# Forum AS

# 10 PM Current Affairs Quiz Compilation

1st to 6th September, 2020

# Q.1) Consider the following statements regarding the Goods and Services Tax (Compensation to States) Act:

- 1. It provides for compensation to the States for the loss of revenue arising on account of a national calamity or due to implementation of the goods and services tax.
- 2. The Act assumes nominal growth rate of revenue subsumed for a State during the transition period as fourteen percent per annum.

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

#### Correct answer: B

Explanation: Statement 1 is incorrect. The Goods and Services Tax (Compensation to States) Act is to provide for compensation to the States for the loss of revenue arising on account of implementation of the goods and services tax in pursuance of the provisions of the Constitution (One Hundred and First Amendment) Act, 2016.

Statement 2 is correct. As per the act the projected **nominal growth rate of revenue** subsumed for a State during the transition period shall be **fourteen percent per annum**.

The projected revenue for any year in a State is calculated by applying the projected growth rate over the base year revenue of that State.

For the purpose of calculating the compensation amount payable in any financial year during the transition period, the financial year ending 31st March, 2016, is taken as the base year.

# **Q.2)** Consider the following statements:

- 1. The Information Technology Act 2000 explicitly prohibits online Betting and Gambling in India.
- 2. The Public Gambling Act 1867 which provides for punishment of public gambling does not apply to games of skill.

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

### Correct answer: B

**Explanation:** Statement 1 is incorrect. The **Information Technology Act 2000** regulates cyber activities in India and provides for offences in cyber domain does not provide for explicit prohibition on Gambling or Betting.

Statement 2 is correct. The **Public Gambling Act 1867**, as it stands makes a distinction between games of chance and games of skill. The act does not apply to any game of mere skill wherever played.

# Fantasy cricket is a game of skill as ruled by the Punjab & Haryana High Court (2017) and the Bombay High Court (2019) further upheld by the Supreme Court.

# Roll of the dice Legal status of gambling globally

Europe: The biggest markets are the U.K., Spain and Germany, which have legal and regulated gambling, both land-based casinos and online betting. France and Iceland have banned online casinos, but allow land-based casinos

Americas: Canada and Mexico have legalised all forms of gambling. In the U.S., some States allow gambling. Nevada allows all forms of gambling



Argentina, Peru, Panama, Costa Rica and the Dominican Republic have legalised all forms of gambling. Chile and Brazil only allow off-shore casinos, while Cuba has outlawed gambling

Africa: Over 30 countries have legalised all forms of gambling. South Africa is a well-known hotspot for casinos Australia: Land-based and online casinos are legal under regulations

Asia: Gambling was outlawed in Singapore since 2014. Japan has recently allowed land-based casinos. In China, all forms of gambling, except for physical sports betting, are outlawed

**Q.3)** Which of the following subject(s) was/were **added to the concurrent list** by the Constitution (Forty-second amendment) Act, 1976?

- 1. Education
- 2. Forests
- 3. Deployment of armed force of the Union in States Select the correct answer using the code given below:
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

### Correct answer: A

**Explanation:** The **42nd Constitutional Amendment Act** transferred five subjects from the state list to the concurrent list:

- -Administration of Justice; constitution and organization of all courts, except the Supreme Court and the High Courts
- -Weights and measures except establishment of standards
- -Education, including technical education, medical education and universities,
- -Forests
- -Protection of wild animals and birds

It added to Union List: **Deployment** of any armed force of the Union or any other force subject to the control of the Union or any contingent or unit thereof in any State in aid of the civil power; powers, jurisdiction, privileges and liabilities of the members of such forces while on such deployment.

Q.4) Which of the following mountain pass(s) is/are in the Union Territory of Ladakh?

- 1. Rezang La
- 2. Nathu La
- 3. Khardung La

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above



#### Correct answer: C

**Explanation:** Option 1 is correct. **Rezang La** is a mountain pass on the south-eastern approach to **Chushul Valley** in the union territory of Ladakh. A major battle was fought between Indian and Chinese forces in 1962 at Rezang La.

Option 2 is incorrect. **Nathu La** is a mountain pass in the Himalayas in **East Sikkim** district. It connects the Indian state of Sikkim with China's Tibet Autonomous Region.

Option 3 is correct. **Khardung La** is a mountain pass in the **Leh district** of the union territory of Ladakh. The pass on the Ladakh Range is north of Leh and is the gateway to the Shyok and Nubra valleys.

# Q.5) Consider the following statements regarding India's GDP data:

- 1. The National Statistical Office (NSO) is mandated to prepare national accounts as well as publish annual estimates of national product.
- 2. India's economy for the first time in last decade saw negative quarterly growth rate in (April-June) Q1 of 2020-21.

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

### Correct answer: C

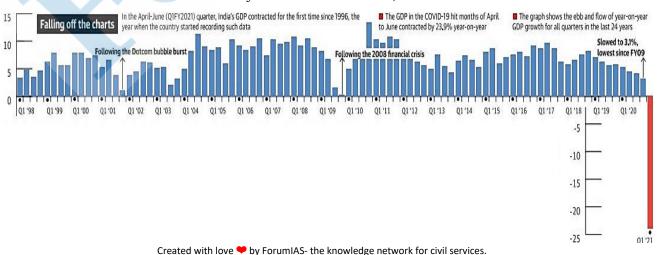
**Explanation:** Statement 1 is correct. The **Ministry of Statistics and Programme Implementation** has two wings, one relating to Statistics and the other Programme Implementation.

The Statistics Wing called the **National Statistical Office (NSO)** consists of the Central Statistical Office (CSO), the Computer center and the National Sample Survey Office (NSSO).

**NSO**, among other its functions, **prepares national accounts** as well as publishes annual estimates of **national product**, government and private consumption expenditure, capital formation, savings, estimates of capital stock and consumption of fixed capital, as also the state level gross capital formation of supra-regional sectors and prepares comparable estimates of State Domestic Product (SDP) at current prices.

Statement 2 is correct. India's economy contracted by a **historic 23.9% in the June quarter**, marking the sharpest drop in the country's growth numbers in more than 40 years. Data released by the National Statistical Office recently shows that manufacturing, construction and trade sectors experienced massive contraction at 39.3%, 50.3%, 47%, respectively.

The last contraction of the economy occurred in 1979-80, when GDP shrank 5.2%.



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Q.6) Which of the following country(s) is/are not participant to the East Asia Summit?

- 1. China
- 2. United States of America
- 3. Australia

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) None of the above

#### Correct answer: D

**Explanation**: The **East Asia Summit** is a unique Leaders-led forum of 18 countries of the Asia-Pacific region formed to further the objectives of regional peace, security and prosperity.

Established in 2005, EAS allows the principal players in the **Asia-Pacific region** to discuss issues of common interest and concern, in an open and transparent manner, at the highest level.

The membership of EAS consists of ten **ASEAN Member States** (i.e. Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, the Philippines and Vietnam), Australia, China, India, Japan, New Zealand, Republic of Korea, Russian Federation and the USA. EAS is an initiative of ASEAN and is based on the premise of the centrality of ASEAN.

# Q.7) Consider the following statements regarding the PM- Urja Suraksha evam Utthaan Mahabhiyaan (PM KUSUM):

- 1. Renewable power plants will be setup by individual farmers, cooperatives, panchayats, farmer producer organisations (FPO) on their barren or cultivable lands.
- 2. Individual farmers will be supported to install standalone solar pumps.

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

#### Correct answer: C

**Explanation:** Both statements are correct.

The **PM KUSUM scheme** aims to add solar and other renewable capacity of 25,750 MW by 2022.

The Scheme consists of three components:

**Component A**: 10,000 MW of Decentralized Ground Mounted Grid Connected Renewable Power Plants of individual plant size up to 2 MW.

-Renewable power plants of capacity 500 KW to 2 MW will be setup by individual farmers/cooperatives/panchayats /farmer producer organisations (FPO) on their barren or cultivable lands. The power generated will be purchased by the DISCOMs at Feed in tariffs determined by respective SERC.

**Component B**: Installation of 17.50 lakh standalone Solar Powered Agriculture Pumps of individual pump.

-Individual farmers will be supported to install standalone solar Agriculture pumps of capacity up to 7.5 HP.

**Component C**: Solarisation of 10 Lakh Grid-connected Agriculture Pumps of individual pump capacity up to 7.5 HP.

-Individual farmers will be supported to solarise pumps of capacity up to 7.5 HP.

For both Component-B and Component-C, central financial assistance (CFA) of 30% of the benchmark cost or the tender cost, whichever is lower, will be provided. The State Government will give a subsidy of 30%; and the remaining 40% will be provided by the farmer.

