

Daily Mcqs- December 3rd

1. Consider the following statements about hurricanes

- 1) Hurricanes are a type of tropical cyclone that occurs in the northwestern Pacific Ocean.
- 2) They are formed over the warm ocean waters near the equator.

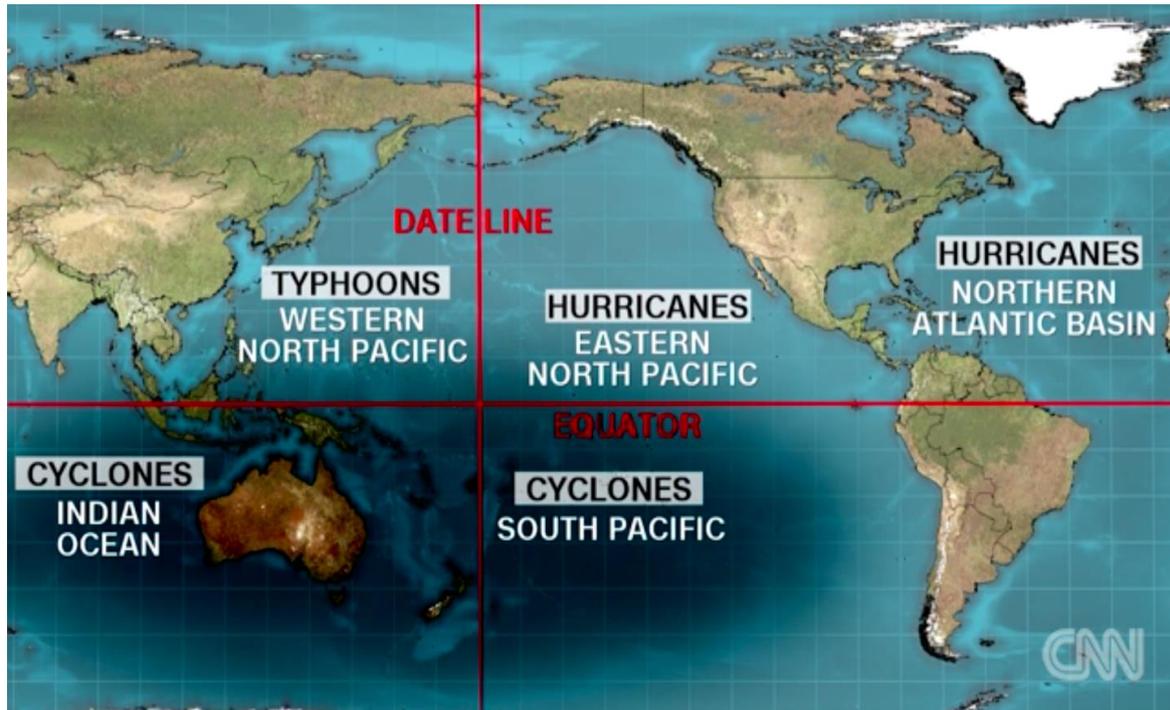
Which of the statements given above is/are correct?

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

Answer: B

Explanation

- Hurricanes are the **most violent storms on Earth**. They form **near the equator over warm ocean waters**. Actually, the term hurricane is used only for the large storms that form over the Atlantic Ocean or eastern Pacific Ocean.
- The **generic, scientific term** for these storms, wherever they occur is **tropical cyclone**. **Tropical cyclones**, also called **typhoon** or **hurricane**, an intense circular storm that originates over warm tropical oceans and is characterized by low atmospheric pressure, high winds, and heavy rain.
- Depending on the locations they occur, they are given various names such as **typhoons, cyclones** and **hurricanes**.
- **Statement 1 is incorrect:** In the **North Atlantic Ocean and Northeast Pacific**, they are called **hurricanes**. But if the same type of disturbance takes place in the **Northwest Pacific Ocean, it is known as a typhoon (not hurricanes)** and in the South Pacific and Indian Ocean they are known as cyclone
- **Statement 2 is correct:** Tropical cyclones are like engines that **require warm, moist air as fuel**. So the first **ingredient** needed for a tropical cyclone is **warm ocean water**. That is why **they form over warm ocean waters near the equator**. The warm, moist air over the ocean rises upward from near the surface. Because this air moves up and away from the surface, an area of lower air pressure is created below.
- The second ingredient for a tropical cyclone is **wind**. As the wind passes over the ocean's surface, **water evaporates (turns into water vapor)** and rises. As it rises, the water vapor cools, and condenses back into large water droplets, **forming large cumulonimbus clouds**.



