

Down To Earth July (Date: 16-07-2021)



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#### Question 1:

Consider the following statements regarding:

- 1. Superbugs are the microorganisms that develop antimicrobial resistance.
- 2. Bacteria can acquire antimicrobial resistance only via genetic mutations.

Which of the statements given above is/are correct?

- 1. 1 only
- 2. 2 only
- 3. Both 1 and 2
- 4. Neither 1 nor 2

Correct Answer: 1

## **Explanation**

- Antimicrobial resistance is the resistance acquired by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections. Microorganisms that develop antimicrobial resistance are sometimes referred to as "superbugs". Hence, statement 1 is correct.
- Some bacteria due to the presence of resistance genes are intrinsically resistant and therefore survive on being exposed to antibiotics.

Bacteria can also acquire resistance. This can happen in two ways:

- By sharing and transferring resistance genes present in the rest of the population, or
- By genetic mutations that help the bacteria survive antibiotic exposure. Hence, statement 2 is not correct.

### Question 2:

Consider the following statements regarding Flash Floods:

- 1. These are highly localised events of short duration.
- 2. Flash floods can occur due to thunderstorms or volcanic eruptions.
- 3. The recent flash flood in Chamoli district of Uttarakhand occured in the Dhauli Ganga river.

Which of the statements given above is/are correct?

- 1. 1 and 2 only
- 2. 2 only
- 3. 2 and 3 only
- 4. 1, 2 and 3

### Correct Answer: 4

## **Explanation**

• **Flash Floods** are sudden surges in water levels generally during or following an intense spell of rain.

These are **highly localised events of short duration** with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood. **Hence, statement 1 is correct.** 

- Flash Floods may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm, or meltwater from ice or snow flowing over ice sheets or snowfields.
  - Flash Floods can also occur due to Dam or Levee Breaks, and/or Mudslides (Debris Flow).
  - In areas on or near volcanoes, flash floods have also occurred after eruptions, when glaciers have been melted by the intense heat. Hence, statement 2 is correct.
- Recently, a glacial break in the Tapovan-Reni area of **Chamoli District of Uttarakhand led to massive Flash Flood in Dhauli Ganga** and Alaknanda Rivers, damaging houses and the nearby Rishi Ganga power project. **Hence, statement 3 is correct.**

It occurred in river Rishi Ganga due to the falling of a portion of Nanda Devi glacier in the river which exponentially increased the volume of water.

Rishiganga meets Dhauli Ganga near Raini. So Dhauli Ganga also got flooded.

#### Question 3:

Consider the following statements:

- 1. Prison is a Concurrent subject in the Seventh Schedule of the Indian Constitution.
- 2. The provision of free legal aid or free legal service is provided under Article 39A of the Indian Constitution.
- 3. Article 22 of the Indian Constitution allows for preventive detention and restriction on personal liberty for reasons of state security.

Which of the statements given above are correct?

- 1. 1 and 2 only
- 2. 2 and 3 only
- 3. 1 and 3 only
- 4. 1, 2 and 3

Correct Answer: 2

## **Explanation**

- Prisons/persons detained therein' is a State subject under Entry 4 of List II of the Seventh Schedule to the Constitution of India. Hence, statement 1 is not correct.
  - Administration and management of prisons is the responsibility of respective State Governments.
  - However, the Ministry of Home Affairs provides regular guidance and advice to States and UTs on various issues concerning prisons and prison inmates.
- Article 39A of the Constitution directs the State to ensure that the operation of the
  legal system promotes justice on a basis of equal opportunity and shall, in particular,
  provide free legal aid to the poor and weaker sections of the society by suitable
  legislation or schemes or in any other way, to ensure that opportunities for securing
  justice are not denied to any citizen by reason of economic or other disabilities. Hence,
  statement 2 is correct.

The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free legal services to weaker sections of the society.

- Preventive Detention: The imprisonment of a person with the aim of preventing them from committing further offences or of maintaining public order.
  - Article 22 (3) (b) of the Indian Constitution allows for preventive detention and restriction on personal liberty for reasons of state security and public order.
     Hence, statement 3 is correct.
  - Further, Article 22 (4) states that no law providing for preventive detention shall authorise the detention of a person for a longer period than three months unless.

### Question 4:

Consider the following statements:

- 1. The Significant Social Media Intermediaries (SSMIs) are the platforms having more than 1 million users.
- 2. The Prajwala v/s Union of India (1996) case is associated with framing necessary guidelines to eliminate child pornography, rape and gang rape imageries.

Which of the statements given above is/are not correct?