Q.8) Which of the following Temple(s) was/were built by the Chola dynasty kings?

- 1. Brihadisvara temple
- 2. Shore Temple
- 3. Virupaksha temple

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

### Correct answer: A

**Explanation:** Option 1 is correct. The **Brihadisvara temples** are situated at Thanjavur, the ancient capital of the Chola kings. King **Rajaraja Chola** constructed the Brihadisvara Temple in 10th century A.D., designed by the famous architect Sama Varma.

The Brihadisvara temple is crowned by a pyramidal 65-m vimana, a sanctum tower. Its walls are covered with rich sculptural decoration.

The second Brihadisvara temple complex built by Rajendra I was completed in 1035. Its 53-m vimana has recessed corners and a graceful upward curving movement, contrasting with the straight and severe tower at Thanjavur. It has six pairs of massive, monolithic dvarapalas statues guarding the entrances and bronzes of remarkable beauty inside.

The other two temples, Gangaikondacholisvaram and Airatesvara were also built in the age of Cholas

Option 2 is incorrect. The **Shore Temples at Mahabalipuram**, a coastal village 50 km south of Madras, was built in the 7th century, during the reign of Rajasimha, and they depict the final flowering of **Pallava** art. The temple with its beautiful polygonal dome enshrines Lord Vishnu and Shiva.

Option 3 is incorrect. The **Mallikarjuna and the Virupaksha temples at Pattadakal**, were built by two queens of Vikaramaditya II, to commemorate the victory of the **Chalukyas** over the Pallavas. Virupaksha temple, built by Queen Lokamahadevi, was originally called Lokeshwara.

This temple is built in the southern Dravida style and is the largest in the enclosure. It has a massive gateway and several inscriptions.

# A rare inscription dating back to the Renati Chola era has been unearthed in a remote village of Kadapa district of Andhra Pradesh.

#### Q.9) Which of the following was determined by the Gadgil-Mukherjee Formula?

- a) Distribution of Central Plan Assistance to States
- b) Poverty Line estimation
- c) Fiscal Responsibility and Budget Management parameters
- d) External commercial borrowing limits

#### Correct answer: A

**Explanation:** The Gadgil-Mukherjee Formula for allocation of **Central Plan Assistance** to states was adopted by the National Development Council (NDC) meeting held in 1990.

On the demand of State Governments for a revision, a Committee under **Shri Pranab Mukherjee, then Deputy Chairman, Planning Commission** was constituted to evolve a

suitable formula. The suggestions made by the Committee were considered by NDC in December 1991, where following a consensus, the Gadgil-Mukherjee Formula was adopted. It was made the basis for allocation post 8th FYP (1992-97). After setting apart funds required for (a) Externally Aided Projects and (b) Special Area Programme, 30% of the balance of Central Assistance for State Plans is provided to the Special Category States. The remaining amount is distributed among the non-Special Category States, as per **Gadgil-Mukherjee Formula**.

**Q.10)** Which of the following correctly defines **revenue neutral rate (RNR)** in context of GST in India?

- a) Rate of taxation at which revenue from imports matches that from exports
- b) New tax rate to match the revenue by previous taxation regime
- c) Rate of tax on sin goods to compensate for zero rated consumption goods
- d) None of the above

#### Correct answer: B

**Explanation: Revenue neutral rate (RNR)** is a structure of different rates established under the new GST regime in order to match the previous revenue generation.

The RNR is aimed to **keep the revenue as constant as possible in the new regime** as was under previous taxation. The government had entrusted the then (2015) chief economic advisor Arvind Subramanian to head a panel with the task of proposing a revenue neutral rate (RNR), or a rate at which there will be no revenue loss to states under the GST regime.

Q.11) Consider the following statements regarding the Purchasing Managers' Index (PMI):

- 1. It is a direct measure of the retail inflation prevalent in the economy.
- 2. A PMI reading under 50 represents a contraction, and a reading at 50 indicates no change in the economic condition.

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

#### Correct answer: B

**Explanation:** Statement 1 is incorrect. The **purchasing managers' index (PMI)** is an economic indicator that **surveys purchasing managers** at businesses that make up a given sector. The most common PMI surveys are the manufacturing PMI and the services PMI. The purchasing managers' index consists of several different surveys that are compiled into

a single numerical result depending on one of several possible answers to each question. **The most common elements include**: New orders, Factory output, Employment, Suppliers' delivery times, Stocks of purchases.

The most common answers include: Improvement, No change, Deterioration.

Statement 2 is correct. The headline PMI is a number from 0 to 100. A **PMI above 50 represents an expansion** when compared with the previous month. A PMI reading under 50 represents a contraction, and a reading at 50 indicates no change. The further away from 50 the greater the level of change.

**Q.12)** Which of the following is/are correctly matched?

1. Kris Gopalakrishnan Committee - Personal Data Protection Framework

2. BN Srikrishna committee - Non-Personal Data Governance Framework

3. J Satyanarayana Committee - National Digital Health Blueprint

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 3 only
- d) All of the above

#### Correct answer: C

Explanation: Option 1 is incorrectly matched. Kris Gopalakrishnan Committee was formed in 2019 to recommend on the **Non-Personal Data Governance Framework**. Option 2 is incorrectly matched. The Justice BN Srikrishna Committee was constituted by the Union government in July 2017, to deliberate on a data protection framework. The committee submitted its report in 2018 also proposed a draft Personal Data Protection Bill. Option 3 is correctly matched. In July 2018, the NITI Aayog released a proposal document, National Health Stack (NHS). A committee was formed to create an implementation framework for NHS as National Digital Health Blueprint, chaired by former UIDAI Chairman **J. Satyanarayana**. The committee submitted its report in 2019.

# **Q.13)** Consider the following statements regarding the **voting rights in India**:

- 1. Constitution provides for basis of adult suffrage for elections to both Houses of the Parliament and to the Legislative Assembly of every State.
- 2. The electors under preventive detention have right to vote unlike those confined in a prison under sentence of imprisonment.

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

#### Correct answer: B

Explanation: Statement 1 is incorrect. Article 326 of the Constitution provides for the elections to the House of the People (not both houses) and to the Legislative Assemblies of States to be on the basis of **adult suffrage**.

Statement 2 is correct. Article 62(5) of the Representation of the People Act, 1951 provides that "no person shall vote at any election if he is confined in a prison, whether under a sentence of imprisonment or transportation or otherwise, or is in the lawful custody of the police:

Provided that nothing in this sub-section shall apply to a person subjected to preventive **detention** under any law for the time being in force."

Therefore, the Representation of the People Act, 1951 confers voting rights on the electors subjected to preventive detention. As per Rule 18 of the Conduct of Elections Rules, **1961**, the electors under preventive detention are entitled to cast their votes by post.

# Q.14) The Intellectual Property Appellate Board (IPAB) hears appeals under which of the following law(s)?

- 1. Trade Marks Act
- 2. Geographical Indications of Goods (Registration and Protection) Act
- 3. Protection of Plant Varieties and Farmers Act

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above



#### Correct answer: D

**Explanation:** Section 83 of the **Trade Marks Act, 1999** provides for the establishment of an Appellate Board to be known as the **Intellectual Property Appellate Board (IPAB)**. The Intellectual Property Appellate Board has been constituted by a Gazette notification of the Central Government in the Ministry of Commerce and Industry in 2003.

It hears appeals against the decisions of the Registrar under the **Trade Marks Act**, 1999 and the Geographical Indications of Goods (Registration and Protection) Act, 1999.

In pursuance of the Finance Act, 2017, all the cases pending before the Copy Right Board under **Copy Right Act**, **1957** were transferred to Intellectual Property Appellate Board.

The Intellectual Property Appellate Board also exercises the jurisdiction, powers and authority conferred with Plant Varieties Protection Appellate Tribunal to hear the appeals under the Protection of Plant Varieties and Farmers Act.

- Q.15) Consider the following statements regarding the Special Frontier Force (SFF) of India:
- 1. It was raised after the India-Pakistan War of 1971.
- 2. It falls under the purview of the Cabinet Secretariat.

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

#### Correct answer: B

Explanation: Statement 1 is incorrect. Special Frontier Force (SFF) referred to as Vikas Battalion was raised in the aftermath of the 1962 Sino-India war.

It mostly recruits **Tibetans and Gorkhas** and initially went by the name of **Establishment 22**. It was named so because it was raised by Major General Sujan Singh Uban, an Artillery officer who had commanded 22 Mountain Regiment.

Statement 2 is correct. **Special Frontier Force** falls under the purview of the **Cabinet Secretariat** headed by an Inspector General who is an Army officer of the rank of Major General.

