



PREPERATORY TEST – 4

Held on 7th July, 2024

KAS- 2024

ANSWER KEY AND SYNOPSIS

NAMMAKpsc

Note: We have taken all effort to ensure correct answer keys. In case of any mistakes, please refer to the detailed synopsis. Please mail us at nammakpsc@gmail.com or call us for any assistance. Thank you

1. Ans : B

- OpenAI, the creator of the revolutionary chatbot ChatGPT, has unveiled a new generative artificial intelligence (GenAI) model that can convert a text prompt into video, an area of GenAI that was thus far fraught with inconsistencies.
- The model, called Sora, can generate videos up to a minute long while maintaining visual quality and adherence to the user's prompt.
- Sora can create complex scenes with multiple characters, specific types of motion, and accurate details of the subject and background.
- The model has a deep understanding of language, enabling it to accurately interpret prompts and generate compelling characters that express vibrant emotions. Sora can also create multiple shots within a single generated video that accurately persist characters and visual style.
- Other businesses have also entered the text-to-video market. Google's Lumiere, which was unveiled last month, can produce text-and image-based five-second movies in response to a suggestion. Several businesses, such as Runway and Pika, have also demonstrated remarkable text-to-video models.

2. Ans : C

- Seventeen years after its launch, Cartosat-2, the first of ISRO's second generation of high-resolution imaging satellites primarily used in urban planning has been deorbited.
- According to the statement, the satellite, launched on January 10, 2007 and weighing 680 kg, operated in a sun-synchronous polar orbit at an altitude of 635 km. It performed 14.78 orbits around Earth in a day.
- Cartosat-2 is an advanced remote sensing satellite capable of providing scene-specific spot imagery.

**3. Ans : B**

- The PRITHvi Vlgyan (PRITHVI) will be an umbrella scheme spearheaded by the Ministry of Earth Sciences (MoES).
- It will help ongoing research projects and efforts in the areas of atmosphere, hydrosphere, cryosphere, geosphere, and biosphere till 2026.
- With climate change and its negative effects being felt on a global scale — whether in the form of extreme weather events like floods, heavy rain, rising sea levels, melting glaciers, stronger cyclones, or protracted dry spells — there is a growing need to better understand the roles that the atmosphere, ocean, and poles play in these processes.

4. Ans : C

- India is purchasing 31 MQ-9B drones from the United States
- The deal is worth approximately \$3.99 billion
- It includes 15 Sea Guardian drones for the Navy and 8 each for the Army and Air Force
- Drone capabilities:
- The MQ-9B is a high-altitude, long-endurance (HALE) unmanned aerial vehicle (UAV)
- It can fly for over 35 hours and operate at altitudes up to 40,000 feet
- The drone has advanced sensors and can carry various payloads for surveillance and strike missions

5. Ans : B

- The Square Kilometre Array Observatory (SKAO) will function as the world's largest radio telescope. SKAO was established as an intergovernmental organisation in 2021.
- The SKAO is not a single telescope but an array of thousands of antennas, to be installed in remote radio-quiet locations in South Africa and Australia, that will operate as one large unit meant to observe and study celestial phenomena.
- Since its inception in the 1990s, India has been participating in the development of SKA through the Pune-based National Centre for Radio Astrophysics (NCRA) and other institutes.
- The countries have to sign, and ratify, the SKAO convention to formally become members. The Government's approval for joining the project, with a financial sanction of Rs 1,250 crore, is the first step towards the ratification.
- The SKA will similarly look for gravitational waves, but it will be able to peek much deeper into the cosmos – more than 3,000 trillion kilometres — to examine galaxies and stars in more detail.
- India, through the Pune-based National Centre for Radio Astrophysics (NCRA) and other institutions, has played a key role in the development of the ambitious SKAO project since its inception in the 1990s.
- India will be signing the SKAO treaty to become a full-fledged member of the SKA Observatory.

**6. Ans : C**

- L1 stands for the first Lagrangian point —there are five such points, L1 to L5, associated with the motion of one astronomical body.
- These points were theoretically discovered by the Swiss mathematician Leonhard Euler and the Italian-French mathematician Joseph-Louis Lagrange in the 19th century.
- L1 is the spot between Earth and the Sun, where the gravitational force exerted on a spacecraft by the two celestial bodies, and the centrifugal force cancel each other.

7. Ans : A

- Also known as Glycogen Storage Disease Type II, Pompe disease is a rare genetic disorder caused by a deficiency of the enzyme acid alpha-glucosidase (GAA).
- This enzyme is crucial for breaking down glycogen into glucose within the lysosomes of cells.
- Its prevalence estimates range from 1 in 40,000 to 1 in 300,000 births. It occurs across diverse ethnicities and populations. The age of onset and severity can vary, leading to a spectrum of clinical presentations.

