Daily Current Affairs Prelims Quiz 24-01-2023 (Online Prelims Test)

1) Consider the following statements with respect to H1-B Visas:

1. It is a non-immigrant visa that allows US companies to employ graduate level workers in specialty occupations.
2. H-1B visa holders can bring their spouse and children only under 21 years of age to the US under as dependents.
3. Indians are at the top of the list of H1B visa holders in the USA.

Which of the above statement(s) is/are correct?

a. 1 and 2 only

b. 2 and 3 only

c. 1 and 3 only

d. 1, 2 and 3

Answer : d

H1-B Visa

- It is a non-immigrant visa that permits the US companies to employ graduate level workers in specialty occupations.
- Specialty occupation requires technical or theoretical expertise in specialized fields such as in IT, finance, accounting, architecture, engineering, mathematics, science, medicine, etc.
- The job must meet one of the following criteria to qualify as a specialty occupation:
  - Have a minimum entry requirement of a Bachelor's or higher degree or its equivalent.
  - The degree requirement for the job is common to the industry or the job is so complex or unique that it can be performed only by an individual with a degree.
  - The employer normally requires a degree or its equivalent for the position.
  - The nature of the job is specialized and complex that the knowledge required to perform the duties is usually associated with the attainment of a bachelor's or higher degree.
- H-1B visa holders can bring their spouse and children under 21 years of age to the US under the H-4 Visa category as dependents.
- An H4 Visa holder is allowed to remain in the US as long as the H-1B visa holder remains in legal status.
- While, an H-4 visa holder is not eligible to work in the US, they may attend school, obtain a driver's license and open a bank account while in the US.

2) Consider the following statements with respect to ChatGPT:

1. It is a conversational artificial intelligence based on the Generative Pre-trained Transformer (GPT).
2. It is a large-scale neural network-based language model developed by OpenAI and powered by Microsoft.
3. ChatGPT is governed under the Digital Personal Data Protection Act, 2022.

Which of the above statement(s) is/are correct?

a. 1 and 2 only

b. 1 and 3 only

c. 2 and 3 only

d. 1, 2 and 3

Answer : a

ChatGPT

- It is a conversational AI.
- It is a type of Generative Pre-trained Transformer (GPT), which is a large-scale neural network-based language model developed by OpenAI.
- GPT is a kind of computer language model that relies on deep learning techniques to produce human-like text based on inputs.
- OpenAI uses Microsoft Azure's cloud infrastructure to run these models.
- Users have the option of down voting or up voting a response.
- Currently, there are no specific laws in India with regard to regulating AI.

3) Consider the following statements with respect to BharOS:

1. It is an indigenous mobile operating system (OS) developed by the Centre for Development of Advanced Computing (C-DAC).
2. BharOS is an Android Open Source Project (ASOP) based operating system with no Google apps or services.

Which of the above statement(s) is/are correct?

a. 1 only

b. 2 only

c. Both 1 and 2

d. Neither 1 nor 2

Answer : b

BharOS

- It is an operating system used in mobile phones.
- It was developed by JandK Operations Private Limited.
- IIT Madras was the pioneer in developing the app.
- The main objective of BharOS is security.
- The OS is unique as it allows only safe and trusted applications to be installed on the OS.
- BharOS screens the applications before installation begins.
- If the app is not safe, then the OS doesn't provide access.
- There are No Default Apps in the OS.
- Default apps are those applications that come with OS which the user cannot uninstall them.
- BharOS is an AOSP (Android Open Source Project) based operating system with no Google apps or services.

4) Consider the following statements with respect to Ken-Betwa River link Project:

1. It is the first project under the National Perspective Plan for interlinking of rivers.
2. The river link will be fed by the Daudhan Dam built within Panna Tiger Reserve.
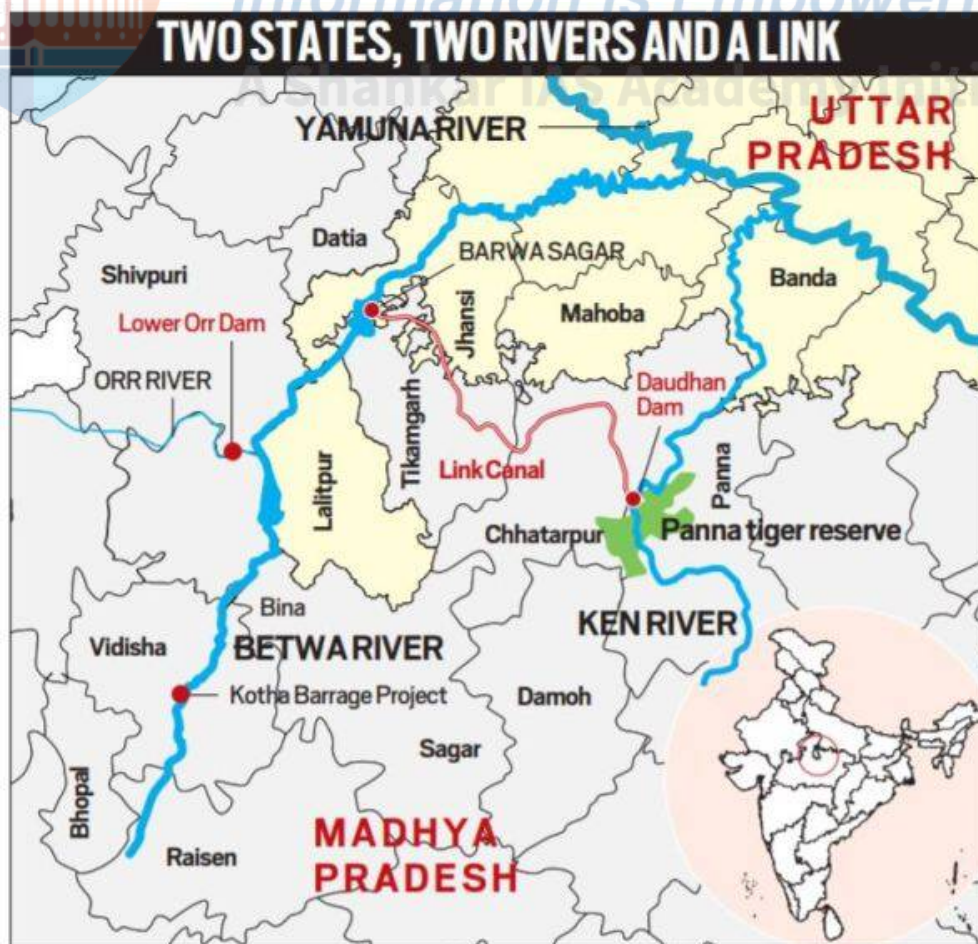3. Both Ken and Betwa are the tributaries of the River Yamuna.

Which of the above statement(s) is/are correct?

a. 1 only

b. 2 only

c. 3 only

d. 1, 2 and 3

Answer : d

Ken-Betwa River link Project

- The project envisages transferring water from the Ken River to the Betwa River, both tributaries of the Yamuna.
- It is the first project under the National Perspective Plan for interlinking of rivers.
- The link will be in the form of a canal that will be fed by the new Daudhan Dam on the Ken, to be built within Panna Tiger Reserve.
- The Ken-Betwa Link Canal will be 221 km long, including a 2-km long tunnel.
- Phases - The project has two phases, with four components.
- Phase -I - Involves one of the components — Daudhan Dam complex and its subsidiary units such as Low Level Tunnel, High Level Tunnel, Ken-Betwa Link Canal and power houses.
- Phase -II - Involves three components — Lower Orr Dam, Bina Complex Project and Kotha Barrage.
- Special Purpose Vehicle - An SPV called Ken-Betwa Link Project Authority (KBLPA) will be set up to implement the project.
- NIRA – the Centre has set in motion the process of creation of National Interlinking of Rivers Authority (NIRA).
- It will be an independent autonomous body for planning, investigation, financing and implementation of the interlinking of river (ILR) projects in the country.
- The NIRA will have powers to set up SPV for individual link projects.

TWO STATES, TWO RIVERS AND A LINK

5) Consider the following statements with respect to Doppler Weather Radars (DWR):

1. DWR works when there is an increase or decrease in the frequency of sound, light, or other waves as the source and observer move towards or away from each other.
2. It is designed to improve precision in long-range weather forecasting and surveillance.

Which of the above statements is/are correct?

   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer : c

Doppler Weather Radars (DWR)

- A Doppler Radar is a specialised radar that uses the Doppler Effect to produce velocity data about objects at a distance.
- When the source and the signal are in relative motion to each other, there is a change in the frequency observed by the observer.
- This is called the Doppler Effect.
- If they are moving closer, the frequency increases and vice versa.
- A Doppler Weather Radar (DWR) works on the Doppler principle.
- It is designed to improve precision in long-range weather forecasting and surveillance using a parabolic dish antenna and a foam sandwich spherical radome.
- DWR has the equipment to measure rainfall intensity, wind shear and velocity and locate a storm centre and the direction of a tornado or gust front.
- Unlike other radars, DWR has the ability to detect air motion, wind, speed of wind, rains, temperature, thunderstorms, hail, squalls, lightning, cyclones and cloud movements and volumetric analysis of cloud and reflectivity index, among others.
- The major advantages of DWRs are, they:
    - Cover the entire country
    - Give the most precise detection of weather parameters including dynamic weather events turbulence, cyclones, thunderstorms or lightning
    - Alone do volumetric analysis of clouds that help in the quantification of rain forecasts and cyclonic intensity and precipitation
    - Precisely detect in real-time normal or routine events
- Their best and famously documented use is in cyclone forecasting. As a cyclone comes within a 200 km range of the coast, the DWRs begin tracking it.
- This enables almost error-free forecasts with pinpoint precision.
- DWRs are also of great help in long-time lightning forecast of up to 3 to 5 days, down to 24 hours.
- The Indian Army and Air Force have deployed the Indian Doppler Radar (INDRA) for the detection of aircraft and other objects in the air.