

Q.1) Which of the following best describes Avangard, often in news?

- a) Russia's hypersonic glide vehicle.
- b) Micro drones of Brazil for avian survey
- c) China's mission to the far side of the Moon.
- d) Israeli missile defence system

Q.1) Solution (a)

AVANGARD

- Russia's nuclear capable, hypersonic boost glide vehicle.
- Capable of hitting target in excess of 6000 km
- Can travel at a speed of 20 Mach (20 times the speed of sound).

Q.2) Which of the following are bilateral exercises between India and one of the BIMSTEC countries?

1. Ekuverin
2. Sampriti
3. MILEX
4. Samudra Lakshmana
5. Bold Kuruksheta
6. Surya Kiran

Select the correct option –

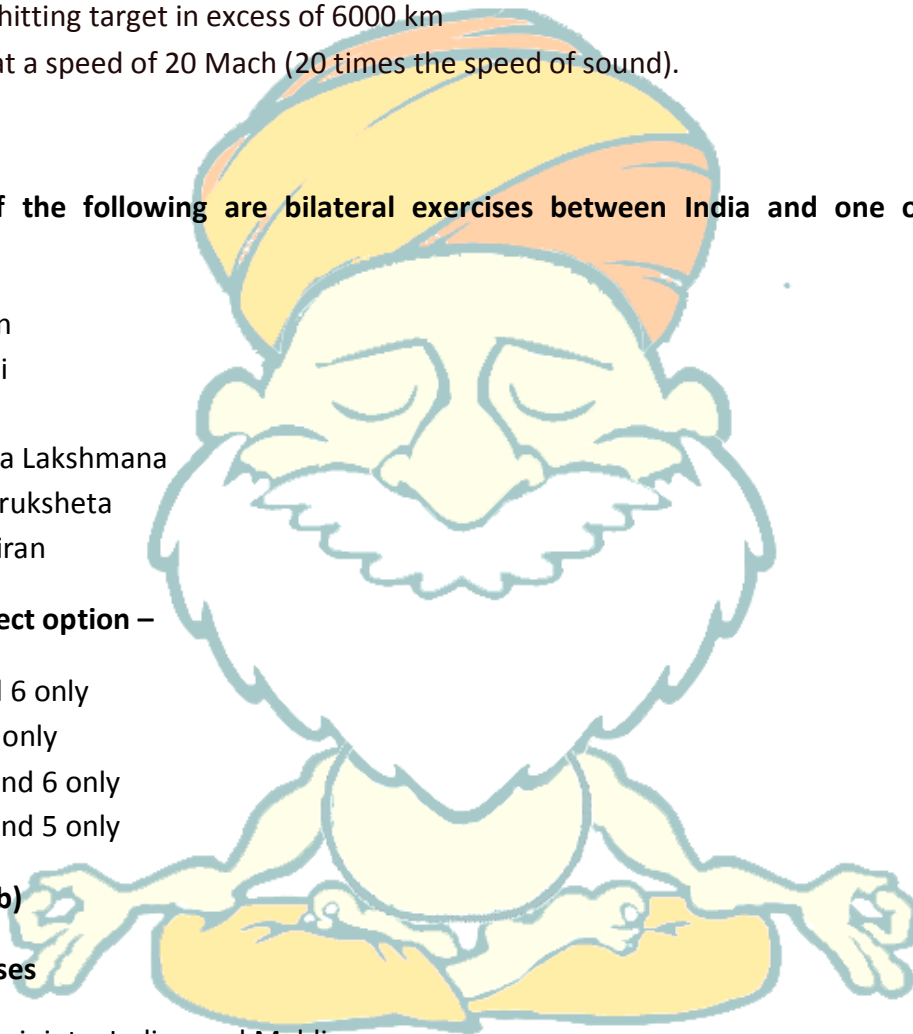
- a) 1, 2 and 6 only
- b) 2 and 6 only
- c) 2, 3, 4 and 6 only
- d) 2, 3, 4 and 5 only

Q.2) Solution (b)

Military exercises

- Ekuverin joint – Indian and Maldives
- Sampriti – India and Bangladesh
- MILEX – Multilateral exercise of BIMSTEC
- Samudra Lakshmana –Navy India-Malaysia
- Bold Kuruksheta – India-Singapore
- Surya Kiran – India and Nepal

The BIMSTEC member states—Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal and Bhutan



Q.3) Consider the following statements regarding Hyperspectral Imaging Program -

1. It is a joint initiative of DRDO and ISRO.
2. It will help detect the presence of a human even below dense trees or inside a structure.
3. Images will be captured through optical and infrared sensors through satellite in Low Earth Orbit.

