following statement is incorrect?

- 1. The National Food Security Act, 2013 aims to provide subsidized food grains to all the citizens of the country.
- 2. Under the provisions of the National Food Security Act, 2013, beneficiaries of the Public Distribution System (or, PDS) are entitled to 5 kilograms of cereals per family per month at the subsidized prices.

Options:

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

Answer: c**Explanation:**

- The National Food Security Act, 2013 aims to provide subsidized food grains to approximately two thirds of India's 1.2 billion people.
- The National Food Security Act, 2013 (NFSA 2013) converts into legal entitlements the existing food security programmes of the Government of India. It includes the Midday Meal Scheme, Integrated Child Development Services scheme and the Public Distribution System.
- The Midday Meal Scheme and the Integrated Child Development Services Scheme are universal in nature whereas the PDS will reach about two-thirds of the population (75% in rural areas and 50% in urban areas).

- Under the provisions of the bill, beneficiaries of the Public Distribution System (or, PDS) are entitled to 5 kilograms per person per month of cereals at the subsidized prices.

Q4. Which of the following statement/s is/are correct?

1. The core of the sun records the highest temperature for the sun, with temperature decreasing as one moves outwards towards the photosphere and corona.
2. Magnetic reconnection contributes to the solar eruptions in the form of sun flares and coronal mass ejections.

Options:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: b

Explanation:

- The core of the Sun is at a temperature of about 15 million degrees, while its outer layer, the photosphere is only 5700 degrees hot. The sun's corona or outer atmosphere, which stretches up to several million kilometres beyond its surface, is much hotter than the surface (one million degrees or more). This is unusual given that while the surface is cooler than the interior, the atmosphere of the Sun (corona) rises substantially.
- Magnetic reconnection is a process where opposite polarity magnetic field lines connect and some of the magnetic energy is converted to heat energy and also kinetic energy which leads to the generation of heating, solar flares, solar jets, etc.

I. UPSC Mains Practice Questions

1. Analyze the arguments both in favour of and against the issuance of immunity certificates for COVID-19. (15 marks, 250 words) (GS paper 2/Governance)
2. What do you mean by Magnetic reconnection phenomenon with respect to the sun's surface? Explain its contribution to the phenomenon of coronal heating and coronal mass ejection. (10 marks, 150 words) (GS paper 3/Science and Technology)