# Wikipedia says it is under the Research and Analysis Wing (R&AW). Technically R&AW is also under Cabinet Secretariat.

### **Q.16)** Consider the following statements regarding the **Coal Gasification**:

- 1. The gasification of coal can produce synthesis gas, a mixture primarily consisting carbon monoxide and hydrogen.
- 2. Emission control is easier and simpler in coal gasification than in combustion.

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

### Correct answer: C

**Explanation:** Both statements are correct.

**Coal** is a complex and highly variable substance that can be converted into a variety of products. The gasification of coal is one method that can produce power, liquid fuels, chemicals, and hydrogen.

**Coal gasification is the process of producing synthesis gas (syngas)**—a mixture consisting primarily of carbon monoxide, hydrogen, carbon dioxide, natural gas, and water vapour—from coal and water, air and/or oxygen.

After the impurities are removed from the synthesis gas, the carbon monoxide in the gas mixture is reacted with steam through the water-gas shift reaction to produce additional hydrogen and carbon dioxide. Hydrogen is removed by a separation system, and the highly concentrated carbon dioxide stream can subsequently be captured and stored.

The **gasification has inherent advantages over combustion** for emissions control. Emission control is simpler in gasification than in combustion because the produced syngas in gasification is at higher temperature and pressure than the exhaust gases produced in combustion. These higher temperatures and pressures allow for **easier removal of sulfur and nitrous oxides (SOx, and NOx)**, and volatile trace contaminants such as mercury, arsenic, selenium, cadmium, etc.

Gasification		versus		Combustion
со	+	С	$\rightarrow$	CO <sub>2</sub>
H <sub>2</sub>	<b>←</b>	Н	$\rightarrow$	H <sub>2</sub> O
N <sub>2</sub>	<b>←</b>	N	$\rightarrow$	NO <sub>X</sub>
H <sub>2</sub> S	+	S	>	SO <sub>X</sub>
	<b>←</b>	0	$\rightarrow$	O <sub>2</sub>

The table summarizes the main transformations of solid fuel constituents to gaseous species in both gasification and combustion. This shows clearly the marked differences between gasification (resulting in syngas) and combustion (resulting in exhaust gas).

### Q.17) Consider the following statements regarding the Group of Monuments at Hampi:

- 1. Hampi, the capital of erstwhile Vijayanagar Empire, lies south of the river Tungabhadra.
- 2. The Krishna temple at Hampi was built during the reign of Krishnadeva Raya of the Tuluva Dynasty.
- 3. It is a UNESCO World Heritage Site.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 only
- c) 1 and 3 only
- d) All of the above

# Correct answer: D

**Explanation:** Statement 1 is correct. **Hampi, the 14th century capital** of the **Vijayanagar Empire**, lies in the Deccan heartland, in the state of Karnataka, protected by the river **Tungabhadra** in the north and rocky granite ridges on the other three sides.

Statement 2 is correct. The monuments of Vijayanagar city, also known as Vidyasagar in honour of the sage Vidyaranya was built between 1336-1570 AD, from the times of **Harihara-I to Sadasiva Raya**. A large number of royal buildings were raised by **Krishnadeva Raya** (A.D. 1509-30), the greatest ruler of the Tuluva dynasty.

**Krishna temple, built by the Krishnadevaraya** in 1513 AD to celebrate the conquest of the eastern kingdom of Udayagiri or Utkala, contains lofty gopurams (grand entry portals) that lead to shrines and structures for the worship of the idol **Balakrishna**.

Statement 3 is correct. Group of Monuments at Hampi is a UNESCO World Heritage Site.

# Q.18) Which of the following country(s) has/have recently proposed a Supply Chain Resilience in Indo-Pacific initiative?

- 1. United States of America
- 2. Japan
- 3. Australia

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 3 only
- d) All of the above

#### Correct answer: B

Explanation: Australia-India-Japan Economic Ministers trilateral meeting proposed an initiative for Supply chain resilience in the Indo- Pacific.

The **joint statement** reads "In light of the COVID-19 crisis and the recent global-scale changes in the economic and technological landscape, the Ministers underscored the necessity and potential to enhance the resiliency of supply chains in the Indo-Pacific region. Recognizing the pressing need for regional cooperation on **supply chain resilience in the Indo-Pacific**, the Ministers shared their intention to work toward the launch of a new initiative to achieve the objective through cooperation. They instructed their officials to promptly **work out the details of the new initiative for its launch later this year.** The Ministers noted the important role of business and academia in realizing the objective."

# Q.19) Consider the following statements regarding the Green Term Ahead Market (GTAM):

- 1. The Indian Energy Exchange (IEX) has launched the GTAM on its platform.
- 2. The pan India GTAM benefits buyers of Renewable Energy through competitive prices and sellers by providing access to nation-wide market.

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

### Correct answer: C

**Explanation:** Statement 1 is correct. The **Indian Energy Exchange** recently launched the GTAM on its power trading platform after receiving approval from the **Central Electricity Regulatory Commission (CERC).** 

The market will offer trade in four types of green term-ahead contracts -Green Intra-day contracts, Day-ahead Contingency contracts, Daily Contracts and Weekly contracts. There will be separate contracts for Solar and Non-Solar energy to facilitate Solar and Non-Solar Renewable Purchase Obligations fulfillment.

Statement 2 is correct. The introduction of GTAM platform would **lessen the burden on RE-rich States** and incentivize them to develop RE capacity beyond their own renewable purchase obligations. This would promote RE merchant capacity addition and help in achieving RE capacity addition targets of the country.

The **GTAM platform** will lead to increase in number of participants in renewable energy sector. It will benefit buyers of RE through **competitive prices** and transparent and flexible procurement. It will also benefit RE sellers by providing access to pan- India market.

# Q.20) Which of the following is/are the payloads in the AstroSat Mission?

- 1. Terrain Mapping Camera
- 2. Ultraviolet Imaging Telescope (UVIT)
- 3. Soft X-ray Telescope (SXT)

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

#### Correct answer: B

**Explanation: AstroSat** is the first dedicated Indian astronomy mission aimed at studying celestial sources in X-ray, optical and UV spectral bands simultaneously.

Option 1 is incorrect. **Terrain Mapping Camera (TMC)** was used onboard the Chandrayaan 1 mission and TMC 2 was onboard the Orbiter payloads of Chandrayaan 2.

Option 2 and 3 are correct. Five payloads of ASTROSAT are chosen to facilitate a deeper insight into the various astrophysical processes occurring in the various types of astronomical objects constituting our universe.

- -The Ultraviolet Imaging Telescope (UVIT), capable of observing the sky in the Visible, Near Ultraviolet and Far Ultraviolet regions of the electromagnetic spectrum
- -Large Area X-ray Proportional Counter (LAXPC), is designed for study the variations in the emission of X-rays from sources like X-ray binaries, Active Galactic Nuclei and other cosmic sources.
- **-Soft X-ray Telescope (SXT)** is designed for studying how the X-ray spectrum of 0.3-8 keV range coming from distant celestial bodies varies with time.
- **-Cadmium Zinc Telluride Imager (CZTI)**, functioning in the X-ray region, extends the capability of the satellite to sense X-rays of high energy in 10-100 keV range.
- -Scanning Sky Monitor (SSM), is intended to scan the sky for long term monitoring of bright X-ray sources in binary stars, and for the detection and location of sources that become bright in X-rays for a short duration of time.
- # A galaxy called AUDFs01 located in the Extreme Deep field, was discovered through AstroSat recently by a team of Astronomers from the Inter-University Centre for Astronomy and Astrophysics (IUCAA).

# Q.21) Consider the following statements regarding the Open Government Data (OGD) Platform of India:

- 1. It used by Government of India Ministries/ Departments to publish datasets, documents, tools and applications collected by them for public use.
- 2. It has been developed by the NITI Aayog.

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

#### Correct answer: A

**Explanation:** Statement 1 is correct. **Open Government Data (OGD) Platform India** is a platform for supporting Open Data initiative of Government of India. The portal is intended to be used by **Government of India Ministries/ Departments** their organizations to publish datasets, documents, services, tools and applications collected by them for public use.

It intends to increase **transparency in the functioning** of Government and also open avenues for many more innovative uses of Government Data to give different perspective. Statement 2 is incorrect. The Open Government Data (OGD) Platform India has been set-up by the **National Informatics Centre (NIC)** in compliance with the **National Data Sharing and Accessibility Policy (NDSAP)** of India.

The **objective of the policy** is to provide proactive access to Government owned shareable data along with its usage information in open/machine readable format, through a wide area of network across the country, in a periodically updated manner, within the framework of various related policies, rules, and acts of the Government.