Select the correct option –

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

Q.3) Solution (b)

Hyperspectral Imaging Program

- The **Indian Air Force (IAF)** has commissioned hyper spectral imagery programme, a first for the country to locate and identify suspicious movements.
- This aerial surveillance system is being developed primarily for monitoring suspicious movements in areas with dense tree cover along the border.
- The technology can also be deployed in agriculture for monitoring drought, disease and nutrient stress or identifying soil moisture.
- **The program will be carried out through drones.**
- It will track unwanted human presence, their numbers and locations with optical and infrared sensors. It can detect human presence from air even if there a cloud covers dense fog or snow cover.
- The data will be analysed with deep learning algorithms and immediately relayed to security forces.
- IAF has roped in former NASA scientist Kumar Krishen as the chief technologist.

Q.4) What is Poseidon with respect to defence technology?

- a) Anti-Submarine Warfare aircraft which India plans to acquire from Israel.
- b) Anti-Submarine Warfare aircraft which India plans to acquire from United States.
- c) Naval multi-role helicopter which India plans to acquire from United States.
- d) Multirole combat fighter aircraft which India plans to acquire from Russia.

Q.4) Solution (b)

POSEIDON

- **Anti-Submarine Warfare aircraft, which India plans to acquire from USA.**
- It is a boost to maritime ISR capabilities (intelligence, surveillance and reconnaissance)

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- Long-range maritime patrol aircraft capable of undersea surveillance from a height of upto 40000 ft.
- It has operational speed of 450 mph and a range of 4,500 nautical miles.
- It is equipped with Active Electronically Scanned Array (AESA) radars capable of engaging multiple targets simultaneously.
- Magnetic Anomaly Detection (MAD) radar will help locate submarines in deep seas.

Q.5) Which of the following statement is incorrect?

- a) Ghatak is India's 1st stealth unmanned combat aerial vehicle.
- b) Lakshya is India's 1st indigenously built reusable aerial target system.
- c) Astra is India's 1st air to air missile developed by India.
- d) Nirbhaya is 1st indigenously developed long range cruise missile flying at high altitudes.

Q.5) Solution (d)

GHATAK – India's *1st stealth unmanned combat* aerial vehicle

LAKSHYA

- 1st indigenously built reusable aerial target system.
- Pilotless drone to serve as aerial target for the training of air defence artillery weapon crews
- Lakshya-2 is an advanced variant and has autonomous flight capability even at low level.
- It is suitable for training of crews for operating beyond visual range (BVR) and cruise missiles

ASTRA

- It is a BvRAAM (Beyond Visual Range Air to Air Missile).
- **1st air to air missile developed by India.**
- Capable of engaging targets at varying range and altitudes.
- Both short range targets at a distance of 20 km and long range targets up to a distance of 80-110 km.

NIRBHAY: Subsonic Cruise Missile

Range: 750-1000 Km; **Weapon Payload:** 500 Kg

- Long range sub-sonic cruise missile.
- 1st indigenously developed long range cruise missile flying at **low altitudes**.
- It will arm the army, the navy and the air force.
- **Speed:** Subsonic speeds of 0.7 mach. (speed of sound)
- **Range:** Long range of 700 to 1000 km.
- Can fly at tree-top altitudes as low as 10 m. (now tested for 5 m)

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- Capable of delivering nuclear warheads of 200-300 kg.
- 2-stage solid fuelled cruise missile.
- As a result it has terrain-hugging capability and sea skimming capability and thus go undetected by enemy radars.

