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30 Mar 2020: UPSC Exam Comprehensive News Analysis

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A. GS 1 Related

Nothing here for today!!!

B. GS 2 Related

Category: POLITY AND GOVERNANCE

1. Migrant workers to be stopped, quarantined at borders: Centre

Context:

- Migrant workers trying to move out of the cities to their villages in the light of the nationwide lockdown.

Details:

Strict enforcement of the lockdown:

- The Union Home Ministry has termed the **movement of migrant workers** to reach their home towns a **violation of the lockdown measures on maintaining social distance**.

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- The Centre has asked the States and UTs to **strictly enforce the 21-day lockdown by prohibiting movement of people across cities and highways**. Directions have been given to seal the district and State borders and allow **only the movement of goods.**

Catering to the needs of the migrants:

- The migrant workers who have moved out of their work spots must be **quarantined in the nearest shelter** after proper screening for a minimum period of 14 days as per standard health protocol.
- The Union Home Ministry has directed State and Union Territory (UT) governments to **provide temporary shelters, food and other essentials to the poor and needy**, including migrant labourers. The states are allowed to **use the State Disaster Response Fund.**
- In order to mitigate the economic hardship of migrants, the Home Ministry has directed the State and UT governments to ensure that all **employers pay wages without deduction** at workplaces, on the due date and for the period their commercial establishments remain closed during the lockdown.
- **Landlords have been directed not to demand one month's rent from workers,** including migrant workers. If any landlord is forcing labourers and students to vacate their premises, they will be liable for action under the Disaster Management Act.

Essentials exempted:

- The transportation of all goods, **without distinction of essential and non-essential**, has been allowed.
- The entire milk supply and newspaper delivery chains have also been allowed.

C. GS 3 Related

Category: ENVIRONMENT AND ECOLOGY

1. Air quality improves in over 90 cities

Context:

- The nationwide lockdown in place has led to reduced air pollution in over 90 cities in India.

Background:

PM2.5:

- PM2.5 is a **fine particulate pollutant**. These are particles with a size (diameter) generally less than 2.5 micrometres (μm).

Sources:

- PM2.5 can be either **human-made or naturally occurring**.
- Human-made sources of PM2.5 are more important than natural sources, which make only a small contribution to the total concentration. Some examples of natural sources include dust and sea-spray.
- Particulate matter is **emitted during the combustion of solid and liquid fuels**, such as for power generation, domestic heating and in vehicle engines.
- **Emissions of PM2.5 from road vehicles are an important source**. Consequently, levels of PM2.5 close to roadsides are often much higher than those in background locations.

- In addition to the direct emissions of particles referred to as primary emissions, PM2.5 can also be **formed from the chemical reactions of gases such as sulphur dioxide (SO2) and nitrogen oxides.** These are called secondary particles.

Impact:

- The biggest impact of particulate air pollution on public health is understood to be from **long-term exposure to PM2.5,** which **increases the age-specific mortality risk,** particularly from cardiovascular causes.
- Exposure to high concentrations of PM to even short term episodes can also intensify lung and heart conditions.
- **Children, the elderly** and those with predisposed respiratory and cardiovascular diseases, are known to be more **susceptible to the health impacts from air pollution.**

NOX:

- Nitrogen dioxide and nitric oxide are referred to together as oxides of nitrogen (NOx).

Sources:

- NOX gases are produced from the reaction between nitrogen and oxygen during combustion of fuels, such as hydrocarbons, in air, especially **at high temperatures.**
- NOx pollution is mainly caused due to high motor vehicle traffic.
- NOx gases are also **produced naturally by lightning**.

Impact:

- NOX increases the **risk of respiratory conditions.**
- NOx gases react to form **smog and acid rain** and also contribute to the **formation of fine particles (PM) and ground level ozone**, both of which are associated with adverse health effects.