# Q.22) Which of the following institution has published the Global Innovation Index (GII) 2020?

- a) World Economic Forum (WEF)
- b) World Intellectual Property Organization (WIPO)
- c) European Union Intellectual Property Office
- d) Institute for Management Development (IMD)

#### Correct answer: B

Explanation: The Global Innovation Index 2020 (GII), in its 13th edition this year, is copublished by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO, a specialized agency of the United Nations).

The Global Innovation Index (GII) ranks world economies according to their innovation capabilities. Consisting of roughly 80 indicators, grouped into innovation inputs and outputs, the GII aims to capture the multi-dimensional facets of innovation.

**Switzerland, Sweden, and the U.S. lead** the innovation rankings, followed by the U.K. and the Netherlands. This year marks the first time a second Asian economy—the Republic of Korea—cracks the top 10, next to Singapore.

Moving up four positions from last year, India ranks 48<sup>th</sup> (of 131) and makes it into the top 50 for the first time in 2020.

- -India performs better in innovation outputs than innovation inputs in 2020.
- -This year India ranks 57th in innovation inputs, higher than last year and compared to 2018.
- -As for innovation outputs, India ranks 45th. This position is higher than last year and compared to 2018.
- -India ranks 3rd among the 29 lower middle-income group economies.
- -India ranks 1st among the 10 economies in Central and Southern Asia.

### Q.23) Consider the following statements regarding the National Security Act, 1980:

- 1. States or Centre governments can detain a person to prevent him/her from acting in a manner prejudicial to security of India.
- 2. It applies only to Indian citizens and foreigners cannot be detained under the act. 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

### Correct answer: A

**Explanation:** Statement 1 is correct. The **National Security Act 1980** empowers the Center and State governments to detain a person if the authorities are satisfied that he/she is a **threat to** the defence of India, the relations of India with foreign powers, or the security of India.

Statement 2 is incorrect. The **Central Government or the State Government** may make an order with respect to **any foreigner** directing that such person be detained with a view to regulating his continued presence in India or to making arrangements for his expulsion from India, it is necessary so to do.

**Q.24)** Consider the following statements regarding the **questions asked in the Parliament** by the legislators:

- 1. Starred Questions are ones to which answers are desired to be given orally on the floor of the House during the Question Hour.
- 2. An Un-starred Question is one which is not called for oral answer in the House and on which no supplementary questions can consequently be asked.

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

#### Correct answer: C

**Explanation:** Statement 1 is correct. A **Starred Question** is one to which a member desires an oral answer in the House and which is distinguished by an asterisk mark. When a question is answered orally, supplementary questions can be asked thereon.

Statement 2 is correct. An **Un-starred Question** is one which is not called for oral answer in the House and on which no supplementary questions can consequently be asked. To such a question, a written answer is deemed to have been laid on the Table after the Question Hour by the Minister to whom it is addressed.

A **Short Notice Question** is one which relates to a matter of urgent public importance and can be asked with shorter notice than the period of notice prescribed for an ordinary question. Like a starred question, it is answered orally followed by supplementary questions.

The **Question to a Private Member** is addressed to the Member himself/herself and it is asked when the subject matter of it pertains to any Bill, Resolution or any matter relating to the Business of the House for which that Member is responsible.

### Q.25) Consider the following statements regarding the Mission Karmayogi:

- 1. The mission emphasizes on 'on-site learning' to complement the 'off-site' learning of the civil servents.
- 2. It is to be delivered by setting up an Integrated Government Online Training (iGOT Karmayogi) Platform.
- 3. A Public Human Resources Council under the chairmanship of the Prime Minister to be set up.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

#### Correct answer: D

**Explanation:** All of the above statements are correct.

Union cabinet recently approved the Mission Karmayogi - National Programme for Civil Services Capacity Building (NPCSCB) with the following institutional framework:

-Prime Minister's Public Human Resources Council,



- -Capacity Building Commission.
- -Special Purpose Vehicle for owning and operating the digital assets and the technological platform for online training,
- -Coordination Unit headed by the Cabinet Secretary.

The Programme will be delivered by setting up an **Integrated Government Online Training-iGOT Karmayogi Platform**. Some of the guiding principles of the Programme:

- Supporting Transition from 'Rules based' to 'Roles based' HR Management.
- To emphasize on 'on-site learning' to complement the 'off-site' learning,
- To calibrate all Civil Service positions to a Framework of Roles, Activities and Competencies (FRACs) approach.

It is also proposed to set up a **Capacity Building Commission**, with a view to ensure a uniform approach in managing and regulating the capacity building ecosystem on collaborative and co-sharing basis.

A **Public Human Resources Council** comprising of select Union Ministers, Chief Ministers, eminent public HR practitioners, thinkers, global thought leaders and Public Service functionaries under the **Chairmanship of Prime Minister** will serve as the apex body for providing strategic direction to the task of Civil Services Reform and capacity building.

# Q.26) Consider the following statements regarding the National Initiative for Developing and Harnessing Innovations (NIDHI):

- 1. It is an umbrella programme of Department of Science and Technology (DST) for nurturing ideas and innovations.
- 2. Entrepreneurs-in-Residence (EIR) Programme under NIDHI provides subsistence grant to entrepreneurs for pursuing a promising technology business idea.

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

### Correct answer: C

**Explanation:** Statement 1 is correct. The **National Initiative for Developing and Harnessing Innovations (NIDHI)** is an umbrella programme developed by the Innovation & Entrepreneurship division, **Department of Science & Technology** for nurturing ideas and innovations (knowledge-based and technology-driven) into successful startups.

# NIDHI has following program components:

- -Technology Business Incubator (TBI) Converting Innovations to start-ups
- -Accelerator Fast tracking a start-up through focused intervention;
- -Seed Support System (NIDHI-SSS)- Providing early stage investment;
- -Centers of Excellence (NIDHI-CoE) A World class facility to helpstartups go global;
- Promotion and Acceleration of Young and Aspiring technology entrepreneurs (NIDHI-PRAYAS) Support from Idea to Prototype
- -Entrepreneur-In-Residence (EIR)

Statement 2 is correct. **Entrepreneurs-in-Residence (EIR) Programme under NIDHI** supports aspiring entrepreneur of considerable potential for pursuing a promising technology business idea over a period up to 18 months with a subsistence grant up to Rs 30000 per month with a maximum cap for total support of Rs 3.6 lakh to each EIR over a maximum of 18 months.

#### **Q.27)** Consider the following statements regarding **Forest Cover of India**:

1. The area under Very Dense Forest (VDF) is more than that under the Open Forest.

2. Uttarakhand has the highest area under forest cover among the states through which Ganga River flows.

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

#### Correct answer: B

**Explanation:** Statement 1 is incorrect. Area under **Open Forest** is much higher than under **Very Dense Forest (VDF)** in India.

TABLE Forest and Tree cover of India in 2019

Class	Area (sq km)	Percentage of Geographical Area
	Forest Cover	
Very Dense Forest	99,278	3.02
Moderately Dense Forest	3,08,472	9.38
Open Forest	3,04,499	9.26
Total Forest Cover*	7,12,249	21.67
Tree Cover	95,027	2.89
Total Forest and Tree Cover	8,07,276	24.56
Scrub	46,297	1.41
Non-Forest <sup>a</sup>	25,28,923	76.92
Total Geographic Area	32,87,469	100.00

<sup>\*</sup> Includes 4,975 sq km under Mangrove Cover

- -Very Dense Forest: All lands with tree canopy density of 70% and above.
- **-Moderately Dense Forest**: All lands with tree canopy density of 40% and more but less than 70%.
- -Open Forest: All lands with tree canopy density of 10% and more but less than 40%.
- -Scrub: Degraded forest lands with canopy density less than 10%.

Statement 2 is correct. The **Ganga River** passes through the states of **Uttarakhand**, **Uttar Pradesh**, **Bihar**, **Jharkhand**, **and West Bengal**, among which Uttarakhand has highest area under forest cover.