8. Ans : B

- The country's first home-grown mRNA Covid-19 vaccine — GEMCOVAC-19 —developed at Pune's Genovaa
- Biopharmaceuticals has got a 'restricted emergency use' nod for the 18-and-above age group.
- As mRNA vaccines are required to be kept at sub-zero temperatures, it was a mammoth task for Genovaa scientists to develop a **thermostable mRNA Covid-19 vaccine**.
- Scientists had to innovate to suit local needs to make it affordable and deployable. The new vaccine can now be stored at the temperature of a standard medical refrigerator.
- Basically, the technology uses genetically engineered mRNA to instruct cells to make the S-protein found on the surface of the Covid-19 virus.

9. Ans : C

- CAR-T is a revolutionary therapy that modifies immune cells, specifically T-cells, by turning them into potent cancer fighters known as CAR-T cells.
- T-cells are special cells (white blood cells that find and fight illness and infection) whose primary function is cytotoxic, meaning it can kill other cells. Through genetic modification, cells are transformed into cancer-fighting cells in CAR-T therapy. Once the body has received these supercharged cells back, they target cancer cells, particularly those found in blood malignancies such as lymphomas and leukaemia.
- It makes treatment easier with a one-time therapy [unlike several sessions of chemotherapy] that can be truly transformative [for a patient]. It's a lifeline for non-responsive cancer patients.



- NexCar19 is a type of CAR-T and gene therapy developed indigenously in India by ImmunoACT, which is a company incubated at IIT Bombay.

10. Ans : A

- The Indian Space Research Organisation (ISRO) launched Aditya L-1, its first space-based mission to study the Sun, from the Satish Dhawan Space Centre in Sriharikota.
- The solar probe was carried into space by the Polar Satellite Launch Vehicle (PSLV) in 'XL' configuration. The rocket is most powerful in the 'XL' configuration as it is equipped with six extended strap-on boosters — they are larger than the boosters of other configurations and, therefore, can carry heavier payloads.
- The PSLV will initially place the Aditya L-1 in a lower Earth orbit. Subsequently, the spacecraft's orbit around the Earth will be raised multiple times before it is put on a path to a halo orbit around the L1 Lagrange point.

There are essentially seven payloads on the Aditya L-1:

- Visible Emission Line Coronagraph (VLEC) to study the solar corona from the lowermost part upwards.
- Solar Ultraviolet Imaging Telescope (SUIT) will capture the UV image of the solar photosphere and chromosphere. It will examine the variation in light energy emitted.
- Solar Low Energy X-ray Spectrometer (SoLEXS) and High Energy L1 Orbiting X-ray Spectrometer (HEL1OS) will analyse X-ray flares.
- Aditya Solar wind Particle Experiment (ASPEX) and Plasma Analyser Package for Aditya (PAPA) have been built to study the solar wind and energetic ions.
- The magnetometer is a dual triaxial magnetic sensor which is installed on the sun-facing the deck of the Aditya L1 spacecraft. It will measure the magnitude and direction of the Interplanetary Magnetic Field (IMF).

11. Ans : D

- The ExoMars Trace Gas Orbiter (ExoMars TGO) is searching for methane and other trace gases in the Martian atmosphere that could be evidence of possible biological or geological activity.
- The orbiter is the first in a series of **joint missions between the European Space Agency (ESA) and Roscosmos, the Russian space agency.**

12. Ans : B

- South Korea is willing to share technology on submarines and missile systems with India to strengthen defence cooperation.
- Both leaders agreed to strengthen cooperation in defence referring to K9 Vajra, a 52-calibre tracked self-propelled howitzer designed by a South Korean company.
- South Korea will provide USD 4 billion to India as a line of credit over the next three years for "high-value" projects.

**13. Ans : B**

- Osmosis is a process by which the molecules of a solvent pass from a solution of low concentration to a solution of high concentration through a semi-permeable membrane.
- Osmosis is a passive process and happens without any expenditure of energy. There are three different types of solutions:
- An isotonic solution is one that has the same concentration of solutes both inside and outside the cell.
- A hypertonic solution is one that has a higher solute concentration outside the cell than inside.
- A hypotonic solution is one that has a higher solute concentration inside the cell than outside

14. Ans : C

- Semaglutide is a glucagon-like peptide-1 receptor agonist (GLP-1 R(A) drug that increases the secretion of insulin (which helps decrease blood sugar levels) after a meal while reducing the production of glucagon (which helps increase blood sugar levels).
- Besides regulating glucose levels in the body, the drug also aids in weight loss, lowers the risk of hypoglycemia, and improves heart health and kidney function.
- Apart from regulating glucose, it also increases gastric emptying time, meaning food takes longer to pass through the gastrointestinal tract and it makes you feel full for a longer period of time.