Details:

- India is currently under the biggest lockdown with around 130 crore people asked to stay home in view of the COVID-19 outbreak.
- Lockdown has reduced vehicular traffic across the country, including Delhi, leading to **a drop in PM2.5, NOx levels.**
    - o According to the Centre-run **System of Air Quality and Weather Forecasting and Research (SAFAR),** the lockdown has led to a drop in PM2.5 by 30% in Delhi and by 15% in Ahmedabad and Pune, respectively.
    - o The level of Nitrogen Oxide (NOx) pollution has also reduced. In Pune, NOx pollution has reduced by 43%, in Mumbai, by 38% and in Ahmedabad, by 50%.
- Generally in the month of March, pollution in Delhi is in the "moderate" category **(Air Quality Index range: 100-200).** However, owing to the lockdown impact, pollution currently is in the "satisfactory" (AQI 50-100) or "good" (AQI 0-50) category.
    - o Under the "good" category, pollution is considered to be at the lowest and the air is believed to be the healthiest to breathe.
    - o **An AQI between 0-50 is considered good, 51-100 satisfactory, 101-200 moderate, 201-300 poor, 301-400 very poor and 401-500 severe.**
- Local factors like shutting down of industries and construction and traffic have contributed in improving the air quality. The rains have also helped decrease PM2.5.
- 92 other cities with **Central Pollution Control Board (CPCB)** monitoring centres have also recorded minimal air pollution, with the air quality in the range of "good" to "satisfactory".

Conclusion:

- The low AQI prove that **pollution is mostly anthropomorphic (man-made) in nature**.
- Though the lockdown is not the ideal way to bring down air pollution, it proves that it can be done. Pollution can be **reduced by using technology and low-emission alternatives.**

Category: INTERNAL SECURITY

1. A new wave of the fake news pandemic is born

Context:

- Misinformation linked to supposed cures for COVID-19 and misleading claims have proliferated on social media networks.

Details:

Fake News pandemic:

- In the light of the pandemic, the social media platforms have witnessed:
  - **Misleading claims on supposed cures** and posts related to 'treatments' that are not proven.
  - **Medicine sales pitches** or claims of techniques to prevent exposure and infection that are either not proven and/or filled with a lot of misleading information.
  - **Conspiracy theories** about the outbreak.
  - **Instructions for individuals to stock up on supplies and food.**
- The misinformation about the pandemic has been deadly. False reports have **appeared in numerous countries.**

Concerns:

- There are many dangers posed by inaccurate information on the virus.
  - It could **incite fear or panic** among the public:
    - The issue of **panic buying** has been reported from many countries. This not only strains the supply system during these critical times but also leads to shortage of essential items for some sections of the society.
    - Fake news also leads to **lowered public morale** in these critical times.
  - The claims can **cause confusion among the public**:
    - Differing claims without underlying scientific evidence can cause a lot of damage as such misinformation creates confusion and **prevents communities from following instructions from authorities** and being united against the threat. The **mass exodus of migrant labourers** from cities despite government's assurances points towards this confusion.
  - The claim on supposed cures can cause **complacency among the general public.**
    - Increased complacency could lead to **lesser adherence to measures like social distancing and good sanitation practices**, which are considered very effective against the spread of the disease. The complacency could aid the **further spread of the disease**.
  - It increases the potential for individuals to do harmful things in the hope of curing or preventing the illness.

- Worryingly some of the supposed cures can **have life-endangering consequences.** In Iran, a fake remedy of ingesting methanol has reportedly led to 300 deaths, and left many sick.
  o The attribution of the disease to wrong causes can also have **economic impacts.**
    - Fake **videos linking COVID-19's spread to the meat and poultry** sector have led to a low demand for these products and, consequently, **large-scale losses.**
- The sharing of false information has an impact beyond the immediate risk of the virus itself.

Way forward:

- There is a need to debunk rumours and myths about the virus.

General public:

- The **public should be more vigilant** and must try to make a distinction between scientific information and misinformation.

Tech companies:

- Though there is no link between what people think is true and what people are willing to share on social media platforms, users tend to forward that content which he or she thinks will be liked or shared. Given the fact that **social media algorithms** are geared to appeal to one's habits and interests, the emphasis of messages is on likeability and not accuracy. Facebook, Twitter and other such companies need to alter what people see on screen.
- **Prompts urging users to consider the accuracy of content** they are spreading on social networks are needed. **Reminders about accuracy** would be a simple way to improve choices.
- Facebook and other social media companies are facing big reputational risks due to the issue of fake news. This should act as an incentive for the tech companies to take **stronger action to stop misinformation** and the scale at which it can be spread online.

Government:

- The government can consider taking **action against the circulation of fake news and rumours.**

D. GS 4 Related

Nothing here for today!!!

E. Editorials

Category: INTERNATIONAL RELATIONS

1. The deep void in global leadership

Context:

- COVID-19 pandemic and the need for global coordination.

