30 September 2023

National and International News

Person in news:Kiran Baliyan	Context
	Recently she **won a bronze medal in women's shot put.** **Key fact** ● She won the medal in the **19th edition of Asian games held in Hangzhou(China)**. ● India won the medal in this category **after 72 years.** ● **Kiran Baliyan is the second Indian** to win a medal in women's shot put in Asian Games. **Did you know?** **Barbara Webster,** an Anglo-Indian from then Bombay, won a **bronze in the inaugural edition in New Delhi in 1951.**
Asian Development Bank(ADB)	**Context** The Asian Development Bank (ADB) a**pproved $100 billion to invest in the Asia Pacific region.** **Key fact:** ● The approval unlocks the fund **through capital management reform.** ● funds are to be available for the **next 10 years** to support Asia and the Pacific ● These resources are **to manage crisis situations and climate-change challenges.** ● The reforms were introduced **through an update of ADB's Capital Adequacy Framework (CAF).**
Asian Development Bank (ADB)	**Asian Development Bank** ● It is a multilateral development bank **established on 19th December 1966.** ● Its Headquarters is in **Manila, Philippines.** ● It currently has **68 members.** ● India became **its member in 1966.** ● Its primary mission is to **"foster economic growth and cooperation"** among countries in the Asia-Pacific Region. ● ADB assists members and partners by **providing loans, technical assistance, grants, and equity investments** to promote social and economic development. **Did you know?** As of 2022, ADB's five largest shareholders are Japan and the United States(15.6%), the People's Republic of China (6.4%), **India (6.3%),** and Australia (5.8%).

SASTRA Ramanujan Prize	**Context** The 2023 SASTRA Ramanujan Prize will be awarded to **Ruixiang Zhang of the University of California**, Berkeley **Key points** ● Zhang's fundamental work spans analytic number theory, combinatorics, Euclidean harmonic analysis, and geometry. **About prize** ● The Ramanujan Prize was **founded by Shanmugha Arts, science, technology and Research Academy (SASTRA).** ● It is located near **Kumbakonam, India,** Srinivasa Ramanujas ' hometown. ● It is awarded every year **to a young mathematician** judged to have done outstanding work in Ramanujan's fields of interest. ● The **age limit for the prize has been set at 32** (the age at which Ramanujan died) **Did you know?** This Award is an annual $10,000 prize
Electoral bond	**Context** The government announced the sale of the 28th tranche of electoral bonds at all authorized branches of the State Bank of India. **Key points** ● Electoral bonds are a **financial instrument introduced by the Government of India in 2018** ● An electoral bond is a **bearer instrument,** like a promissory note, that is payable to the bearer on demand to donate their contributions to political parties. ● The various denominations for electoral bonds, ranging from Rs. **1,000 to Rs. 1 crore.** ● **SBI is the only bank authorized to sell these bonds.** ● The **political parties have to disclose the amount to the Election Commission.** **Did you know?** **Only registered political parties are eligibl**e to receive electoral bonds.

Global Innovation Index 2023	**Context**
	 India has maintained the 40th position out of 132 economies in the Global Innovation Index 2023
	
	 About Index
	 ● It is published by the **World Intellectual Property Organization.**
	 ● It is an **annual index**
	 ● It **measures the innovation performance** of the country.
	 ● **Index is based on following Parameters**
	    1. human capital and research
	    2. infrastructure
	    3. market sophistication
	    4. business sophistication
	    5. knowledge and technology outputs create outputs
	    6. Institutions

PM Gati Shakti Scheme
 	
	Context
	 The PM Gati Shakti Scheme has recommended six major road and rail projects worth ₹52,000 in Odisha and Kerala.
	
	 Key facts
	 ● It includes **two greenfield highways proposed through Gujarat** and
	 ● two **new railway projects in Odisha and Kerala**.
	
	 About Scheme
	 ● PM Gati Shakti is a National plan for **multimodal connectivity**
	 ● It is essentially **a digital platform.**
	 ● Aim of the scheme is **to bring 16 Ministries together for integrated planning and coordinated implementation** of infrastructure connectivity projects.
	 ● will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala Sagarmala Inland dry/land ports,Udan, Economic Zones
	 ● It is based on the **six pillars**
	    1. Comprehensiveness
	    2. prioritization
	    3. Optimisation
	    4. Synchronization
	    5. Analytical
	    6. dynamic.

Quantum computer	**Context**
	In a paper in Nature Physics, a researcher at Google Quantum AI reportedly demonstrated in theory that simulating random quantum circuits and determining their output will be difficult for classical computers.
	● Quantum computing is a rapidly-emerging technology that harnesses the laws of quantum mechanics to solve problems too complex for classical computers.
	● It is a fundamentally different way of processing information compared to today's classical computing systems.
Classical computing vs. Quantum computing	**Classical computing**
	● It is based upon the **principles of classical mechanics**
	● It is based on bits that can **either be 0 or 1 to represent data.**
	● The classical **bit is the basic and smallest unit in classical** computing.
	● The **byte is a collection of bits that can be used to represent larger information units,** like characters or numbers.
	● The classical bit operations are **deterministic. This means that the output of a given input is always the same.**
	Quantum computing
	● Quantum computing **uses quantum-mechanical phenomena**
	● It is based on **quantum bits", or "qubits",**
	● It allows **superposition means "qubits", and can exist simultaneously in different states.**
	● and **entanglement which means the state of a qubit can be connected to another's state**, even though they are physically separated.
	● It can **solve complex phenomenon ,**
	● This allows for the **simultaneous exploration of multiple solutions.**