15. Ans : C

- A cluster bomb is a type of weapon that is designed to disperse smaller bombs over a large area.
- They are also known as cluster munitions, with the smaller bombs referred to as submunitions or bomblets.
- They can be dropped from air or fired from ground/sea, dispersing dozens or hundreds of bomblets across a large area.
- These explosions pose a grave threat to anyone in the vicinity, causing death or severe injuries.
- Some bomblets fail to detonate immediately, leaving behind unexploded ordnance that can harm or kill people for years to come
- The use of cluster bombs has been widely condemned internationally.
- Over 100 countries have ratified the Convention on Cluster Munitions including India.

**16. Ans : B**

- Guillain-Barré Syndrome is a rare neurological disorder where the body's immune system which normally protects it from infections and other foreign bodies mistakenly attacks its own peripheral nerve cells.
- The disorder, which affects the body's nervous system. It is characterized by muscle weakness and breathing difficulties and can even lead to total paralysis in extreme situations.
- A person with this syndrome will have difficulty speaking, walking, swallowing, excreting, or performing other normal functions of the body.
- The first symptoms include a tingling sensation in the body's extremities, weakness in the legs that spreads to the upper body, difficulty in facial movements, unsteady walking, or inability to walk, pain and, in severe cases, paralysis.

17. Ans : B

- International Business Machines (IBM) has designed a new quantum computing chip, "Eagle" has 127 so-called "qubits," which can represent information in quantum form.
- The classical computers work using "bits" that must be either a 1 or 0, but qubits can be both a 1 and a 0 simultaneously.
- Quantum computers are much faster than classical computers.
- The qubits are exceedingly hard to build and require huge cryogenic refrigerators to operate correctly.

18. Ans : D

- C40 is a network of 97 global megacities that have come together to confront the climate crisis.
- It is a network driven by the cities, for the cities and it is led by the cities. These 97 cities are members and our chair is on a rotational basis.
- The mayor of one of the member cities becomes the chair.
- Cities are the centre of climate change and climate action. They are the epicentre of bringing people together for economic opportunities or livelihood and they also end up being the largest emitters of greenhouse gas emissions.

19. Ans : D

- North Korea tested its latest Hwasong-18 intercontinental ballistic missile (ICBM). This ICBM is the first to use solid propellants.
- The Hwasong-18 is a solid-fuelled ICBM and was first unveiled at the February 8 parade earlier this year that commemorated the 75th anniversary of the founding of the Korean People's Army in DPRK's capital Pyongyang.

**20. Ans : A**

- Leptospirosis is a bacterial disease usually affects animals and can spread to human beings if they are travelling through waterlogged areas.
- Leptospira is a bacteria which is present in the excreta and urine of animals can infect human beings if they are exposed to it – they can be exposed if they are wading through contaminated water, if there is a cut in the skin which has been exposed to the bacteria.
- The common symptoms of leptospirosis include fever, rash, body ache, and vomiting.
- If leptospirosis is left untreated, it can cause kidney damage and even prove to be fatal.
- This can be treated with antibiotics.

21. Ans : A

- In 2020, the European Commission approved the European Green Deal which set an ambitious targets of making the EU climate-neutral by 2050.
- The Green Deal introduced the “From Farm to Fork” strategy in order to overhaul the EU’s agriculture sector, which accounts for 11 per cent of EU’s total GHG emissions.
- Nitrous oxide (N₂O), also known as laughing gas, is one of the major problems for the sector.

22. Ans : C

- The IBCA is an initiative launched in April 2023 in Mysuru commemorating the 50th anniversary of Project Tiger.
- The objective of the IBCA is to ensure cooperation for the conservation of seven big cats: lion, tiger, leopard, cheetah, snow leopard, jaguar, and puma.
- Five of these cats, apart from jaguar and puma, are found in India.

23. Ans : B

- Smooth-coated Otters are classified under Schedule II of the Wildlife Protection Act, 1972.
- There are six species of otters in Asia, of which, the Eurasian otter, smooth-coated and Asian small-clawed otters are found in India.
- Smooth-coated Otters are classified as ‘vulnerable’ by the International Union for Conservation of Nature (IUCN)

24. Ans : D**25. Ans : B**

- The CMS is an environmental treaty of the UN that provides a global platform for the conservation and sustainable use of migratory animals and their habitats.