Background:

Lack of coordination:

- World leaders are overwhelmed with their own national challenges and do not appear inclined to view the **pandemic as a common enemy against mankind**.
- The pandemic has caused loss of human life, regardless of citizenship and race, and has ravaged economies across continents. Yet, there is as yet **no comprehensive, concerted plan of action by global leaders to combat this crisis.**
- The rapid spread of the COVID-19 pandemic across the world has exposed the **lack of collective leadership at the global level.**

Wrong strategy:

- **The G20 recently had a virtual meeting regarding the COVID-19 crisis**. The G20 leaders have agreed to **inject $5-trillion into the world economy** to partially counter the economic impact of the pandemic. Though this comes as a welcome relief, taking collective ownership to fight a global war against the virus will **need more than an economic solution**.
- The typical response by all affected nations has been limited to imposing 'National distancing' by closing borders. Though this is right, there have been **no additional efforts.**
    - China delayed reporting the virus to the World Health Organization (WHO), and perhaps, in the process, contributed to the rapid spread of the virus across the globe.
    - The U.S. administration did not even inform the European Union before it shut off flights from Europe. This **lack of communication** could have detrimental effects in the fight against the pandemic.
    - All countries are **working separately on drug and vaccine development**.

Details:

Need for coordination:

Need for global eradication:

- The assumption that nations would be able to control the virus with only domestic shutdowns might be just wishful thinking.
- As long as the virus is alive in some corner of the world, it would resume its travel across the world the moment international travel restrictions are relaxed. Epidemiologists point out that unless herd immunity develops**, the virus will remain alive and strike whenever there is a lowering of guard.**
- It is not possible to keep international travel suspended till the virus is completely eradicated. National shutdowns and physical distancing have been a challenge. Such lockouts come at enormous economic and social costs.
- **Only global efforts can ensure the global eradication of the virus.** Hence, global action is both relevant and of critical importance in the context of the present pandemic.

Common problem:

- Given the **high level of globalization,** the fortunes of nations are closely intertwined. Given the scale and intensity of the crisis, all nations remain affected and hence need to work together to come out of it.

Challenges:

- Two developments in the global polity in the last few years have contributed to the indifference towards collective global action.

Swing towards right-wing nationalism:

- Right-wing nationalism has become the guiding political ideology, in **large parts of the world** and particularly in the U.S.
- The nationalist ideology presumes global good being in conflict with national interests. Such countries chose national, **short-term economic interests over global interests**.
- The decision to withdraw from the Paris Accord on climate change, on the ground that the accord would undermine U.S. economic interest is a classic demonstration of narrow nationalism against global interests.

Ineffectiveness of the multilateral institutions:

- **The United Nations, based on the principle of collective action**, has failed to live up to its expectations to maintain peace among nations in the nearly 80 years since its formation.
- **The affiliate organizations of the UN have also failed to deliver on their mandates.** The WHO, with the mandate to be the directing and coordinating authority among member countries in health emergencies, has proven to be too sluggish in reacting to pandemics in the past. Its responses to COVID-19 has come under the scanner for lack of intellectual integrity.

<u>**Way forward:**</u>

Need for collective actions:

- Given the global nature of the challenge, efforts to address it need collective global leadership. There is an emergent need for leaders of nations to **come together for collective global action.**

India's role:

- The initiative taken by India to convene a meeting of the [South Asian Association for Regional Cooperation](#) countries stands out in present times.
- India should **catalyse collective global action**.

G20 as a platform:

- A nimble outfit, not burdened with bureaucracy, is required to manage a global crisis like the COVID-19. **G20, with co-option of other affected countries**, might serve this purpose for the present. G20 offers an appropriate **ready mechanism for global cooperation**.

Rapid mobilization of relevant resources:

- The global collective should ensure that shortages of **drugs, medical equipment and protective gear** do not come in the way of any nation's capacity to contain or fight the pandemic.
- Nations that have succeeded in bringing the pandemic under control, such as China, Japan or South Korea, with the capability to step up production at short notice should meet the increasing demand from other countries.
    - The global mobilization of resources would require development of an **information exchange** on global production capacity, present and potential, demand and supply.
    - Given the controls on international traffic and national shutdowns, **protocols might need to be put in place** among participating countries to ensure seamless logistics for the supply chain for essential goods and services to function efficiently.