Q.6) Consider the following about Indigenous 'Parth' gunshot locator device –

1. It has been procured by ministry of defence under Buy {Indian-IDDM (Indigenously Designed, Developed and Manufactured)} category of Defence Procurement Procedure – 2016.
2. It can detect the exact location of a bullet from a distance of 400m.

Select the correct option –

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

Q.6) Solution (b)

The Indigenous 'Parth' gunshot locator device was showcased during the Def-Expo 2020 in Lucknow. The device is jointly developed by an army institute and a private firm. It can detect the exact location of a bullet from a distance of 400 m and will help with locating and neutralising terrorist faster.

Q.7) Consider the following statements –

1. First India Africa Defence Ministers Conclave was held in 2020.
2. All African nations participated in it.
3. A declaration was made to strengthen Asia-Africa Growth Corridor to strategically counter China's One Belt One Road initiative.

Select the correct option –

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

Q.7) Solution (a)

Statement 2 is incorrect. "All" MOSTY makes the statement wrong. Actually 38 African countries participated.

Statement 3 is purely imaginary in nature.

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The 1st ever India Africa Defence Ministers Conclave was held at Lucknow, in conjunction with DEFEXPO INDIA in February 2020. This is the first in the series of Pan Africa events at the Ministerial level in the run-up to India Africa Forum Summit IV.

A Joint Declaration - "Lucknow Declaration", was adopted after conclusion of IADMC 2020.

Over 154 delegates from Africa including Defence Ministers from 14 African countries, Member of Parliament, 19 Defence and Service Chiefs and 8 Permanent Secretaries from **38 African countries** participated in this Conclave attesting to the high priority accorded to India-Africa engagement in defence and security.

The Leaders recognised the importance of the oceans and seas to the livelihood of people and maritime security. Participating countries sought to increase cooperation in securing sea lines of communications, preventing maritime crimes, disaster, piracy, illegal, unregulated and unreported fishing through sharing of information and surveillance.

Defence Ministers also called for deeper cooperation in the domain of defence industries including through investments, joint venture in defence equipment software, digital defence, research and development, provisioning of defence equipment, spares and their maintenance on sustainable and mutually beneficial terms.

Q.8) Consider the following pairs

Defence equipment	Exporting Country
1. US-2 Amphibious Aircraft	Japan
2. Predator-B	Israel
3. Heron	United States

Which of the pairs given above is/are correctly matched?

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

Q.8) Solution (a)

Defence equipment	Exporting Country
1. US-2 Amphibious Aircraft	Japan
2. Predator-B	United States
3. Heron	Israel

Q.9) Consider the following statements regarding MISSION SHAKTI –

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1. It was technology demonstration by ISRO to show India's capability to destroy a satellite in the low earth orbit using an Anti-Satellite missile.
2. India became only the 4th country to conduct an Anti-Satellite missile test.

Select the correct option –

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

Q.9) Solution (b)

MISSION SHAKTI

- Under Mission Shakti, India demonstrated the capability to destroy a satellite in **the low earth orbit** using an anti-satellite missile.
- This was carried out by **DRDO**.
- India became only the 4th country to conduct an Anti-Satellite missile test after USA, Russia and China.

TARGET

- Microsat R was a military imaging satellite placed in an orbit 274 km above the Earth surface with an orbital velocity of 7.8km/s.

TECHNOLOGY: 'HIT TO KILL'

- The anti- satellite test involved the 'hit to kill' missile technology.
- Under the 'hit to kill' technology, a missile is shot at the satellite in order to hit and kill the satellite.

Q.10) What is 'Sagarika' in the context of Indian defence technology?

- a) Nuclear-powered submarine
- b) Torpedo launch and recovery vessel
- c) Nuclear capable submarine-launched ballistic missile
- d) Nuclear-powered aircraft carrier

Q.10) Solution (c)

Sagarika, also known by the code names K-15, is a nuclear-capable submarine-launched ballistic missile (SLBM) with a range of 750 kilometres. It belongs to the K Missile family and forms a part of India's nuclear triad, and will provide retaliatory nuclear strike capability.

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Q.11) Which of the following statements is/are correct?