- It is the only global convention dedicated to the conservation of migratory species, habitats, and migration routes. — The pact was signed in 1979 in Germany and is known as the Bonn Convention.
- India has been a party to the Convention on Migratory Species since 1983

26. Ans : B

- The Union Ministry of Ports, Shipping and Waterways (MoPSW) has launched the Green Tug TrANS ition Programme(GTTP) which aims to make India the 'Global Hub for Green Ship' by 2030.
- India's first National Centre of Excellence in Green Port and Shipping (NCoEGPS) was inaugurated in Gurugram, Haryana.
- The Green Hybrid Tugs will be powered by Green Hybrid Propulsion systems, and subsequently adopt non-fossil fuel solutions like (Methanol, Ammonia and Hydrogen).

27. Ans : C

- 'Panchamrita' meaning the 'five ambrosia', includes:
 - India will get its non-fossil energy capacity to 500 gigawatt by 2030
 - India will meet 50% of its energy requirements till 2030 with renewable energy.
 - India will reduce its projected carbon emission by one billion tonnes by 2030
 - India will reduce the carbon intensity of its economy by 45% by 2030
 - India will achieve net zero by 2070.

28. Ans : C

- Red Tide is a phenomenon where certain phytoplankton species contain pigments and bloom such that the human eye perceives the water to be discolored.
- Factors influencing red tide events include warm ocean surface temperatures, low salinity, high nutrient content, calm seas, and rain followed by sunny days during the summer months.
- Red Tide is scientifically referred to as "Harmful Algal Blooms".

29. Ans : A

- The Cabinet Committee on Economic Affairs has approved the "Broadcasting Infrastructure and Network Development (BIND)" scheme which will pave the way for the upgrade an expansion of the public service broadcasting infrastructure across the country.

30. Ans : B



- India occupies fifth place with a total area of 2.66 million hectares. Madhya Pradesh has the largest area under organic certification followed by Maharashtra, Rajasthan, Gujarat, and Karnataka.
- Nutritional crops like millet, pulses and vegetables will be encouraged to ensure nutritional security.
- Advantages of Organic Farming:
 - It improves and sustains soil fertility while minimising the use of off-farm resources.
 - It creates a harmonious balance between crop production and animal husbandry and facilitates the alignment of life with natural ecosystems and cycles.
 - It also supports self-reliance and sustainability in farming.
- The World Health Organisation (WHO) is promoting 'One Health' which necessitates organic farming to improve soil health.
- Organic farming would encourage mixed farming as the components are interdependent.

31. Ans : D

- Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) programme was launched on World Environment Day on June 5.
- MISHTI aims at planting mangroves in 540 sq km on the coastline, spanning 11 states and two Union territories.
- This programme to plant mangroves started in Dwarka on around 3,000 hectares through initiatives under Compensatory Afforestation Fund Management and Planning Authority, Mahatma Gandhi National Rural Employment Guarantee Act and public private partnership.

32. Ans : D

- India has at least 29 species of freshwater turtles (24) and tortoises (5) along with five species of marine turtles.
- The main difference between the two is that turtles are primarily aquatic whereas tortoises are terrestrial and spend more time on land.
- The highest diversity is found in northeast India, where 23 species have been reported.
- Along Indian rivers, the maximum diversity of fresh water turtles is found in the Ganges, the Brahmaputra and their tributaries.
- Two of them—Travancore Tortoise and Cochin Forest Cane Turtle—are endemic to the Western Ghats while Leith's Softshell Turtle *Nilssonina leithii*, is endemic to peninsular India.

**33. Ans : C**

- Ambergris, which means grey amber in French, is a waxy substance that originates from the digestive system of protected sperm whales
- The freshly passed ambergris is a light yellowish substance and is fatty but as it ages it turns waxy and gets red-brownish.
- Ambergris is a rare substance, which contributes to its high demand and high price in the international market.
- Traditionally, it is used to produce perfumes that have notes of musk.
- While there are records of it being used to flavour food, alcoholic beverages, and tobacco in some cultures in the past, it is rarely used for these purposes presently.
- There is a ban on the possession and trade of ambergris in countries like the USA, Australia and India.

34. Ans : D

- According to Diego Kersting, a marine scientist with Spain's National Research Council (CSI(C), the rise in temperature accelerates metabolism, and the organisms need more food to maintain this metabolic rate.
- Algal blooms are more common in hot waters and such blooms can further deplete oxygen levels and produce toxins harmful for fish, marine mammals, and birds.
- High water temperatures are most harmful for animals living at the bottom of oceans, lakes or rivers.
- These benthic species include corals, mussels, sponges, starfish, and plants like sea grasses, and are often attached to rock or solid ground. They can't migrate when it gets too hot.
- Many benthic animals play critical roles in the marine ecology. By consuming dead organisms, they filter the water and keep oceans, rivers, and lakes clean.
- Some species are vital food sources for other animals, while others are gathered by humans.
- Some of the most important ocean habitats are provided by benthic organisms such as soft corals, seaweed, and sea grasses.
- Jellyfish, on the other hand, are thriving because of higher temperatures, as well as nutrient run-off from farms and sewage.