TABLE Forest Cover in the States/UTs in India

	(area in sq km						a in sq km)			
S. State/	State/UT	T Geo. Area (GA)	2019 Assessment				% of	Change	Change	Scrub
No.			VDF	MDF	OF	Total Forest Cover	GA	in forest cover w.r.t ISFR 2017	% w.r.t ISFR 2017	
1.	Bihar	94,163	333	3,280	3,693	7,306	7.76	7	0.10	250
2.	Jharkhand	79,716	2,603	9,687	11,321	23,611	29.62	58	0.25	688
3.	Uttar Pradesh	2,40,928	2,617	4,080	8,109	14,806	6.15	127	0.87	587
4.	Uttarakhand	53,483	5,047	12,805	6,451	24,303	45.44	8	0.03	383
5.	West Bengal	88,752	3,019	4,160	9,723	16,902	19.04	55	0.33	146

**Area-wise** Madhya Pradesh has the largest forest cover in the country followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra. In terms of **forest cover as** 

<sup>#</sup> Non-forest includes Tree Cover (Percentage rounded off)

**percentage** of total geographical area, the top five States are Mizoram (85.41%), Arunachal Pradesh (79.63%), Meghalaya (76.33%), Manipur (75.46%) and Nagaland (75.31%). # Data Source: India State of Forest Report (ISFR) 2019.

# Q.28) Consider the following statements regarding the National Crime Records Bureau (NCRB):

- 1. It is a statutory body under the Ministry of Home Affairs.
- 2. It stores, coordinates and disseminates information on inter-state and international criminals in India.

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

#### Correct answer: B

**Explanation:** Statement 1 is incorrect. **National Crime Records Bureau (NCRB)** was set up in the year 1986 by a Ministry of Home Affairs Resolution with the objective to function as a clearing house of information on crime and criminals.

Statement 2 is correct. The objectives of the NCRB include:

- -To function as a **clearing house of information** on crime and criminals including those operating at National and International levels so as to assists the investigators, and others in linking crimes to their perpetrators.
- -To **store, coordinate and disseminate** information on inter-state and international criminals from and to respective States, national investigating agencies, courts and prosecutors in India without having to refer to the Police Station records.
- -To collect and process **crime statistics** at the National level.
- -To coordinate, guide and assist the functioning of the State Crime Records Bureaux.
- -To evaluate, develop and modernise Crime Records Bureaux.
- # A comparative study recently released by NCRB of data on Accidental Deaths and Suicides shows that suicides in the agriculture sector have declined by 10% from 11,379 in 2016 to 10,281 in 2019.

# Q.29) Consider the following statements regarding the National Commission for Backward Classes (NCBC):

- 1. It is a Constitutional body having the Chairperson appointed by the President by warrant under his hand and seal.
- The Constitution mandates Union Government to consult the Commission on major policy matters affecting the socially and educationally backward classes.

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

#### Correct answer: C

**Explanation:** Both statements are correct.

**National Commission for Backward Classes (NCBC)** was initially constituted by the Central Govt by The National Commission for Backward Classes Act, 1993.

It has been accorded **Constitutional Status** and constituted through the Constitution (One Hundred and Second Amendment) Act, 2018 Act, whereby Article 338B has been inserted,

forming a Commission for the socially and educationally backward classes to be known as NCBC.

The **Chairperson, Vice-Chairperson and other Members** of the Commission are appointed by the President by warrant under his hand and seal. [Article 338B (3)]

# Duties of the Commission [Article 338B (5)]:

- -to investigate and monitor all matters relating to the safeguards provided for the socially and educationally backward classes;
- -to inquire into specific complaints with respect to the deprivation of rights and safeguards of the socially and educationally backward classes;
- -to participate and advise on the socio-economic development of the socially and educationally backward classes;
- -to present to the President reports upon the working of the safeguards.

The **Union and every State Government shall consult** the Commission on all major policy matters affecting the socially and educationally backward classes. [Article 338B (9)]

**Q.30)** Which of the following language(s) is/are not listed in the **Eighth Schedule** of the Constitution?

- 1. Kashmiri
- 2. Nepali
- 3. Rajasthani

Select the correct answer using the code given below:

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

#### Correct answer: C

**Explanation:** The **Eighth Schedule to the Constitution** consists of the following 22 languages:

(1) Assamese, (2) Bengali, (3) Gujarati, (4) Hindi, (5) Kannada, (6) Kashmiri, (7) Konkani, (8) Malayalam, (9) Manipuri, (10) Marathi, (11) Nepali, (12) Oriya, (13) Punjabi, (14) Sanskrit, (15) Sindhi, (16) Tamil, (17) Telugu, (18) Urdu (19) Bodo, (20) Santhali, (21) Maithili and (22) Dogri.

Of these languages, 14 were initially included in the Constitution. Sindhi language was added in 1967. Thereafter three more languages viz., Konkani, Manipuri and Nepali were included in 1992. Subsequently Bodo, Dogri, Maithili and Santhali were added in 2004.

### Q.31) Consider the following statements regarding the National Health Stack (NHS):

- 1. NITI Aayog proposed the National Health Stack as a digital health infrastructure at national level.
- 2. It proposed a Coverage and Claims platform as building blocks to support large health protection schemes.

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

# Correct answer: C

**Explanation:** Statement 1 is correct. **National Health Stack (NHS) as proposed by NITI Aayog** in its strategy paper in 2018 is digital infrastructure built with the aim of making the

health insurance system more transparent and robust, while factoring in the uniqueness of India's health sector, and the political realities of federalism

Statement 2 is correct. The key components of the National Health Stack are:

- -National Health Electronic Registries: to create a single source of truth for and manage master health data of the nation;
- -A **Coverage and Claims platform**: building blocks to support large health protection schemes, enable horizontal and vertical expansion of Rashtriya Swasthya Suraksha Mission by states and robust fraud detection;
- -A Federated **Personal Health Records (PHR)** Framework: to solve twin challenges of access to their own health data by patients and availability of health data for medical research, critical for advancing our understanding of human health;
- -A **National Health Analytics Platform**: to bring a holistic view combining information on multiple health initiatives and feed into smart policy making, for instance, through improved predictive analytics;
- -Other horizontal Components: including, and not restricted to, unique Digital Health ID, Health Data Dictionaries and Supply Chain Management for Drugs, payment gateways etc. shared across all health programs.

# Q.32) Consider the following statements regarding the **Prohibition of Child Marriage Act**, 2006:

- 1. It defines child as a male who has not completed twenty-one years of age and a female who has not completed eighteen years of age.
- 2. It treats underage marriages as invalid and prohibits any recognition to such marriages. 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

# Correct answer: A

**Explanation:** Statement 1 is correct. The **Prohibition of Child Marriage Act, 2006** defines "child" means a person who, if a male, has not completed twenty-one years of age, and if a female, has not completed eighteen years of age; "child marriage" means a marriage to which either of the contracting parties is a child.

Statement 2 is incorrect. It **treats underage marriages as valid, but voidable**. An underage marriage is valid as long as the minors involved in the marriage want it to remain valid.

The petition for such action may be filed at any time but before the child filing the petition completes two years of attaining majority.

The PCMA also treats those underage marriages as void or having no legal validity, where they involve trafficking, enticement, fraud and deceit.

# Q.33) Which of the following dynasty(s) is/are correctly matched to the region they ruled?

1. Ahom - Assam

2. Kakatiya - Andhra Pradesh

3. Chera - Kerala

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above



#### Correct answer: D

**Explanation:** Option 1 is correctly matched. The **Ahom dynasty** (1228–1826) ruled the Ahom kingdom in present-day Assam, India for nearly 600 years. The dynasty was established by Sukaphaa, a Shan prince of Mong Mao who came to Assam after crossing the Patkai Mountains.

Option 2 is correctly matched. The **Kakatiya dynasty** (12<sup>th</sup> century AD) was a South Indian dynasty whose capital was Orugallu, now known as **Warangal**. It was eventually conquered by the Delhi Sultanate.

Option 3 is correctly matched. The **Chera dynasty** was one of the principal lineages in the early history of the present-day states of **Kerala and Tamil Nadu** in southern India. Together with the Cholas and the Pandyas, the early Cheras were major powers of south India in the early centuries of the Common Era.

# Q.34) Consider the following statements regarding the PM Bhartiya Janaushadhi Priyojana (PMBJP):

- 1. Scheme provides generic medicines at affordable prices to the masses through Jan Aushadhi Kendra.
- 2. National Pharmaceutical Pricing Authority is the implementing authority of the scheme. 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

#### Correct answer: A

**Explanation:** Statement 1 is correct. **'Pradhan Mantri Bhartiya Janaushadhi Pariyojana'** aims to provide quality medicines at affordable prices to the masses through dedicated outlets called 'Pradhan Mantri Bhartiya Janaushadhi Kendra'.

These provide generic medicines at much lesser price. The potency of these medicines is same as compared to expensive branded medicines available in the open market.

Statement 2 is incorrect. **BPPI** (Bureau of Pharma PSUs of India), under the administrative control of the Department of Pharmaceuticals, Ministry of Chemicals& Fertilizers is the implementation agency for the PMBJP.

# Generic drugs are marketed under a non-proprietary or approved name rather than a proprietary or brand name. Generic drugs are equally effective and inexpensive compared to their branded counterparts.