- 1. 1 only
- 2. 2 only
- 3. Both 1 and 2
- 4. Neither 1 nor 2

Correct Answer: 1

## **Explanation**

- Recently, the Government of India announced the New IT Rules for social media platforms in the 'Significant Social Media Intermediaries (SSMIs)' category.
  - The genesis of these rules lies in the Prajwala v/s Union of India (1996), the Supreme Court (SC) ordered the government to frame the necessary guidelines/Standard Operating Procedure (SOP) and implement them to "eliminate child pornography, rape and gang rape imagery, videos, and sites in content hosting platforms and other applications". Hence, statement 2 is correct.
  - In Tehseen S. Poonawalla, 2018 case, the SC gave the government full freedom to stop/curb dissemination of "irresponsible and explosive messages on various social media platforms, which have a tendency to incite mob violence and lynching of any kind".

- The guidelines call upon the categories of social media intermediaries as:
  - Regular Social Media Intermediaries (RSMIs)
  - Significant Social Media Intermediaries (SSMIs)

The SSMIs are the intermediaries having more than 5 million (50 lakh) users. Hence, statement 1 is not correct.

#### Question 5:

Consider the following statements regarding poverty in India:

- 1. India has managed to reduce its poverty rate in the time period 2004-05 to 2011-12.
- 2. Poverty line estimation in India is based on the income levels of the people.
- 3. Andhra Pradesh and Tripura and have witnessed poverty alleviation of more than 60% in the time period 2004-05 to 2011-12.

Which of the statements given above is/are correct?

- 1. 1 and 2 only
- 2. 2 only
- 3. 3 only
- 4. 1 and 3 only

#### Correct Answer: 4

## **Explanation**

- As per the World Bank's Development Data Group, India has not carried out its poverty estimation since 2011. The latest data is available for 2011-12
- Rural India has seen a higher poverty ratio (26%) than urban areas (14%).
- India managed to reduce its poverty rate from 37% in 2004-05 to 22% in 2011-12. Hence, statement 1 is correct.
- However, the alleviation rate was skewed among states. Of the 23 states considered, Goa, Andhra Pradesh, Himachal Pradesh, Tripura and Uttarakhand saw poverty alleviation rates of over 65%; while Assam, Jharkhand and Chhattisgarh recorded less than 20% reduction. Hence, statement 3 is correct.

Other than the Union Territories, five states were left out: Arunachal Pradesh, Manipur, Mizoram, Nagaland, Sikkim— due to paucity of data and because of their miniscule contribution to the country's gross domestic product or GDP at 0.71%.

- Poverty estimation in India is carried out by NITI Aayog's task force.
  - Poverty line estimation in India is based on the consumption expenditure and not on the income levels. Hence, statement 2 is not correct.
  - Poverty is measured based on consumer expenditure surveys of the National Sample Survey Organisation. A poor household is defined as one with an expenditure level below a specific poverty line.

#### Question 6:

Consider the following statements regarding Millets:

- 1. Millets are rich in iron and calcium.
- 2. Millet after going through the process of fermentation loses its nutritious value.
- 3. Kodo and Kutki are indigenously developed varieties of millets.

Which of the statements given above is/are not correct?

- 1. 1 only
- 2. 2 only
- 3. 1 and 3 only
- 4. 1, 2 and 3

### Correct Answer: 2

## **Explanation**

- **Millets** are often referred to as Superfood and its production can be seen as an approach for sustainable agriculture and a healthy world.
- The three major millet crops currently grown in India are jowar (sorghum), bajra (pearl millet) and ragi (finger millet).

Along with that, India grows a rich array of bio-genetically diverse and indigenous varieties of "small millets" like kodo, kutki, chenna and sanwa. Hence, statement 3 is correct.

• Major producers include Rajasthan, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Maharashtra, Gujarat and Haryana.

- Millets have seen a rise in popularity in recent years. They are rich in fiber, high in iron, calcium, vitamin B-complex and other essential nutrients. Hence, statement 1 is correct
  - Fermented millets are more nutritious, as beneficial microbes such as Lactobacillus fermentum, Weissella paramesenteroides and yeasts break down the starch into sugars and amino acids. Hence, statement 2 is not correct.
  - Fermentation also reduces the inhibitors of the enzymes trypsin and amylase and make the final product easier to digest.

#### Question 7:

Consider the following statements regarding Malaria:

- 1. It is caused by plasmodium parasites which spread through the bites of infected female Anopheles mosquitoes.
- 2. The Anopheles mosquito is also responsible for transmitting chikungunya and yellow fever.
- 3. The E-2025 is an initiative of WHO to eliminate malaria in various countries.

Which of the statements given above is/are not correct?

- 1. 1 and 2 only
- 2. 2 only
- 3. 3 only
- 4. 2 and 3 only

### Correct Answer: 2

## **Explanation**

 Malaria is a life threatening mosquito borne blood disease caused by plasmodium parasites. The parasites spread through the bites of infected female Anopheles mosquitoes. Hence, statement 1 is correct.

Zika Virus Disease (ZVD) is caused by a virus transmitted primarily by **Aedes mosquitoes** (AM), mainly Aedes aegypti.