35. Ans : D

- The term 'Kayal' in geography is used for a shallow sea inlet or a shallow lagoon that is located parallel to a bigger water body or a coastline.
- Simply put, they are lagoons that are separated from any bigger water body by some type of natural barrier like a coral or barrier reef, or even sandbars.
- The lagoon lakes of Kerala are called Kayals.



- The Kerala backwaters are a network of brackish lagoons and canals lying parallel to the Arabian Sea of the Malabar coast of Kerala state in south-western India.

36. Ans : B

- Sholas are the local name for **patches of stunted tropical montane forest** found in valleys amid rolling grassland in the **higher montane regions of South India**, largely in Kerala, Karnataka and Tamilnadu.
- These patches of shola forest are found mainly in the valleys and are usually separated from one another by undulating montane grassland.

37. Ans : D

- In a plea on the declining vulture population due to the veterinary use of certain nonsteroidal anti-inflammatory drugs, the Centre informed the Delhi High Court that it has released an action plan for vulture conservation and has undertaken measures in addition to steps already taken to strengthen the conservation of Vultures.
- It also sought a ban on two “Vulture Toxic drugs”—namely, ‘Aceclofenac’ and ‘Ketoprofen’, which have been found to be toxic to vultures, and a recommendation to ban these drugs for veterinary use.
- There are four species of vultures, namely, Gyps indicus, Gyps bengalensis, Gyps tenuirostris and Gypaetus barbatus, which are listed in Schedule 1 of the Wild Life Protection Act 1972.

38. Ans : A

Dehing Patkai National Park

- It is located within the larger Dehing Patkai Elephant Reserve, which spreads across the coal- and oil-rich districts of Upper Assam (Dibrugarh and Tinsukia districts).
- The oldest refinery of Asia in Digboi and ‘open cast’ coal mining at Lido are located near the sanctuary.
- The Dehing Patkai Wildlife Sanctuary is also known as the Jeypore Rainforest.

Raimona National Park

- The Raimona National Park is within the Bodoland Territorial Region.
- The area of the park includes the northern part of the notified Ripu Reserve Forest, which forms the western-most buffer to the Manas National Park that straddles the India-Bhutan border.
- It is bounded on the west by the Sonkosh river and the Saralbhanga river on the east. Both the rivers are tributaries of Brahmaputra.

39. Ans : D

- UNDP has developed an open-source software which allows countries to effectively manage national data and processes for trading carbon credits.



- The software, called the National Carbon Registry, has recently been accredited as a digital public good (DPG).
- The registry uses open-source code, which allows countries to replicate and adapt the information to fit their own needs and contexts.
- The registry is based on input from countries and follows national and international best practices. It is the result of ongoing work by
- the Digital4Climate (D4C) Working Group, which includes UNDP, the World Bank, the United Nations Framework Convention on Climate Change (UNFCCC), and the European Bank for Reconstruction and Development (EBRD), among others.

40. Ans : A

- Mangroves are salt-tolerant trees and shrubs typical of estuarine and intertidal regions, meaning they grow in areas where freshwater and saltwater meet.
- Mangroves typically have aerial, breathing roots and waxy, succulent leaves, and are flowering plants. Mangroves represent a littoral forest ecosystem, which means they thrive in saline or brackish waters in coastal regions.
- The Sundarbans (spread across India and Bangladesh) is the largest contiguous mangrove forest in the world.

41. Ans : C

42. Ans : C

43. Ans : B

44. Ans : D

45. Ans : B

46. Ans : A

47. Ans : A

48. Ans : C

49. Ans : B

50. Ans : C

51. Ans : A

52. Ans : A

53. Ans : B

54. Ans : B

55. Ans : D

56. Ans : B

57. Ans : D

58. Ans : B

59. Ans : C

60. Ans : B

61. Ans : D

62. Ans : B

63. Ans : A



64. Ans : B
65. Ans: D
66. Ans : A
67. Ans : A
68. Ans : C
69. Ans : B
70. Ans : D

71. Ans : A

The State has increased the GSDP from Rs.22.70 lakh crore in 2022-23 to Rs. 25.01 lakh crore in 2023-24 with a **growth rate of 10.2% at current prices** and Rs. 13.35 lakh crore to Rs. 14.23 lakh crore with a growth rate of 6.6% at constant prices during the same period.

72. Ans : D

- Karnataka's Percapita Income of Rs.3,32,926 is higher by 79% to All India Percapita Income of Rs.1,85,854 during 2023-24
- The percapita income has increased from Rs.3,04,474 in 2022-23 to Rs.3,32,926 in 2023-24 with a growth rate of 9.3% at current prices and Rs. 1,75,895 to Rs.1,86,038 with a growth rate of 5.8% at constant prices during the same period.

