Prelim Bits 06-05-2022 | UPSC Daily Current Affairs

Shigella

The Kerala health department identified Shigella bacteria as the cause for the food poisoning incident in Kasaragod, which claimed the life of a 16-year-old girl.

- Shigella bacteria belongs to the enterobacter family - a group of bacteria that reside in the intestine, not all of which cause disease in humans.
- It causes a **food- and water-borne infection** that mainly **affects the intestine** and results in diarrhoea, sometimes bloody, stomach pain, and fever.
- **Spread** - The infection spreads easily as it takes only a small number of bacteria to make someone ill.
- It can happen when someone consumes contaminated food, unwashed fruit or vegetables.
- It is easily spread by direct or indirect contact with the excrement of the patient.
- Shigellosis is not a very common infection like the typhoid and cholera.
- **Types** - There are four types of Shigella bacteria that affect humans - Shigella sonnei, S. flexneri, S. boydii, and S. dysenteriae.
- The fourth type causes the most severe disease because of the toxin it produces.
- But it is not common for people to die of the infection, unless
    1. The patient has a weak immune system or
    2. The pathogen is resistant to the antibiotics that are prescribed or
    3. Shigella outbreaks appear to be exacerbated during pregnancy and in children under 5 years of age.
- **Treatment** - Shigellosis is a very treatable condition; if a patient reaches hospital on time they can effectively be treated using IV antibiotics.
- The problem though, occurs when the antibiotics do not work because the bacteria are resistant to it.
- **Problem** - If the bacteria continue to proliferate in the body even after giving the antibiotics, it will continue to produce toxins that can affect all other organs.
- These toxins can then affect the kidney, cause seizures, lead to multi-organ failure, and shock, and even turn fatal.
- The mortality of the infection is less than 1%.
- **Precautions** - The measures to prevent a Shigella infection are the same as that of any other food- and water-borne infection - be hygienic.
- Products such as milk, chicken, and fish can get infected easily and must be kept at a proper temperature. They must also be properly cooked.

Reference

1. https://indianexpress.com/article/explained/explained-shigella-bacteria-killed-girl-eating-shawarma-kerala-7902768/
2. https://www.firstpost.com/india/explained-what-is-shigella-the-bacteria-that-killed-kerala-girl-after-eating-shawarma-10638131.html

World Press Freedom Index 2022

Recently, the 20th edition of the World Press Freedom Index (WPFI) 2022 was published.

- It is published by the global media watchdog, the Reporters Without Borders or Reporters Sans Frontieres (RSF) since 2002.
- It ranks countries and regions according to the level of media freedom available to journalists.
- It is based on an evaluation of media freedom that measures pluralism, media independence, media environment and self-censorship, transparency, and the legal framework and the safety of journalists.
- It is also based on the quality of the infrastructure that supports the production of news and information.
- It includes indicators of level of media freedom violations in each region.
- **Methodology -** The Index's ranking is based on a **score ranging from 0 to 100** that is assigned to each country or territory.
- 100 is the best possible score (the highest possible level of press freedom) and 0 is the worst.
- Countries are evaluated using **five contextual indicators** - political context, legal framework, economic context, socio-cultural context and safety.
- **Findings -** India's ranking in the 2022 World Press Freedom Index has fallen to 150 out of 180 countries.

Country	**Rank in World Press Freedom Index 2022**
Norway	1
Denmark	2
Sweden	3
India	150 (142 in the year 2021)
North Korea	180

- In terms of global trends, the report flags a two-fold increase in polarisation amplified by information chaos
    1. Media polarisation fuelling divisions within countries, and
    2. Polarisation between countries at the international level.
- The report states that in India, "the violence against journalists, the politically partisan media and the concentration of media ownership all demonstrate that press freedom is in crisis".
- It describes India as one of the world's most dangerous countries for the media.
- It notes that the journalists are exposed to all kinds of physical violence including police violence, ambushes by political activists, and deadly reprisals by criminal groups or corrupt local officials.
- It highlights that "supporters of Hindutva, the ideology that spawned the Hindu far-right, wage all-out online attacks on any views that conflict with their thinking."

Reference

1. https://www.thehindu.com/news/national/indias-position-on-the-world-press-freedom-index/article65382354.ece?homepage=true
2. https://rsf.org/en/index

National Film Heritage Mission

Under the National Film Heritage Mission (NFHM), the world's largest film restoration project of approximately 2,200 films is set to commence in full swing at National Film Archive of India (NFAI).

- The National Film Heritage Mission is an initiative of the Ministry of Information & Broadcasting (I&B) to preserve and conserve country's cinematic heritage.
- Launched in **2017**, NFHM is the prestigious mission of Government of India, for preservation, conservation, digitization and restoration of rich cinematic heritage of the country.
- In addition to restoration, the National Film Heritage Mission also involves the on-going preservation processes of film condition assessment, preventive conservation and digitization.
- The National Film Archive of India (NFAI) is the nodal organization for the implementation of this project.

National Film Archive of India

- It was set up in 1964 as a media unit of the Ministry of Information & Broadcasting.
- The primary objective of the NFAI is to acquire and preserve the Indian cinematic heritage.
- This includes preservation of film and non-film material including but not limited to celluloid, stills, glass slides, posters, lobby cards, scripts and song booklets.

Reference

1. https://pib.gov.in/PressReleasePage.aspx?PRID=1823020
2. https://pib.gov.in/PressReleasePage.aspx?PRID=1576379

Frilled Shark

- The prehistoric frilled shark has 300 teeth and a long and slim body.
- The frilled shark has been swimming in the depths of the ocean since the time of the dinosaurs.
- It is often called a "living fossil" because in the 80 million years they've been known to live on earth, the fish have barely changed.
- With 300 teeth, the shark - distant cousin of other sharks like the great whites - was described as being "reminiscent of a snake".
- Its intimidating teeth and knowledge of the creature suggests they pose the biggest threat to other fish - having a hinged jaw to catch larger prey.
- **Habitat** - It has been found in waters across the Atlantic and in waters off the coasts of Japan and Australia.
- But because the shark lives in extreme depths and is actually rarely caught, scientists are unsure of how many there are in population.
- The International Union for the Conservation of Nature lists the frilled shark as a species of **least concern**.
- But it was noted that increasing deep water commercial fishing could in fact increase the likelihood of the frilled shark becoming an unwanted catch.

Reference

1. https://www.thehindu.com/society/green-humour-by-rohan-chakravarty/article6537498ece
2. https://www.mirror.co.uk/news/weird-news/bizarre-prehistoric-frilled-shark-300-26871923

E-Band

Tech companies opposed the Digital Communications Commission's (DCC) decision to allocate 'E band' airwaves exclusively to mobile carriers via the administrative route is in direct conflict with the DCC's position to open up this spectrum band.

- The E-band is a major solution of 5G's microwave transmission.
- The waveguide E band is the range of radio frequencies from 60 GHz to 90 GHz in the electromagnetic spectrum.
- This range of radio frequencies corresponding to the recommended frequency band of operation of WR12 waveguides.
- These frequencies are equivalent to wave lengths between 5 mm and 3.333 mm. The E band is in the Extremely high frequency (EHF) range of the radio spectrum.

Reference

https://economictimes.indiatimes.com/industry/telecom/telecom-policy/tech-cos-oppose-dcc-call-on-e-band-allotment-to-telcos/articleshow/91311349.cms