1. Prithvi is a surface-to-surface short-range ballistic missile.
2. Trishul is a short range surface-to-surface missile.
3. NAG is an anti-tank guided missile.

Select the correct answer using the code given below:

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

Q.11) Solution (a)

PRITHVI-I – Range: 150 KM; Weapon Payload: 1000 kg

PRITHVI-II – Range: 350 KM; Weapon Payload: 500 Kg

PRITHVI-III – Range: 350 KM; Weapon Payload: 1000 kg

TRISHUL – Range: 9-12 Km; Weapon Payload: 5 Kg - Short range low-level surface-to-air missile.

NAG

- 3rd generation anti-tank missile, best in its class for Indian conditions.
- Fire and forget capability.
- Imaging Infrared(IIR) guidance with day and night capability
- Weight - 48 Kg and therefore fired from a BMP-2 vehicle called **Namica (Nag Missile Carrier)**

Q.12) Consider the following pairs –

Defence equipment	Description
1. Dongfeng missiles	China's intercontinental ballistic missile
2. Kinzhal	Russia's nuclear capable air launched ballistic missile.
3. ARIHANT	Nuclear-powered cruise missile submarine
4. SUKHOI	Combat fighter aircraft jointly developed by Russia and India.
5. DHRUV	Utility helicopter developed and manufactured by DRDO.

Select the correct option –

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1, 2 and 4 only
- d) All of the above

Q.12) Solution (c)

Defence equipment	Description
1. Dongfeng missiles -17	China's hypersonic boost-glide missile
2. Kinzhal	Russia's nuclear capable air launched ballistic missile.
3. ARIHANT	Nuclear-powered ballistic missile submarine
4. SUKHOI	Combat fighter aircraft jointly developed by Russia and India.
5. DHRUV	Utility helicopter developed and manufactured by HAL .

Q.13) Which of the following countries possess hypersonic cruise missiles capability?

1. United states
2. Russia
3. China
4. India
5. Israel

Select the correct option –

- a) 2 and 3 only
- b) 1, 2 and 3 only
- c) 1, 2, 3 and 4 only
- d) All of the above

Q.13) Solution (a)

Dongfeng missile -17 is China's hypersonic boost-glide missile.

Avangard is Russia's nuclear capable, hypersonic boost glide vehicle.

U.S does not possess a hypersonic missile yet.

India is in the process of making Brahmos-II which will be hypersonic missile

Q.14) Consider the following statements regarding Chief of Defence Staff –

1. He is principal Military Advisor to the Union Defence Minister on all Tri-Services matters.

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2. He will not exercise any military command.
3. He will command tri-service agencies related to Cyber and Space.
4. He will head the Defence Acquisition Council.

Select the correct option –

- a) 1 and 2 only
- b) 1, 2 and 3 only
- c) 1, 3 and 4 only
- d) All of the above

Q.14) Solution (b)

Chief of Defence Staff

- A 4 star general

IMPORTANT FUNCTIONS

- Principal Military Advisor to the Union Defence Minister on all Tri-Services matters.
- Will not exercise any military command, including over the three Service Chiefs
- Act as the secretary of Department of Military Affairs
- Permanent Chairman of the Chiefs of Staff Committee
- Will command Tri-service agencies related to Cyber and Space
- **Will be member of Defence Acquisition Council**
- Military Adviser to the Nuclear Command Authority

Q.15) Consider the following statements regarding newly constituted Department of Military Affairs –

- a) Chief of Defence Staff will act as Secretary to the department.
- b) It will come directly under Prime Minister's Office.
- c) It will do the direct oversight of critically important projects of Defence Research and Development Organisation.

Select the correct option –

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

Q.15) Solution (a)

Statement 2 is incorrect – Department of Military Affairs (DMA) is the department in charge of military matters within the **Ministry of Defence**.

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Statement 3 is correct – this can be guessed as statement 2 is incorrect.

Department of Military Affairs (DMA)

A new Department of Military Affairs was created by making amendments in the Allocation of Business Rules.

DMA is the department in charge of military matters within the **Ministry of Defence**.