73. Ans : B

Bangalore Urban District Gross Domestic Product is Rs. 8,59,154 crore with 37.8% contribution to State GDP followed by **Dakshina Kannada with 5.5%** and Belagavi with 4.0% during 2022-23.

74. Ans : A

- Karnataka's exports amounted to about Rs. 1267656 crores in 2022-23 which constituted about 20.50% of the Country's exports. The share of Merchandise exports in the National exports constitutes around 6.19% and Software/ Service exports at 41 % in 2022-23.
- Karnataka State's exports in Agriculture Commodity amounted to \$2376.87 million in 2020-21 and \$2789.36 million in 2022-23 with a significant increase of 17 %.
- Exports is about 40% of the GSDP with electronic, computer software and biotechnology contributing a major portion of the exports.
- Karnataka accounts for more than one third of electronics and computers software exports from the country

75. Ans : A

- Karnataka Raitha Siri Scheme plans to encourage organic cultivation in addition to millet.



- The plan also promotes millet growers.
- Minor millet farmers have increased due to this plan.
- Because of this initiative, the government has granted financial aid to the millet producers of Rs 10,000 per acre.

76. Ans: A

- FPOs are legally recognized entities under the Companies Act, 1956, or the newly enacted Companies Act, 2013.
- Membership in an FPO is open to all farmers, irrespective of their landholding size. This includes small, marginal, and large farmers.
- While FPOs can help reduce the role of middlemen by enabling direct marketing, it is not possible to eliminate middlemen entirely, as some farmers may still prefer to sell their produce through traditional channels.
- By collectivizing small and marginal farmers, FPOs enhance their bargaining power and allow them to access better technology, inputs, and markets. However, the complete elimination of middlemen is not a realistic objective of FPOs.

77. Ans : B

- The primary objective of NADCP is to control and eventually eradicate the Foot and Mouth Disease (FMD) and Brucellosis among livestock in India.
- The NADCP scheme is being implemented on a cost-sharing basis between the Central and State Governments, with a 60:40 ratio for most states and 90:10 for North-Eastern and Himalayan states.
- The NADCP involves vaccination of cattle, buffalo, sheep, goats, and pigs against FMD and Brucellosis, not just cattle.
- The NADCP scheme aims to vaccinate over 600 million livestock against these diseases, which are a significant threat to livestock health and trade. By vaccinating a wide range of livestock species, the scheme aims to create a comprehensive disease control program across the country.

78. Ans : A

- NABARD funded RIDF drinking water projects have received administrative approval amounting to Rs.490.20 crore (Rs.200 crore state share) and Rs.146.80 crore project for filling **Basappa Lake and other lakes from Tungabhadra River in Gunjalli village of Raichur Taluk.**

79. Ans : C

- The DESH Bill aims to overhaul the existing Special Economic Zone (SEZ) law of 2005 and develop more inclusive economic hubs called "Development Hubs".
- Unlike the SEZ regime, the hubs under DESH will not be required to be net foreign exchange positive cumulatively in five years.



- Companies operating in the Development Hubs under DESH will be allowed to sell in the domestic market by paying duties only on the imported inputs and raw materials instead of the final product
- The DESH Bill aims to make the economic hubs WTO-compliant by removing the direct linkage of tax benefits to exports, which was a key issue with the existing SEZ scheme. It also gives a larger role to state governments in the approval and monitoring process of these hubs.

80. **Ans : B**

- To attract national and international tourists visiting Mysuru, an international standard Karnataka Archeology Museum and Art Gallery will be constructed with Augmented Reality (AR) and Virtual Reality (VR) technology to showcase the rich art and cultural heritage of Karnataka on a **2.5 acre land at Mysuru.**

81. **Ans : B**

- Efforts of the State Government schemes and policies has led to **increase in LFPR** (15 years and above) from 54.7% in 2021-22 to 57% in 2022-23 and **decrease in Unemployment Rate** from 3.2% in 2021-22 to 2.4% in 2022-23.
- **Female Worker Population Ratio is 31.7% in 2019-20, which increased** to 37.2 % in 2022-23.

82. **Ans : D**

- The Human Development Index (HDI) is an index published by the United Nations Development Programme (UNDP) as part of the annual Human Development Report.
- The HDI is not a measure of only economic progress but a composite index that takes into account both economic and social dimensions of development.
- The HDI ranks countries based on three key dimensions - health (measured by life expectancy at birth), education (measured by mean years of schooling and expected years of schooling), and standard of living (measured by Gross National Income per capita).
- In the latest Human Development Report (2022), Norway has been ranked as the country with the highest HDI, followed by Switzerland and Iceland.
- The HDI is designed to provide a more comprehensive measure of human development and progress than economic indicators alone. It aims to capture the overall well-being of a population by considering factors beyond just income or economic growth.