# **Q.35)** Consider the following statements regarding **BIMSTEC**:

- 1. All members of the group share their border with the Indian Ocean.
- 2. BIMSTEC has a Permanent Secretariat in Dhaka, Bangladesh.

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

#### Correct answer: B

**Explanation:** The **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** is a regional organization comprising seven Member States lying in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity.

Statement 1 is incorrect. It constitutes **seven Member States**: five deriving from South Asia, including Bangladesh, Bhutan, India, Nepal, Sri Lanka, and two from Southeast Asia, including Myanmar and Thailand.

# Bhutan and Nepal are land-locked countries.

Statement 2 is correct. After a span of 17 years of the founding of BIMSTEC, **Permanent Secretariat** was established in **Dhaka**, Bangladesh in 2014 to serve the BIMSTEC Member States.



Q.36) What is Novichok that was in news recently?

- a) A potential COVID-19 vaccine
- b) A toxic nerve agent
- c) A newly discovered galaxy
- d) A bacterium infecting cattle population in Africa

#### Correct answer: B

**Explanation:** The name **Novichok** means "newcomer" in Russian, and applies to a group of **advanced nerve agents** developed by the Soviet Union in the 1970s and 1980s.

They were known as fourth-generation chemical weapons and were developed under a Soviet programme codenamed Foliant.

Novichok agents have similar effects to other nerve agents - they act by **blocking messages** from the nerves to the muscles, causing a collapse of many bodily functions.

While some Novichok agents are liquids, others are thought to exist in solid form. This means they could be dispersed as an ultra-fine powder.

Nerve agents enter the body **primarily through the respiratory tract**, although they may be absorbed through the eyes or skin. In the liquid state, nerve agents are hazardous via skin or eye contact and through ingestion. Generally, all nerve agents are highly toxic and fast acting.

- # Britain says Russia used Novichok to poison former spy Sergei Skripal and his daughter Yulia in the British city of Salisbury two years ago.
- # Germany says Novichok was used to poison Alexei Navalny, a critic of Russian President Vladimir Putin.

Q.37) Consider the following statements regarding the **Chemical Weapons Convention** (CWC):

- 1. The Convention prohibits the development, acquisition, stockpiling, transfer or use of chemical weapons by States Parties.
- 2. India has signed and ratified the CWC.

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

#### Correct answer: C

**Explanation:** Statement 1 is correct. The **Chemical Weapons Convention (CWC)** aims to eliminate an entire category of weapons of mass destruction by **prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons** by States Parties. States Parties, in turn, must take the steps necessary to enforce that prohibition in respect of persons (natural or legal) within their jurisdiction. All States Parties have agreed to chemically disarm by destroying any stockpiles of chemical weapons they may hold.

States Parties have also agreed to create a verification regime for certain toxic chemicals and their precursors in order to ensure that such chemicals are only used for purposes not prohibited under the Convention.

A unique feature of the Convention is its incorporation of the 'challenge inspection', whereby any State Party in doubt about another State Party's compliance can request a surprise inspection. Under the Convention's 'challenge inspection' procedure, States Parties have committed themselves to the principle of 'anytime, anywhere' inspections with no right of refusal.

Statement 2 is correct. India has signed and ratified the CWC (1996).

### **Q.38)** Consider the following statements:

- 1. The Gravitational waves, that are theorised to be disturbances in the curvature of spacetime, have never been detected in human history.
- 2. A black hole is a region of space where matter has collapsed in on itself and the gravitational pull is so strong that nothing except light can escape.

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

### Correct answer: D

**Explanation:** Statement 1 is incorrect. A **gravitational wave** is an invisible (yet incredibly fast) ripple in space. Gravitational waves travel at the speed of light (186,000 miles per second). These waves squeeze and stretch anything in their path as they pass by. A gravitational wave is an invisible (yet incredibly fast) ripple in space.

In **2015**, scientists detected gravitational waves for the very first time. They used a very sensitive instrument called LIGO (Laser Interferometer Gravitational-Wave Observatory). These first gravitational waves happened when two black holes crashed into one another. The collision happened 1.3 billion years ago.

Statement 2 is incorrect. A black hole is a region of space where matter has collapsed in on itself and the gravitational pull is so strong that nothing, not even light, can escape.

Black holes emerge from the explosive demise of certain large stars, but some are truly gargantuan and are billions of times the mass of our Sun.

Black holes are detected from the way they influence their surroundings, they produce observable gravitational waves as they spiral in to each other.

- # Scientists from LIGO and Virgo have detected the largest collision between two black holes to date, which appears to have created an "intermediate-mass" black hole.
- # LIGO-VIRGO collaboration operates three super-sensitive gravitational wave-detection systems in America and Europe.

# Q.39) Consider the following statements regarding the Group of Twenty or G20:

- 1. The G-20's primary mandate is to prevent future international financial crises and shape the global economic agenda.
- 2. India has proposed development of voluntary 'G-20 Principles on Coordinated Cross-Border Movement of People'.

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

### Correct answer: C

**Explanation:** Statement 1 is correct. The **Group of Twenty, or G20**, is the premier forum for international cooperation on the most important aspects of the international economic and financial agenda.

# The objectives of the G20 are:

- -Policy coordination between its members in order to achieve global economic stability, sustainable growth;
- -To promote financial regulations that reduce risks and prevent future financial crises; and -To create a new international financial architecture.

Statement 2 is correct. The **G20 Foreign Ministers' Extraordinary Meeting** was convened by the current G20 Chair, the Kingdom of Saudi Arabia on 3rd September, 2020.

**India** has proposed for the development of voluntary 'G-20 Principles on Coordinated Cross-Border Movement of People' with three elements: a) Standardisation of testing procedures and universal acceptability of test results; b) Standardisation of 'Quarantine procedures'; c) Standardisation of 'movement and transit' protocols.

The **G20 comprises** Argentina, Australia, Brazil, Canada, China, EU, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, UK and USA.

# Q.40) Which of the following is/are located in Manipur?

- 1. Kangla Fort
- 2. Moirang
- 3. Pakke Tiger Reserve

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

#### Correct answer: A

**Explanation:** Option 1 is correct. The **Kangla Fort** is situated along the banks of the Imphal River in the city of **Imphal, Manipur** and is also called the Palace of Kangla. The word Kangla belongs to an ancient language Meitei, which means 'dry land'.



In ancient times, this fort was the royal palace of King Pakhangba and is a structure of political and religious significance.

In 2004 the Assam Rifles moved out of Imphal's Kangla Fort, from where Manipuri kings ruled for 2,000 years. The para military force had occupied the fort for 113 years.

Option 2 is correct. **Moirang**, which is one of the largest towns in **Manipur**, has a rich history. It had served as the headquarters of Netaji Subhas Chandra Bose's Azad Hind Fauj. Moirang also has a museum of the Indian National Army

Option 3 is incorrect. **Pakke Tiger Reserve**, also known as Pakhui Tiger Reserve, is a Project Tiger reserve in **Arunachal Pradesh**.

**Q.41)** Recently certain **mobile applications** have been in India banned by invoking which of the following statutory law?

- a) Information Technology Act
- b) National Security Act
- c) Foreign Contribution (regulation) Act
- d) Unlawful Activities (Prevention) Act

#### Correct answer: A

**Explanation:** Certain mobile applications have been banned recently by invoking government's power under the Section 69A of the Information Technology Act.

Section 69A of the Information Technology Act states that "where the Central Government is satisfied that it is necessary or expedient so to do, in the interest of sovereignty and integrity of India, defense of India, security of the State, friendly relations with foreign States or public order or for preventing incitement to the commission of any cognizable offence relating to above, it may direct any agency of the Government or intermediary to block for access by the public or cause to be blocked for access by the public any information generated, transmitted, received, stored or hosted in any computer resource."

# **Q.42)** Consider the following statements regarding the **Sputnik V vaccine**:

- 1. It is a two-shot vaccine using adenovirus vector.
- 2. A gene coding S-protein of the SARS-CoV-2 has been inserted in the vector.

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

### Correct answer: C

**Explanation:** Statement 1 is correct. The Sputnik V, **Russian adenovirus vector-based vaccine** was registered by the Russian Ministry of Health on August 11 and became the first registered COVID-19 vaccine on the market.

It is a **two-shot vaccine** being developed by Russia's Gamaleya Research Institute using **adenovirus vectors (rAd26 and rAd5)** for the first and second vaccination.

Statement 2 is correct. "Vectors" are vehicles, which can induce a genetic material from another virus into a cell. The gene from adenovirus, which causes the infection, is removed while a gene with the genetic code of a **Spike protein from SARS-CoV-2** is inserted.