As per the Second Schedule to Government of India (Allocation of Business) Rules 1961, the following subjects were allocated to DMA:-

- India's Armed Force.
- Integrated Headquarters of the Ministry of Defence comprising of Army Headquarters, Naval Headquarters, Air Headquarters and Defence Staff Headquarters
- Territorial Army
- Procurement exclusive to the Services except capital acquisitions,
- Promoting jointness in procurement, training and staffing
- Facilitation of restructuring of Military Commands.
- Promoting use of indigenous equipment by the Services.

Q.16) Consider the following statements –

1. Information Fusion Centre – Indian Ocean Region (IFC-IOR) has been formed under the aegis of Ministry of Shipping.
2. It has opened many regional centres in IOR countries to create coastal radar chains to generate a seamless real-time picture of the nearly 7,500-km coastline.

Select the correct option –

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

Q.16) Solution (d)

Statement 1 is incorrect – It will be managed by Indian Navy. It comes under the aegis of **Ministry of defence**.

Statement 2 is incorrect – There will be cooperation with many countries in Indian Ocean Region. However there are no regional centres of IFC-IOR in these countries.

INFORMATION FUSION CENTRE-IOR

The IFC-IOR is established as a real time maritime information sharing hub for Indian Ocean region. It will be managed by Indian Navy. It comes under the aegis of **Ministry of defence**.

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AIM

To keep track of both conventional and unconventional threats in our primary area of geopolitical interest spreading from the Persian Gulf to well beyond the Malacca Strait.

FUNCTIONS

1. The IFC-IOR will help collate shipping data from –
 - Partner countries with whom we have white shipping agreements (US, UK, France, Australia, Brazil, Israel, Vietnam, Oman and Mauritius).
 - Multi-national networks for exchange of shipping data (For instance, Trans Regional Maritime Network signed in December 2018).
 - Other Maritime Information Centers.
2. It also facilitates dissemination of maritime security and safety information to partner nations, constructs and agencies.
3. Now India has extended the facility to other participating countries of the Goa Maritime Conclave including Indian Ocean littoral countries, including Indonesia, Malaysia, Singapore and Thailand from South East Asia.

Q.17) BOLD-QIT is often seen in news. Which is it most closely related to?

- a) Radar based early warning technology
- b) Border management
- c) High temperature resistant material
- d) Stealth technology

Q.17) Solution (b)

BOLD-QIT (BORDER ELECTRONICALLY DOMINATED QRT INTERCEPTION TECHNIQUE)

- The project was conceived of in 2017 under Comprehensive Integrated Border Management System.
- It primarily involves installation of technical systems to equip border area with sensors.
- Under the project the entire span of riverine border is covered with a data network using various communication devices.
- The communication devices used in the data network include microwave communication, OFC cables, DMR communication, day and night surveillance cameras and intrusion detection system.
- The various devices under the data network feed signals to BSF control rooms.
- This ensures quick reaction teams (QRTs) from BSF in handling cross-border crimes.
- Since electronic communication devices are used to ensure quick reaction time from BSF in border surveillance, the project is named BOLD-QRT.

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- Recently the riverine border at Dhubri, Assam between India and Bangladesh is now secured with electronic surveillance with the formal launch of BOLD-QIT project.

Q.18) Consider the following statements regarding Multi-lateral Naval Exercise (MILAN) –

1. It is conducted under the aegis of Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).
2. India will host MILAN for the first time in 2020.
3. It includes simulation of complex operational scenarios, tactical manoeuvres and disaster preparedness.

Select the correct option –

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

Q.18) Solution (d)

MILAN

The Indian Navy has postponed its multi-nation mega naval exercise 'MILAN' due to continuing spread of the coronavirus.

MILAN (11th edition) was scheduled to be held in Visakhapatnam from 18th - 28th March 2020.

- It is a biennial, multilateral naval exercise **conducted by India**.
- The Navy has held 10 editions of the Milan exercise, with the theme of “synergy across the seas” to enhance professional interactions between friendly foreign navies and learn best practices from each other, **since 1995**.
- The exercise includes exercises at sea in multi-national groupings with seamanship drills, simulation of complex operational scenarios and tactical manoeuvres. **[However there is no simulated exercise for disaster preparedness. Although the exercise will help in rescue operations during disaster]**
- It was conducted at the Andaman and Nicobar Command until 2018.
- It is held **under the aegis of Eastern Naval Command**.
- Over 40 countries were expected to participate in the exercise in 2020.