83. **Ans : C**

- Mangalore Taluk of Dakshina Kannada district tops in human development with HDI of 0.786 and the Yadgir taluka of Yadgir district is at the lowest with HDI of 0.325.
- In 36 talukas the achievement in HDI is less than 50% indicating high incidence of deprivation. The State average is 0.573 and 76 talukas are below state average for which priority is to be given in the developmental programmes for their improvement.
- Karnataka's **Multidimensional Poverty Index value reduced from 0.055 in 2015-16 to 0.031 in 2019- 21 and an intensity of poverty reduced from 42.76% to 41.21% during the same period.** Nutrition years of schooling, sanitation and cooking fuel played a significant role in reducing the MPI value.



84. Ans : A

Circle	Division	National Park / Wildlife Sanctuary	Area (Sq.Kms)
CCF Bangalore Circle	1. DCF, Bannerghatta National Park	1. Bannerghatta National Park	260.51
CCF, Mangalore Circle	9. DCF, Kudremukh WL Dvn, Karkala	2. Kudremukh National Park	600.57
CCF Kanara Circle	10. DCF & Director, Kali Tiger Reserve Dandeli	3. Anshi National Park /Tiger Reserve	417.34
APCCF Field Director Project Tiger, Mysore.	20. CF & Director Bandipur Tiger Reserve	4. Bandipur National Park/Tiger Reserve	872.24
	21. DCF & Director Hunsur, Nagarahole National Park	5. Nagarahole National Park/Tiger Reserve	643.39
Total Area (A)			2794.05

85. Ans : C

- The PM-JANMAN scheme aims to bring tribal communities, especially Particularly Vulnerable Tribal Groups (PVTGs), into the mainstream.
- The document mentions that the scheme will be implemented by the Ministry of Tribal Affairs in **collaboration with state governments and PVTG communities**.
- One of the components of the PM-JANMAN scheme is the establishment of Van Dhan Vikas Kendras for trading in forest produce.
- The scheme includes providing off-grid solar power systems for 1 lakh households of PVTGs and solar street lights.
- The PM-JANMAN scheme is an ambitious initiative aimed at uplifting PVTGs by addressing various challenges faced by them, including access to safe housing, clean drinking water, healthcare, education, nutrition, connectivity, and sustainable livelihoods.

86. Ans :D

- The BBMP introduced a new property tax system aimed at fixing leaks and rationalizing the tax structure

Structure of the New Tax Regime:

- Properties are categorized into six distinct heads, including residential (self-use & tenanted), commercial, industrial, star hotels, exempted, and fully vacant lands.
- The previous zonal classification system has been eliminated in favor of individual property guidance values.
- The system that is made online, allows citizens to question and correct guidance values online, with unaddressed claims considered accepted after three months.

Objective of the New System:



- The primary goal is not to increase the tax burden but to simplify and rationalize the taxation process.
- Maximum yearly increases are capped at 10%, ensuring manageable tax burdens for property owners.

Comparison with the Old System:

- The old system relied on zonal classifications and the Self Assessment Scheme (SAS), leading to potential tax leakage.
- The new system uses nominal rates based on guidance values, ensuring fairness and accuracy in taxation.

87. Ans : A

- The 10th edition of Karnataka Bird Festival is being organised at Bagalkote by the Karnataka Ecotourism Development Board and Karnataka Forest Department.
- The **Greater Flamingo has been chosen as the Mascot for this year's festival.**
- Bagalkote is situated near Krishna river which turns into a haven for migratory birds especially Greater Flamingos.

88. Ans : D

- Karnataka Govt launches dedicated **Panchamitra portal for panchayat services**
- By Rural Development & Panchayat Raj (RDPR) ministry
- Online portal and a WhatsApp chatbot feature that promises to help citizens access various services provided by gram panchayat
- panchamitra.karnataka.gov.in - dedicated website for citizens to access services
- and register their grievances
- The portal will be linked to a WhatsApp chatbot service available on the number 8277506000
- This Panchamitra WhatsApp has been developed to provide easy access to various information about gram panchayats, facilitate online service applications, provide application status tracking and enable the registration of grievances.

89. Ans : D

- Karnataka state health department launched 33 brain health clinics across the state to improve care for people with neurological disorders under the Karnataka Brain Health Initiative (KaBHI), supported by Nihans.