Meteorologists have divided the **development of a tropical cyclone into four stages**: Tropical disturbance, tropical depression, tropical storm, and full-fledged tropical cyclone.

- **Tropical disturbance**: When the water vapor from the warm ocean condenses to form clouds, it releases its heat to the air. The **warmed air rises** and is pulled into the column of clouds. **Evaporation and condensation** continue, building the cloud columns higher and larger. A pattern develops, with the wind circulating around a center. As the moving column of air encounters more clouds, it becomes a **cluster of thunderstorm clouds**, called a tropical disturbance.
- **Tropical depression**: As the thunderstorm grows higher and larger, the air at the top of the cloud column is cooling and becoming unstable. As the heat energy is released from the cooling water vapor, the **air at the top of the clouds becomes warmer**, making the air pressure higher and causing **winds to move outward away from the high pressure area**. This movement and warming causes pressures at the surface to drop. Then air at the surface moves toward the lower pressure area, rises, and creates more thunderstorms. Winds in the storm cloud column spin faster and faster, whipping around in a circular motion. **When the winds reach between 25 and 38 mph, the storm is called a tropical depression.**

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- **Tropical storm:** When the **wind speeds reach 39 mph**, the **tropical depression becomes a tropical storm**. **Wind direction is counterclockwise** (west to east) in the northern hemisphere and **clockwise (east to west) in the southern hemisphere**.
- **Tropical cyclone:** When the **wind speeds reach 74 mph**, the storm is officially a Tropical cyclone (hurricane, cyclone or typhoon). The winds and the low air pressure also cause a huge mound of ocean water to pile up near the eye of the hurricane, which **can cause monster storm surges** when all this water reaches land.

2. Among the following, which one is the largest producer of milk in the world ?

- a) China
- b) India
- c) New Zealand
- d) Vietnam

Answer: B

Explanation

- In most developing countries, **milk is produced by smallholders**, and milk production contributes to household livelihoods, **food security and nutrition**.
- In many developing countries, dairy productivity is **constrained by poor-quality feed resources, diseases, limited access to markets** and services (e.g., health, credit and training) and dairy animals' low genetic potential for milk production.
- Unlike developed countries, many developing countries have **hot and/or humid climates that are unfavourable for dairying**.
- In the last three decades, **world milk production has increased by more than 58 percent**, from 522 million tonnes in 1987 to 828 million tonnes in 2017.
- **India is the world's largest milk producer**, with **21 percent of global production**, followed by the United States of America, China, Pakistan and Brazil
 - Milk production in India has been **increasing steadily over the years** from 55.6 million tonnes in 1991-92 to **176.3 million tonnes in 2017-18**, at an average annual growth rate of 4.5 percent. It further increased to 187.7 **million tonnes in 2018-19**.

- Since the 1970s, **most of the expansion in milk production has been in South Asia**, which is the main driver of milk production growth in the developing world.
- India's dairy sector provides **livelihood to about 70 million households**. A key feature of India's dairy sector is the predominance of small producers. India is **largely self-sufficient** in milk production.

<http://www.fao.org/dairy-production-products/production/en/>

3. Consider the following statements

- 1) A superbug is defined as a microorganism that's resistant to commonly used antibiotics.
- 2) AWaRe is an online tool aimed at guiding policy-makers and health workers to use antibiotics safely.
- 3) Antibiotic resistance is the same as that of antimicrobial resistance.

Which of the statements given above is/are incorrect?

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

Answer: C

Explanation

Superbug

- **Statement 1 is correct:** A superbug is usually defined as a **microorganism that's resistant to commonly used antibiotics**. The number of different antibiotics to which it can be resistant determines the **degree of the superbug**. Some are resistant to one or two, but others can be resistant to multiple drugs.
- Decades of **easy availability and misuse of antimicrobials** has led to the emergence of **drug-resistant strains** of common pathogens like diarrhoea-causing **E coli**.
- India reported the world's **highest burden of extensively drug-resistant tuberculosis (XDR-TB)** in 2017. This means they are more **expensive to treat**, the side-effects of treatment are typically more severe and **mortality rates are significantly higher**.

