



Mains Practice Question

Q. What are novel viruses? Discuss its threats and suggest measures to deal with them. (250 words)

17 Jun, 2020 GS Paper 3 Science & Technology

Approach

- In introduction explain what novel viruses are and how they are different from viruses.
- Mention a few examples of novel viruses.
- Discuss the various dimensions of the threat posed by novel viruses.
- Suggest various administrative and other measures to deal with novel viruses.
- Conclude by summarising your answer.

Introduction

A virus is a submicroscopic infectious agent that replicates only inside the living cells of an organism. Such a virus that has not previously been recorded is called Novel virus. It can be isolated from its natural reservoir or isolated as the result of spreading to an animal or human host where the virus had not been identified before.

Well-known examples of novel viruses are the **Zika virus** transmitted by mosquitoes, **bird flu viruses**, **MERS** from camels and **Novel Covid19 virus** which caused the ongoing pandemic, and is being associated with Bats.

Body

Threats from Novel Viruses

- Novel viruses can cause large-scale outbreaks of infectious diseases that can become a pandemic. It **greatly increases morbidity and mortality** over a wide geographic area and causes significant economic, social, and political disruption.
- **Economic impact:** Viruses outbreak causing pandemic to have a negative impact on business confidence, financial markets and the travel sector, including disruption to supply chains. This halts the overall economic growth.
 - Global economic growth undergoes a downturn decreasing the GDP growth rate of the majority of countries.
 - Causes loss of jobs and economic hardships especially for the lowest strata of society.
 - The quality of educational and academic activities have to be compromised.
- **Social threats:** Lockdown and social distancing measures to prevent the spread of novel viruses like Covid19 cause decline in social capital value i.e. relationships between individuals or groups and the resulting ability to secure or obtain resources or information.

Measures to Combat Adversities from Novel Virus Outbreak

- A whole-of-society approach is needed to counter pandemic due to novel viruses. A significant role is played by all the sectors especially the Health sector. Government, individuals, families, and

communities should work together in mitigating the effects of a virus pandemic.

Administrative Measures

- **Role of government:** The governments should:
 - Identify, appoint, and lead the coordinating body for pandemic preparedness.
 - Enact or modify legislation and policies required to sustain and optimize pandemic preparedness.
 - Initiate capacity building, and coordinate efforts across all sectors.
 - Prioritize and guide the allocation and targeting of resources judiciously.
- **Filling key gaps in information and knowledge:** Initiate scientific exploration to understand the nature of novel viruses and develop vaccines with the coordination of scientific organisations and pharma companies..

Health Sector

- In addition to raising awareness of the risk and potential health consequences of a virus pandemic. The health sector should be ready to:
 - Provide reliable information on the risk, severity, and progression of a pandemic.
 - Prioritize and continue the provision of health-care during a virus pandemic.
 - Enact steps to reduce the spread of the virus outbreak in the community.
 - Protect and support health-care workers during a pandemic.

Individuals and Families

- During a virus pandemic, it is important that households take measures to ensure they have access to accurate information, food, water, and medicines.
- For families, access to reliable information from sources such as WHO and local and national governments are essential.

Conclusion

Novel virus pandemics bring threats to lives, and dislodge the social and economical dimensions of humanity. Crises like these call for resilience in sectors such as healthcare, business, government and wider society. Immediate relief measures need to be implemented and adjusted for those that may fall through the cracks. Medium and longer-term planning is needed to re-balance and re-energise the economy following this crisis.