KARNATAKA BRAIN HEALTH INITIATIVE

- Launched in 2022
- By Government of Karnataka Health dept , NIMHANS in association with Niti Aayog
- Doctors will be trained in screening and treating mental health patients
- Was rolled out in Bengaluru, Kolar and Chikkaballapur districts on a pilot basis



- Indian cricketer Robin Uthappa has been recently appointed as the brand ambassador

90. **Ans : D**

Karnataka wins first CK Nayudu Trophy

- The CK Nayudu Trophy is a prestigious cricket tournament organized by the BCCI.
- It is named after CK Nayudu, India's first Test cricket captain.
- The tournament is for players under the age of 23.
- It features teams representing different state cricket associations in India.
- Teams compete in a series of matches, with the format changing from year to year

91. **Ans : B**

BWSSB launched Jalasnehi, Jalamitra, Jalasamrakshaka, and Antharjala to address water shortage and misuse issues in Bangalore

- **Jalasnehi:** Allows consumers to request treated water from BWSSB.
- **Jalamitra:** Facilitates citizens, NGOs, and volunteers in preventing water leakage and conducting surveys.
- **Jalasamrakshaka:** Enables reporting of water misuse for penalization.
- **Antharjala:** Streamlines the process of applying for borewells with BWSSB's permission.

92. **Ans : A**

- BWSSB has launched the 'Green Star' challenge targeting hotels in Bengaluru to promote water conservation and sustainable practices, coinciding with 'World Water Day' activities.

Objectives of the Challenge:

- Encourage hotels to adopt eco-friendly practices reducing water consumption and using treated water sources.
- Highlight the role of hotels in environmental stewardship and sustainable development

Process for Securing the Green-Star Rating:

- Hotels implementing water-saving modules within 30 days are eligible for a greenstar rating.
- BWSSB monitors water consumption and conducts inspections to verify guideline implementation.
- Final inspection by BWSSB confers the green-star rating upon meeting all criteria

93. **Ans : B**

- Soundarya is the **first AI-generated news presenter in one of the Karnataka news channels.**



- She was created **by Power TV** and is trained on a massive dataset of Kannada news content.

94. **Ans : A**

- The inaugural **India Paddle Festival is being held at the Sasihithlu beach, Mangaluru** from 8-10 March 2024 with athletes from the USA, Thailand, Spain, and South Korea and hosts India vying for the top honours across three categories.

95. **Ans : C**

- Karnataka launches 'Browse Safe', a free tool to protect citizens from cyber frauds
- Browse Safe blocks malicious websites as its functionalities prevent internet traffic from accessing harmful websites, including phishing sites, malware or viruses, and sites attempting to steal personal information
- The State's Centre of Excellence for Cyber Security introduced 'Browse Safe', a free-to-use online safety service to ensure digital safety for citizens
- 'Browse Safe' is a public Domain Name System (DNS), a first-of-its-kind initiative in the country.

96. **Ans : A**

- Doddaballapura-Hoskote route introduces state's first boothless toll on STRR.
- The Doddaballapur-Hosakote section of the Satellite Town Ring Road (STRR) in Bengaluru introduces toll charges starting November 17.
- This 34.15 km segment, a part of the larger 288 km STRR, will implement toll rates for various vehicles, featuring a boothless toll plaza and emphasizing FASTag compliance for seamless passage.
- The larger project by NHAI aims to decongest Bengaluru's traffic.

97. **Ans : A**

- The historic Shore Temple in Mamallapuram, a UNESCO World Heritage Site, has achieved a significant milestone by becoming India's first Green Energy Archaeological Site.
- This achievement is the result of the Green Heritage Project, a collaborative initiative between the Renault Nissan Technology & Business Centre India (Renault Nissan Tech) and Hand in Hand India (HiH).
- The Shore Temple was built during the reign of the Pallava dynasty in the 7th century AD. It is part of a complex of temples in Mahabalipuram, a major port city during the Pallava dynasty's rule.
- Patronage: The temple was commissioned by Narasimhavarman II, also known as Rajasimha, a prominent Pallava king. It was dedicated to Lord Shiva and served as a prominent pilgrimage site for devotees of the deity.



98. Ans : B

- World Bamboo Day is observed on September 18 every year to raise awareness about bamboo worldwide.
- The World Bamboo Organisation has been on a mission to make people more aware of bamboo's potential.

99. Ans : A

- Karnataka's first **'health ATM' was unveiled in Kalaburagi** by Chief Minister Siddaramaiah as part of the 'Arogya Mitra' scheme. As part of their CSR initiative, HP Enterprises donated 25 health ATM machines.
- These advanced-technology automated ATMs provide preventive healthcare services. They screen people for 50 health parameters and provide a user-friendly experience. Users can get blood pressure readings by stepping on the machine scale and placing their palm on the designated area

100. Ans : B

- Operation kaveri : Sudan
- Operation Ganga : Russia-Ukraine war
- Operation Devishakthi: Afganistan
- Operation Ajay: Israel
- Operation karuna : Myanmar
- Operation dost : Turkey