# Two-vector vaccine against coronavirus

#### First vaccination Vector creation Second vaccination Vector with a gene coding S protein Repeated vaccination takes place A vector is a virus that lacks a gene of coronavirus gets into a cell in 21 days responsible for reproduction and is used to transport genetic material from another virus that is being CELL CELL vaccinated against into a cell. The vector does not pose any hazard to the body. The vaccine is based on an adenoviral vector which normally causes acute respiratory viral infections SARS-COV-2 GENE CODING THE SPIKE CONSISTS OF S PROTEIN SPROTEIN The body synthesizes S protein), The vaccine based on another in response, the production adenovirus vector unknown of immunity begins to the body boosts the immune response and provides for long-lasting immunity ADENOVIRUS **ADENOVIRUS** VECTOR 1 VECTOR 2 A gene coding S protein of SARS-COV-2 spikes is inserted into each vector.

The use of two vectors is a unique technology of the Gamaleya

Center making the Russian vaccine different from other

adenovirus vector-based vaccines being developed globally

**Q.43)** Consider the following statements regarding the **Kaziranga National Park**:

- 1. The park has elephant-grass meadows, swampy lagoons and dense forests.
- 2. The park is recognized as an Important Bird Area by the BirdLife International. 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

The spikes form the "crown" from which

the virus gets its name. The SARS-COV-2

virus uses spikes to get into a cell

Correct answer: C

**Explanation:** Both statements are correct.

**Kaziranga National Park**'s 430 square kilometer area in Assam is sprinkled with **elephant-grass meadows, swampy lagoons, and dense forests** are home to more than 2200 Indian one-horned rhinoceros. Along with the iconic Greater one-horned rhinoceros, the park is the breeding ground of elephants, wild water buffalo, and swamp deer.

The park is recognized as an **Important Bird Area by BirdLife International** for the conservation of avifaunal species. Birds like lesser white-fronted goose, ferruginous duck, Baer's pochard duck and lesser adjutant, greater adjutant, black-necked stork, and Asian Openbill stork specially migrate from the Central Asia during the winter season.

Q.44) Which of the following correctly defines the term 'force majeure'?

- a) An act of compulsion being forced upon public by the government
- b) A law passed by the majority of the representatives
- c) A measure of force acting upon a celestial body by another
- d) A clause in contracts to remove liability due to unforeseeable circumstances

#### Correct answer: D

**Explanation: Force majeure** is a common clause in contracts to remove liability for natural and unavoidable catastrophes. It comes into play when unforeseeable circumstances that prevent either party from fulfilling a contract.

The provisions of 'Act of God' also have similar effect. Generally, an "Act of God" is understood to include only natural unforeseen circumstances, whereas force majeure includes both naturally occurring events and events that occur due to human intervention. However, both concepts elicit the same consequences in law.

Q.45) Consider the following statements regarding the Gangetic Dolphin:

- 1. It is the national aquatic animal of India.
- 2. They locate their prey by emitting ultrasonic sounds.

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

#### Correct answer: C

**Explanation:** Both statements are correct.

Gangetic Dolphin was declared the national aquatic animal (2009).

Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh. But the species is extinct from most of its early distribution ranges.

The Ganges river dolphin can only live in **freshwater** and is essentially **blind**. They **hunt by emitting ultrasonic sounds**, which bounces off of fish and other prey, enabling them to "see" an image in their mind.

Ganges River Dolphin is listed as **Endangered** in IUCN Red List.

# Recently the Prime Minister announced Project Dolphin on the lines of Project Tiger aimed at conserving the riverine and oceanic dolphins.

# Q.46) Which of the following institution has recently published the report "From insights to action" on Gender equality in the wake of COVID-19"?

- a) UN Women
- b) United Nations Educational, Scientific and Cultural Organization
- c) International Labour Organization
- d) Global Fund for Wome

### Correct answer: A

Explanation: 'From insights to action: Gender equality in the wake of COVID-19' has been published by the UN Women.

This publication summarizes data, research, and policy work by UN Women's Policy and Programme Division on the pandemic's impact on women and girls, including the impact on extreme poverty, employment, health, unpaid care, and violence against women and girls.

The **poverty rate for women** was earlier projected to decrease by 2.7 per cent between 2019 and 2021, but with the coming of the pandemic, it has increased to 9.1 per cent.

By 2021, for every 100 men aged 25 to 34 living in extreme poverty (living on USD 1.90 a day or less), there will be 118 women, a gap that is expected to increase to 121 women per 100 men by 2030.

The report gave **suggestions to prevent** women from falling behind permanently because of the COVID-19 pandemic. These included addressing inadequate access to affordable childcare, addressing occupational segregation and gender pay gaps.

# Q.47) Consider the following statements regarding the Repurchase (buyback) of Government securities:

- 1. It is a process whereby the Government of India and States buy back their existing securities, by redeeming them prematurely, from the holders.
- 2. It can be used for infusion of liquidity in the economy.

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

#### Correct answer: C

**Explanation:** Both statements are correct.

Repurchase (buyback) of G-Secs is a process whereby the Government of India and State Governments buy back their existing securities, by redeeming them prematurely, from the holders.

The **objectives of buyback** can be reduction of cost (by buying back high coupon securities), reduction in the number of outstanding securities and improving liquidity in the G-Secs market (by buying back illiquid securities) and infusion of liquidity in the system.

# Q.48) Consider the following statement regarding the Quadrilateral Security Dialogue (Quad):

- 1. It has been formed by a mutual-assistance treaty for strategic cooperation in the Indopacific.
- 2. India is the only BRICS member country that is also part of the Quad.

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

### Correct answer: B

**Explanation:** Statement 1 is incorrect. The **Quadrilateral Security Dialogue or Quad** is an informal strategic forum between the United States, Japan, Australia and India that is maintained by semi-regular summits and information exchanges among the member countries.

Quad, being an **informal** forum, has no formal mutual-assistance treaty, secretariat, or even a website.

Statement 2 is correct. BRICS members are Brazil, Russia, India, China, and South Africa; **India** is the only country in Quad that is a member of BRICS.

**Q.49)** Consider the following statements regarding the **Priority Sector Lending (PSL)** norms of RBI:

- 1. The small finance banks are required to extend 75 percent of their Adjusted Net Bank Credit (ANBC) to priority sector.
- 2. The Housing and Renewable Energy sectors are included in the Priority Sector under PSL norms.

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

#### Correct answer: C

**Explanation:** Statement 1 is correct. The **small finance banks** are required to extend **75 per cent of their Adjusted Net Bank Credit (ANBC)** to the sectors eligible for classification as priority sector lending (PSL) by the Reserve Bank.

The target for **Domestic scheduled commercial banks** (excluding Regional Rural Banks and Small Finance Banks) and Foreign banks with 20 branches and above is 40 per cent of Adjusted Net Bank Credit or Credit Equivalent Amount of Off-Balance Sheet Exposure, whichever is higher

Statement 2 is correct. The **categories under priority sector are**: Agriculture, Micro, Small and Medium Enterprises, Export Credit, Education, **Housing**, Social Infrastructure, **Renewable Energy** and Others.

**Q.50)** The **'two plus two dialogue'** has been in news recently, which of the following Minister(s) take part in the dialogue?

- 1. Minister of Defense
- 2. Minister of External Affairs
- 3. Minister of Commerce & Industry

Select the correct answer using the code given below:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

# Correct answer: A

**Explanation:** A 'two plus two dialogue' is a term, adopted in foreign parleys, used for installation of a dialogue mechanism between two countries' **defence and external affairs** ministries.

Government of India's Ministers of Defense and External Affairs have in past held the 'two plus two dialogue' with **Japan and United States**. Secretary level 2+2 dialog have been held with Australia.

### Q.51) Consider the following statements regarding the Wolbachia bacteria:

- 1. It is an artificially developed genus of intracellular bacteria.
- 2. It is used to prevent transmission of mosquito-borne viral diseases such as dengue. 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

#### Correct answer: B

**Explanation:** Statement 1 is incorrect. **Wolbachia** are extremely common and **natural bacteria** that occur naturally in **60 per cent of insect species**, including some mosquitoes, fruit flies, moths, dragonflies

Statement 2 is correct. It is often reported to be **used in prevention of mosquito-borne viral diseases**. However, it is not usually found in the Aedes aegypti mosquito (responsible for transmitting viruses such as Zika, dengue and chikungunya).

Prevention methods involve introducing Wolbachia into populations of Aedes aegypti. When the Wolbachia-infected mosquitoes breed with their wild counterparts, the percentage of mosquitoes carrying the bacterium grows.