AWaRe

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- The **AWaRe tool** was developed by the **WHO** to contain rising resistance and **make antibiotic use safer** and more effective.
- **Statement 2 is correct:** The World Health Organization (WHO) has launched a global campaign that urges countries to adopt its **new online tool** aimed at **guiding policy-makers and health workers to use antibiotics safely and more effectively**. Its another objective is to limit drugs that are at risk of resistance.
- The tool, known as 'AWaRe' **classifies antibiotics into three groups:**
 - **Access** — antibiotics used to **treat the most common** and **serious infections**
 - **Watch** — antibiotics **available at all times** in the healthcare system
 - **Reserve** — antibiotics to be **used sparingly** or preserved and used only as a last resort
- The campaign aims to achieve a **60 per cent increase in use of antibiotics under the Access group** — cheap, 'narrow-spectrum' drugs (that target a specific microorganism rather than several) and also lower the risk of resistance and also **reduce use of the antibiotics most at risk of resistance from the Watch and Reserve groups**.

Antimicrobial resistance and Antibiotic resistance

- **Statement 3 is incorrect:** Antibiotics are medicines **used to prevent and treat bacterial infections**. **Antibiotic resistance occurs when bacteria change in response** to the use of these medicines. Bacteria, not humans, become antibiotic resistant.
- On the other hand, **Antimicrobial resistance is a broader term**, encompassing resistance to drugs to treat infections caused by other microbes as well, such as **parasites (e.g. malaria), viruses (e.g. HIV) and fungi (e.g. Candida)**.
 - Antimicrobial resistance occurs when **microorganisms such as bacteria, viruses, fungi and parasites change** in ways that render the medications ineffective to cure the infections

<https://www.who.int/news-room/detail/18-06-2019-in-the-face-of-slow-progress-who-offers-a-new-tool-and-sets-a-target-to-accelerate-action-against-antimicrobial-resistance>

<https://www.newindianexpress.com/opinions/2019/oct/04/superbugs-not-sci-fi-anymore-2042876.html>

<https://www.downtoearth.org.in/news/health/who-launches-tool-for-safer-use-of-antibiotics-curb-resistance-65161>

<http://www.emro.who.int/health-topics/drug-resistance/what-is-the-difference-between-antibiotic-and-antimicrobial-resistance.html>

4. Which of the following diseases is/are caused by bacteria?

1. Ringworms
2. Typhoid
3. Tuberculosis
4. Malaria

Select the correct answer using the code given below:

- a) 1, 2, 3 and 4
- b) 2 only
- c) 2, 3 and 4 only
- d) 2 and 3 only

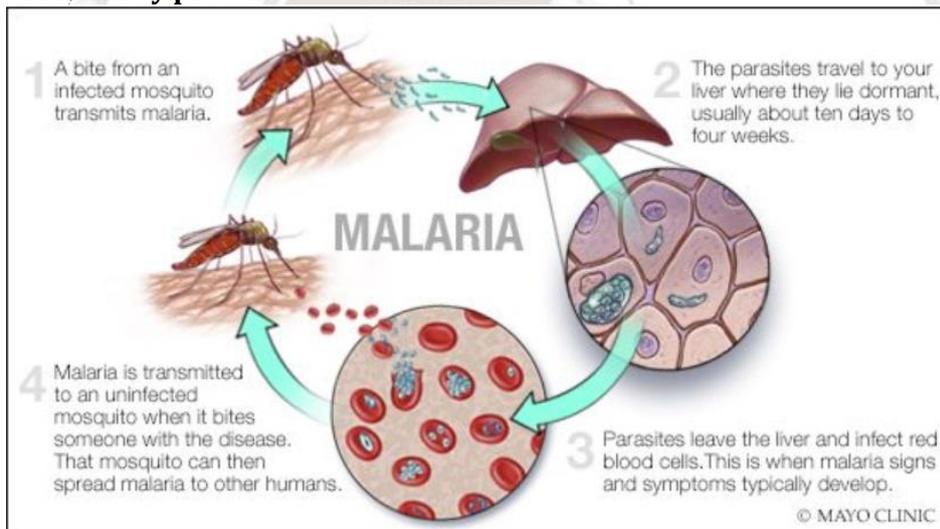
Answer: d

Explanation

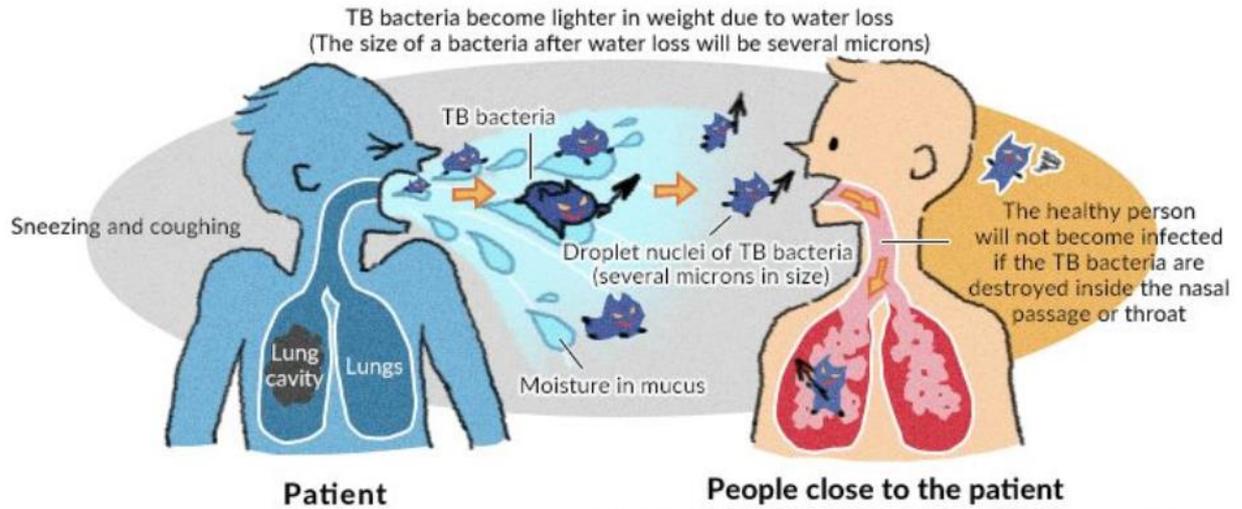
● **Ringworms are caused by fungi.**

● Ringworm, or tinea, refers to several types of contagious fungal infections of the top layer of the skin, scalp, and nails. It is called ringworm because the itchy, red rash has a ring-like appearance. However, ringworm has nothing to do with worms. It can affect different parts of the body.

● **Malaria by protozoa**



● Tuberculosis is caused by bacteria.



Japan Anti-Tuberculosis Association: Common sense of Tuberculosis 2007, 2, 2007

- Typhoid is caused by bacteria

TYPHOID FEVER

is a disease caused by the *Salmonella typhi* bacteria

SYMPTOMS

Headache	Rashes	Fever	Abdominal pain	Diarrhea	Vomiting

COMPLICATIONS

Intestinal bleeding	Inflammation of the brain	Psychosis

PREVENTION

Drink boiled	Practice good hand hygiene procedures	Refrain from eating uncooked food

HOW IT IS SPREAD

Through contaminated food or water

DANGER!

Typhoid carriers may not display any symptoms

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Why in the news?

- The **World Malaria Report (WMR) 2020** released by WHO, which gives the estimated cases for malaria across the world, based on mathematical projections, indicates that India has made considerable progress in reducing its malaria burden.
- India is the **only high endemic country** which has reported a decline of 17.6% in 2019 as compared to 2018.

<https://pib.gov.in/PressReleaseFramePage.aspx?PRID=1677601>

5. With reference to the office of the Attorney General, Consider the Following Statements

- 1) The Attorney General is appointed by the Chief Justice of India.
- 2) The Attorney General holds the office during the pleasure of the President and does not have a specific term.

Which of the Statements given above is/are correct?

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

Answer-B

Explanation

- The **President shall appoint a person** who is qualified to be appointed a Judge of the Supreme Court to be Attorney-General for India.
- It shall be the duty of the Attorney-General to give advice to the Government of India upon such legal matters, and to perform such other duties of a legal character, as may from time to time be referred or assigned to him by the President, and to discharge the functions conferred on him by or under this Constitution or any other law for the time being in force.
- In the performance of his duties the Attorney General shall have right of audience in all courts in the territory of India.
- The Attorney-General shall hold office during the **pleasure of the President, and shall receive such remuneration as the President may determine. Hence, Statement 1 is incorrect and 2 is correct.**

Why in the news?

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The procedure in cases of criminal contempt of court, which means the publication of material that scandalises or lowers the dignity of the court or prejudices or interferes with the proceedings of the court, the consent of the Attorney General is required under the law.

<https://indianexpress.com/article/explained/consent-for-contempt-attorney-general-for-india-k-k-venugopal-rachita-taneja/>