Q.19) Consider the following statements regarding Outer Space Treaty of 1967 –

1. It bars states party to the treaty from placing weapons of mass destruction in earth orbit, installing them on the Moon or any other celestial body, or otherwise stationing them in outer space.

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2. It comes under the aegis of United Nations.
3. India has signed but not ratified the treaty.
4. U.S and China objected to India's recent successful anti-satellite (ASAT) missile test citing this treaty.

Select the correct option –

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

Q.19) Solution (b)

Statement 3 is incorrect – India has ratified the treaty.

Statement 4 is incorrect – it is factually incorrect.

OUTER SPACE TREATY 1967

- According to this treaty, outer space shall be used only for peaceful purposes.
- It prohibits countries from placing into orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction.
- It requires that celestial bodies shall be used by all parties exclusively for peaceful purposes and no weapon can be stationed on them.
- However Outer Space Treaty by itself does not prevent arms race in space.
- India is a party to Outer Space Treaty
- 50th anniversary of United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE+50) took place in 2018.

Q.20) Consider the following statements regarding Airborne Early Warning and Control System (AEW&C) of India –

1. It has been developed with collaboration of DRDO and IAF.
2. It is constituted by PHALCON of Israel and the indigenous NETRA only.

Select the correct option –

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

Q.20) Solution (c)

The Airborne Surveillance System is a game changer in air warfare. The AEW&C System is a system of systems populated with state-of-the art Active Electronically Scanned Radar, Secondary Surveillance

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Radar, Electronic and Communication Counter Measures, LOS (Line of Sight) and beyond LOS data link, voice communication system and self-protection suite.

This system has been developed and evaluated through collaborative efforts between DRDO and the IAF.

PHALCON – AWACS procured from Israel

NETRA

- Airborne Early Warning and Control (AEW&C) system indigenously developed by DRDO.
- Mounted on an Embraer aircraft was for the 1st time used in an aerial combat by IAF in the Balakot airstrike.

The IAF currently operates three Israeli Phalcon AWACS and three indigenous NETRA Airborne Early Warning and Control (AEW&C) systems mounted on Embraer aircraft.

Q.21) Consider the following statements with respect to 'Barak River'.

1. It flows only through India, whereas the river basin extends to Bangladesh.
2. The river has its source in the state of Mizoram.

Select the correct statements

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

Q.21) Solution (d)

The Barak River is a 900-kilometre-long river flowing through the states of Manipur, Nagaland, Mizoram and Assam in India and into the Bay of Bengal via Bangladesh.

From its source at Liyai Kullen Village in Manipur state of India wherein the majority of the local population belongs to the Poumai Naga tribe, the river is known as Vourei.

Q.22) Consider the following statements with respect to 'Central Public Works Department (CPWD)'

1. It is under the aegis of the Ministry of Home Affairs.
2. It came into existence in 1805 when Lord Bentick established a central agency for execution of public works and set up Ajmer Provincial Division.

Select the correct statements

- a) 1 Only

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- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.22) Solution (d)

The Central Public Works Department, under the Ministry of Urban Development now MoHUA (Ministry of Housing and Urban Affairs), deals with buildings, roads, bridges, flyovers, complicated structures like stadiums, auditoriums, laboratories, bunkers, border fencing, border roads (hill roads), etc.

CPWD came into existence in July 1854 when Lord Dalhousie established a central agency for execution of public works and set up Ajmer Provincial Division.

Q.23) 'World Population Prospects 2019' was released by

- a) World Economic Forum
- b) World Health Organisation
- c) International Labour Organisation
- d) None of the above

Q.23) Solution (d)

World Population Prospects 2019 was released by the Population Division of the UN Department of Economic and Social Affairs.