Wolbachia has been seen to **decrease the lifespan of Aedes aegypti**, carriers of mosquitoborne diseases, and decreases their efficacy of pathogen transmission.

The **World Mosquito Program** uses safe and natural bacteria called **Wolba**chia to prevent the transmission of mosquito-borne viral diseases such as dengue, Zika, chikungunya and yellow fever.

# Q.52) Which of the following statement correctly defines Haemodynamic Monitoring?

- a) Analyses of the antibody production in the immune system
- b) Study of blood flows through the cardiovascular system
- c) Observation of pressure-temperature correlation of Earth's atmosphere
- d) Monitoring of oxygen requirements of an eco-sensitive zone

# Correct answer: B

**Explanation: Haemodynamic monitoring** is the study of how **blood flows** through the cardiovascular system (i.e. the heart and blood vessels). The purpose of the cardiovascular system is to deliver blood carrying oxygen and other vital nutrients to the cells and tissues the body.

The results of haemodynamic monitoring allow the healthcare team to check whether a person has:

- -enough blood, to decide whether more or less is needed
- -a suitable blood pressure
- -structural problems with their heart that stops it from working properly
- -good heart rate, to decide the heart needs more support.

# Q.53) Consider the following statements regarding the Open Market Operations (OMOs):

- 1. These are the market operations conducted by the RBI by way of sale/ purchase of Government Securities to/ from the market.
- 2. RBI resorts to sale of securities if there is excess liquidity in the market.

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

#### Correct answer: C

**Explanation:** Both statements are correct.

**Open Market Operations (OMOs)** are the market operations conducted by the RBI by way of **sale/ purchase of G-Secs** to/ from the market with an objective to adjust the rupee liquidity conditions in the market on a durable basis.

When the RBI feels that there is excess liquidity in the market, it resorts to sale of securities thereby sucking out the rupee liquidity. Similarly, when the liquidity conditions are tight, RBI may buy securities from the market, thereby releasing liquidity into the market.

Q.54) Which of the following institution/organization has published the report 'The State of Young Child in India'?

- a) NITI Aayog
- b) Mobile Creches
- c) Save the Children Fund
- d) United Nations Children's Fund

#### Correct answer: B

**Explanation:** The Vice President recently released 'The State of Young Child in India' report prepared by Mobile Creches a policy advocacy organisation which works with the underprivileged children across India. It a comprehensive account of the challenges related to early child development in India.

The **Young Child Outcomes Index** in the report measures health, nutrition and cognitive growth with the help of indicators such as infant mortality rate, stunting and net attendance at the primary school level. As per the report Kerala, Goa, Tripura, Tamil Nadu and Mizoram are among the top five States for well-being of children.

The report has also developed the **Young Child Environment Index** to understand the policy and environment enablers that influence a child's well-being. According to the environment index, Kerala, Goa, Sikkim, Punjab and Himachal Pradesh secured the top five positions.

# Q.55) Consider the following statements regarding the Association of Renewable Energy Agencies of States (AREAS):

- 1. It is an initiative of the NITI Aayog in collaboration with the International Renewable Energy Agency (IRENA).
- 2. It provides a knowledge sharing platform for the States in renewable energy sector. 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

### Correct answer: B

Explanation: Statement 1 is incorrect. Association of Renewable Energy Agencies of States (AREAS) is an initiative of the Ministry of New & Renewable Energy (MNRE).

Statement 2 is correct. Ministry of New & Renewable Energy (MNRE) is the nodal agency at the central level for promotion of grid-connected and off-grid renewable energy in the country. Ministry's programmes are implemented in close coordination with **State Nodal Agencies (SNAs)** for renewable energy (RE).

Over the period the SNAs have developed considerable knowledge and experience in planning and implementation of RE programmes. For SNAs to **interact and learn from each other's experiences** and also share their best practices and knowledge regarding technologies and schemes/programmes, MNRE took an initiative in this regard in consultation with SNAs, and Association of Renewable Energy Agencies of States (AREAS) was formed and registered as a society in 2014.

# Q.56) The 'International Principles and Guidelines on Access to Justice for Persons with Disabilities' have been published recently by which of the following institution?

- a) Amnesty International
- b) Office of the UN High Commissioner for Human Rights
- c) World Justice Project
- d) United Nations Educational, Scientific and Cultural Organization

#### Correct answer: B

**Explanation:** Published recently by the **Office of the UN High Commissioner for Human Rights**, the International Principles and Guidelines on Access to Justice for Persons with Disabilities were adopted jointly by the UN Special Rapporteur on the rights of persons with disabilities, the Committee on the Rights of Persons with Disabilities, and the Special Envoy of the UN Secretary-General on Disability and Accessibility.

They have been **endorsed by** the ICJ and the International Disability Alliance.

# Q.57) Consider the following statements regarding the **Accelerating CCS Technologies** (ACT) initiative:

- 1. It is an international initiative to facilitate research development in CO2 capture, transport, utilization and storage.
- 2. India is member of the ACT initiative.

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

#### Correct answer: C

**Explanation:** Statement 1 is correct. **Accelerating CCUS Technologies (ACT)** is an initiative to facilitate the emergence of **CO2 Capture, Utilisation and Storage (CCUS)** via transnational funding of projects aimed at accelerating and maturing CCUS technology through targeted innovation and research activities.

ACT is an ERA NET Cofund, which is a tool established by the **European Commission** under the Horizon 2020 programme for research and innovation.

Statement 2 is correct. The ACT members are funding agencies from: The Alberta province in Canada, Denmark, France, Germany, Greece, **India**, Italy, the Netherlands, Norway, the Nordic Region, Romania, Spain, Switzerland, Turkey, UK, and the USA.

# Department of Science & Technology (DST) recently invited proposals from Indian researchers in the area of Carbon Capture, Utilisation & Storage (CCUS) under ACT initiative.

# Q.58) Consider the following statements regarding the International Covenant on Civil and Political Rights (ICCPR):

- 1. It forms part of the International Bill of Human Rights.
- 2. India has acceded to the ICCPR.

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

### Correct answer: C

**Explanation:** Statement 1 is correct. The **International Bill of Human Rights** consists of the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, and the International Covenant on Civil and Political Rights (**ICCPR**) and its two Optional Protocols.

The **ICCPR obligates countries** that have ratified the treaty to protect and preserve basic human rights, such as: the right to life and human dignity; equality before the law; freedom of speech, assembly, and association; religious freedom and privacy; freedom from torture, ill-treatment, and arbitrary detention; gender equality; the right to a fair trial; right family life and family unity; and minority rights.

Statement 2 is correct. India acceded to the ICCPR on 10 Apr 1979.

DATE OF ACCESSION / RATIFICATION					
India ratified the Convention on 3 December 1968 with certain reservations					
India acceded to the Convention on 10 April 1979					
India acceded to the Convention on 10 April 1979					
India signed the Convention on 30 July 1980 and ratified it on 9 July 1993 with certain reservations					
India acceded to the Convention on 11 December 1992					
India ratified the Convention on 1 October 2007					
India ratified the Optional Protocol on 30 November 2005					
India ratified the Optional Protocol on 16 August 2005					

# Q.59) Consider the following statements regarding the Agricultural and Processed Food Products Export Development Authority (APEDA):

- 1. It is a statutory body under the Ministry of Food Processing Industries.
- 2. It is the authority for fixing of standards and specifications of certain food products for the purpose of exports.

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

#### Correct answer: B

**Explanation:** Statement 1 is incorrect. Agricultural and Processed Food Products Export Development Authority (APEDA) a statutory body under the **Ministry of Commerce and Industry** established by **Agricultural and Processed Food Products Export Development Authority Act 1985**.

Statement 2 is correct. The **functions of APEDA** include:

- -Development of industries relating to the scheduled products for export
- -Fixing of **standards and specifications** for the scheduled products for the purpose of exports;
- -Improving of packaging of the Scheduled products;
- -Improving of marketing of the Scheduled products outside India;
- -Promotion of export-oriented production and development of the Scheduled products;
- -Training in various aspects of the industries connected with the scheduled products.
- # "Scheduled products" means any of the agricultural or processed food products included in the Schedule of the Act, which includes Fruits, Vegetables and their Products, Meat and Meat Products, Poultry and Poultry Products, Dairy Products etc.

# Q.60) Which of the following country(s) is/are bordered by both, Black Sea and Mediterranean Sea?

- 1. Turkey
- 2. Cyprus
- 3. Greece

Select the correct answer using the code given below:

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

### Correct answer: A

Explanation: Turkey borders both Black Sea as well as Mediterranean Sea.