Medical collaboration:

Information exchange on clinical trials:

- There needs to be **instantaneous exchange of authenticated information** on what clinical solutions have succeeded and what has not.
- While there is no substitute to classic clinical proof, the more **field-level information** is shared within the medical community the better will be the success rates of clinical trials in finding a treatment regime for COVID-19.

Collaboration on drug development:

- There is a need to ensure **cross-country collaboration on laboratory trials and clinical validation for vaccines and anti-viral drugs**.
- The best way to ensure speedy research is to pool global resources. Such a framework might be necessary for sustained collaborations for future challenges too.

Facilitate cross country movement of health professionals:

- There is a need to **facilitate easy movement of trained health professionals** across the world to train others and augment resources wherever there are shortages.
- Nations should come together to organise a global pool of medical personnel to fight the pandemic. The findings of **field experience should be shared** among the global community of medical personnel.

Ensuring basic needs:

- The world might anticipate food shortages occurring sooner or later, in some parts of the world, consequent to the national shutdowns.
- This increases the risk of losing lives to starvation and malnutrition, if adequate precautions are not taken. Addressing this will require coordinated global action.

Post pandemic efforts:

- The economic devastation caused by the pandemic is huge. Given the fact that economies of the world are intertwined, an orderly reconstruction of the global economy would be required.
- The new global economy based on the ideals of equity and inclusivity will require **renegotiating terms of trade among key trading blocs**, concerted action among central bankers to stabilise currencies, and a responsible way to regulate and manage global commodity markets.
- This millennium has already suffered three pandemics and COVID-19 will certainly not be the last. **Future pandemics** are a certainty and nations should create a **framework for coordination for such scenarios.**

Category: SCIENCE AND TECHNOLOGY

1. Looking beyond just diagnosis and quarantine

Context:

- The author of the article calls for **greater attention towards the development of therapeutic options** against epidemics in India.

Background:

- The world has suffered numerous pandemics and COVID-19 will certainly not be the last. Future pandemics are a certainty.
- **Ebola, Zika, Nipah, SARS, MERS, H1N1 and COVID-19 are some of the viral diseases.**
- Unlike bacterial infections such as cholera, typhoid which have drug and vaccine options, **some of the viruses do not have vaccines or drugs available as yet**. Also, mutations of known viruses periodically cause havoc.
- In India, given the **population density and unsatisfactory hygiene conditions and awareness**, citizens can face serious situations even though the disease may have originated elsewhere.

Details:

- In India, the **options against epidemics are always limited to diagnosis** as per World Health Organization protocols and seem to be limited to the exclusive domain of the National Institute of Virology (NIV), Pune and its designated centres.
- There is **much scope for improvement in terms of development of therapeutic options in India.**

Therapeutic approach:

Sequencing:

- The first requirement is to **sequence the genome of all the isolates** from infected patients.
- COVID-19, being an RNA virus, would require conversion to DNA data. Then the sequence of the alphabets (ATGC) of the nucleic acids would be determined.
- COVID-19 can be sequenced in 24 hours in India.
- It is important to sequence the virus isolates in at least three different institutions in India to ensure that sequencing errors are eliminated.
- The **knowledge of genome sequence is essential to designing drugs and vaccines.**

Short term measures:

- A quick response for the development of treatment regimes would involve the **evaluation of repurposed known drugs.**
  - This drug development strategy depends on the reuse of existing licensed drugs for new medical treatments.
  - For example, in the case of COVID-19, anti-HIV drugs and antimalarial drugs are being evaluated.
- **Passive immunisation** provides an effective measure for treatment.
  - This technique uses the plasma derived from convalescing patients, who have completely recovered, which is then injected into infected patients. This would boost antibodies in the patients.
  - Another strategy of passive immunisation involves **cloning of B cells from patients to make therapeutic antibodies** and their subsequent injection into patients.

Long-term approach:

- A long-term approach in developing therapeutic options involves cloning the genome, making recombinant antigens and **testing for vaccine potential and new drug design**.
- The virus needs to be cultured for drug screening.
- A phage library expressing all possible human antibodies (single chain) is available for screening.
- This approach eventually needs **clinical trials to be taken forward on fast-track** with the cooperation of the office of the Drug Controller General of India.

Conclusion:

- There is a need in India for a **rapid response research and development team to handle viral onslaughts.**
- India should come out with a **framework for drug and vaccine development domestically**.
- India can **use the vast expertise** of its organizations, scientists and medical professionals to effectively implement such a framework.
- Apart from the state organizations, there should be ample **opportunity for including the private sector too,** given its expertise.