This is the same mosquito that transmits dengue, chikungunya and **yellow** fever. Hence, statement 2 is not correct.

- In 2017, WHO launched the E-2020 initiative to support a group of countries to achieve zero indigenous cases of malaria by 2020.
  - Building on the successes of the E-2020, WHO has identified a new group of
     25 countries (E-2025) that have the potential to stamp out malaria within a
     5-year timeline. Hence, statement 3 is correct.
  - The E-2025 countries will receive technical and on-the-ground support by WHO
    and its partners. In return, they are expected to audit their elimination
    programmes annually, participate in elimination forums, conduct surveillance
    assessments, and share malaria case data periodically.

### Question 8:

Consider the following statements regarding Biomedical Waste:

- 1. The vaccination camps and blood donation camps come under the ambit of Biomedical Waste Management Rules, 2016.
- 2. India has also ratified the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal.

Which of the statements given above is/are correct?

- 1. 1 only
- 2. 2 only
- 3. Both 1 and 2
- 4. Neither 1 nor 2

### Correct Answer: 3

## **Explanation**

- **Biomedical waste** is defined as human and animal anatomical waste, treatment apparatus like needles, syringes and other materials used in health care facilities in the process of treatment and research.
- Biomedical waste management rules came into force in 1998 and have undergone many amendments since then. The latest major amendment was made in 2016.

Under the amendment in the rules in 2016, the **ambit of the rules has been expanded to include vaccination camps, blood donation camps**, surgical camps or any other healthcare activity. **Hence, statement 1 is correct.** 

- India has also ratified the Basel Convention on the Control of Trans-boundary
   Movements of Hazardous Wastes and their Disposal. Hence, statement 2 is correct.
  - It particularly focuses on preventing transfer of hazardous waste from developed to less developed countries.
  - It provides for cooperation between the parties, including exchange of information on issues relevant to the implementation of the Convention.

#### Question 9:

Consider the following statements regarding African Swine Fever (ASF):

- 1. It is a highly contagious and fatal disease that infects domestic and wild pigs.
- 2. The mortality rate of ASF is almost 100% and the fever has no cure.
- 3. ASF is not a threat to human beings.

Which of the statements given above is/are correct?

- 1. 1 and 2 only
- 2. 2 only
- 3. 1 and 3 only
- 4. 1, 2 and 3

### Correct Answer: 4

**Explanation** 

African Swine Fever (ASF) is a highly contagious and fatal animal disease that
infects and leads to an acute form of hemorrhagic fever in domestic and wild pigs.
Hence, statement 1 is correct.

Other manifestations of the disease include high fever, depression, anorexia, loss of appetite, hemorrhages in the skin, vomiting and diarrhoea among others.

- It was first detected in Africa in the 1920s.
  - Historically, outbreaks have been reported in Africa and parts of Europe, South America, and the Caribbean.
  - However, more recently (since 2007), the disease has been reported in multiple countries across Africa, Asia and Europe, in both domestic and wild pigs.
- The mortality is close to 100% and since the fever has no cure, the only way to stop its spread is by culling the animals. Hence, statement 2 is correct.
- ASF is not a threat to human beings since it only spreads from animals to other animals. Hence, statement 3 is correct.
- ASF is a disease listed in the World Organisation for Animal Health (OIE) Terrestrial Animal Health Code and thus, reported to the OIE.

#### Question 10:

Consider the following statements regarding the World Intellectual Property Organisation (WIPO):

- 1. It is a UN Specialised Agency.
- 2. The WIPO is the only organisation that works for the protection of Intellectual Property throughout the world.
- 3. India is a party to the WIPO Copyright Treaty but not to the WIPO Performances and Phonograms Treaty.

Which of the statements given above is/are correct?

- 1. 1 only
- 2. 2 and 3 only
- 3. 1 and 3 only
- 4. 1, 2 and 3

Correct Answer: 1

# **Explanation**

- Intellectual Property (IP) is a category of property that includes intangible creations of the human intellect, and primarily encompasses copyrights, patents and trademarks.
- The World Intellectual Property Organisation (WIPO) is one of the oldest specialised agencies of the United Nations. Hence, statement 1 is correct.
  - It was created in 1967 to encourage creative activity, to promote the protection of IP throughout the world.
  - o It is headquartered in Geneva, Switzerland.
  - As of date, 193 nations across the world, including India, are members of WIPO.
- WIPO members had agreed upon two treaties, namely the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.

India is a member of both the treaties. Hence, statement 3 is not correct.

 Other than WIPO treaties, Intellectual property (IP) is also covered under the World Trade Organisation's (WTO) TRIPS Agreement (Agreement on Trade Related Aspects of Intellectual Property). Hence, statement 2 is not correct.

India is a member of WTO and hence committed to TRIPS.