F. Prelims Facts

1. U.S. Air Force cancels Red Flag exercise

- The **U.S. Air Force** has cancelled Phase-I of its flagship multilateral air exercise, **Red Flag,** scheduled in Alaska due to COVID-19.
  - Exercise Red Flag is an **advanced aerial combat training exercise** held several times a year by the United States Air Force. The exercise offers realistic air-combat training for military pilots and other flight crew members from the **U.S., NATO and other allied countries**.
- The **Indian Air Force (IAF) was to take part in the exercise.**

2. Himalayan Ibex a distinct species

- **Siberian Ibex is a species of wild goat** and is distributed in **diverse habitats**, ranging from cold deserts, rocky outcrops, steep terrain, high-land flats and mountain ridges to low mountains and foothills.
- In Asia, Ibex is **distributed in the Montane habitats**, ranging in elevations from 500 m to 6,700 m in countries like **India, Kazakhstan, Tajikistan, Mongolia, Pakistan, China, and also Southern Siberia.**
- A recent study by scientists of the [Zoological Survey of India (ZSI)](link) has proved that **the Himalayan Ibex is a distinct species from the Siberian Ibex.**
- In India, the Ibex is distributed mainly in the trans-Himalayan ranges of the Union Territories of **Ladakh and Jammu and Kashmir and Himachal Pradesh** up to the river Sutlej.

G. Tidbits

Nothing here for today!!!

H. UPSC Prelims Practice Questions

Q1. The Red flag exercise is conducted by which of the following countries?

a. Israel
b. Russia
c. The United States of America
d. China

Answer:

c

Explanation:

- Exercise Red Flag is an advanced aerial combat training exercise held several times a year by the United States Air Force. The exercise offers realistic air-combat training for military pilots and other flight crew members from the U.S., NATO and other allied countries.
- The Indian Air Force (IAF) also takes part in the exercise.

Q2. The Himalayan Ibex has been documented in which of the following states/UTs?

1. Jammu and Kashmir
2. Ladakh
3. Himachal Pradesh
4. Uttarakhand
5. Sikkim
6. Arunachal Pradesh

Options:

a. 1, 2 and 3 only
b. 2 and 3 only
c. 5 and 6 only
d. 1, 2, 3 and 4 only

Answer:

a

Explanation:

- In India, the Himalayan Ibex is distributed mainly in the trans-Himalayan ranges of the Union Territories of Ladakh and Jammu and Kashmir and Himachal Pradesh. The eastern limit seems to be the Bara Lacha La Pass on the north and Satluj Gorge south of the Great Himalayan Range in Himachal Pradesh.
- They are found in the western Himalayan region, usually at elevations of 3800m and higher.
- They are best seen in Pin Valley NP, Himachal Pradesh, Kanji WLS, Jammu and Kashmir.

Q3. Which of the following pair/s is/are wrongly matched?

1. Gonds: Madhya Pradesh
2. Chenchus: Andhra Pradesh
3. Gaddis: Himachal Pradesh
4. Apatani: Arunachal Pradesh
5. Soliga: Karnataka
6. Cholanayakan: Kerala
7. Asura: Jharkhand
8. Khonds: Odisha

Options:

a. 2, 3 and 7 only
b. 1, 2 and 5 only

c. 7 and 8 only
d. All are correctly matched

Answer:

d

Explanation:

Self-explanatory

Q4. Which of the following will not reduce NOX emission?

a. Exhaust gas recirculation
b. Selective catalytic reduction
c. Water/steam injection
d. Increasing Combustion temperature

Answer:

d

Explanation:

- NOX gases are produced from the reaction between nitrogen and oxygen during combustion of fuels, such as hydrocarbons, in air, especially at high temperatures.
- Exhaust gas recirculation, Selective catalytic reduction and direct water/steam injection are used extensively to reduce NOX emissions.

I. UPSC Mains Practice Questions

1. The rapid spread of the COVID-19 pandemic calls for a comprehensive, concerted plan of action from the global community. Discuss. (10 marks, 150 words)
2. In the light of the proliferation of misinformation regarding COVID-19 on social media networks, analyze the concerns associated with the spread of fake news in the present context. Suggest suitable measures to tackle this problem. (15 marks, 250 words)