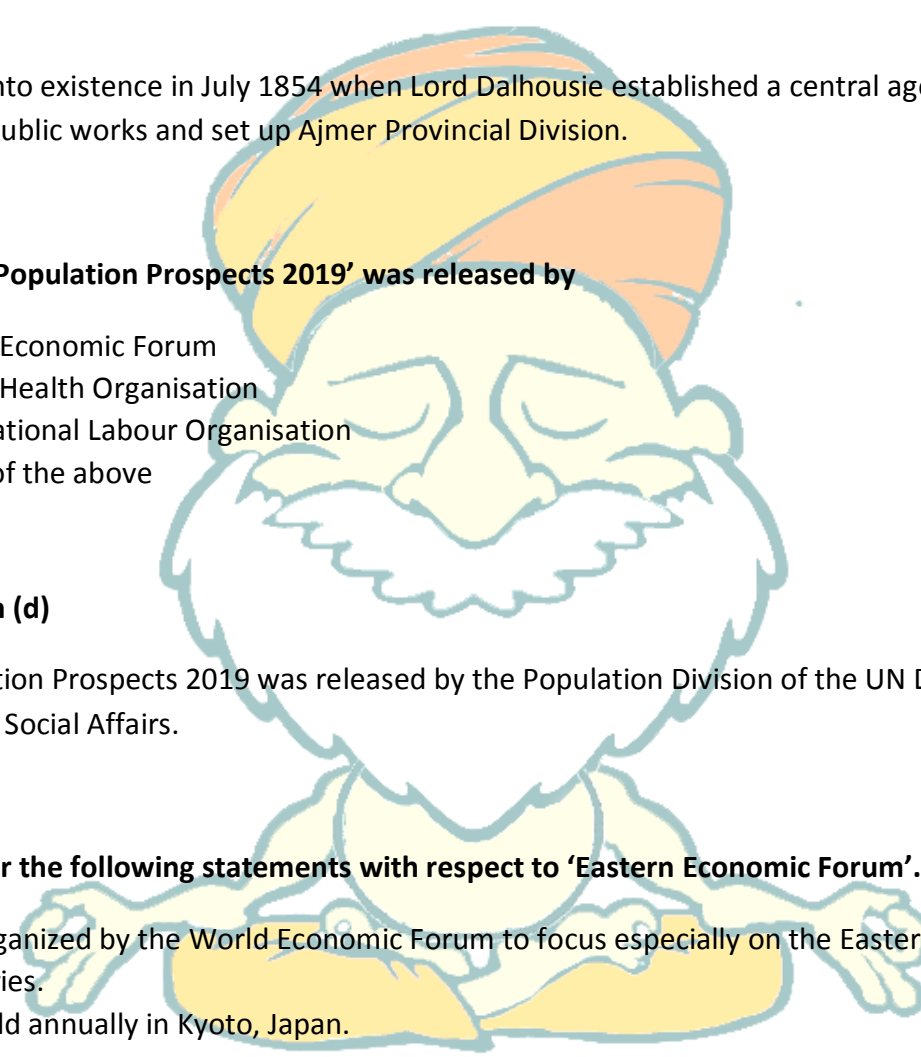
Q.24) Consider the following statements with respect to 'Eastern Economic Forum'.

1. It is organized by the World Economic Forum to focus especially on the Eastern Asian Countries.
2. It is held annually in Kyoto, Japan.

Select the correct statements

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

Q.24) Solution (d)



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It is an international forum held each year in Vladivostok, Russia, for the purpose of encouraging foreign investment in the Russian Far East.

Q.25) _____ is the first country in the world to issue Biometric Seafarer Identity Document (BSID).

- a) India
- b) Australia
- c) Japan
- d) USA

Q.25) Solution (a)

Biometric Seafarer Identity Document (BSID)

- India has become the first country in the world to issue Biometric Seafarer Identity Document (BSID), capturing the facial bio-metric data of seafarers.
- The new facial biometric technology is a marked improvement over the two finger or iris based bio-metric data, with modern security features.
- It will make the identification of the SID holder more reliable and efficient, while protecting their dignity and privacy.
- The new card is in confirmation of the Convention No. 185 of the International Labour Organisation on BSID. India ratified the Convention in October 2015.
- In India the BSID project has been taken up in collaboration with Centre for Development of Advanced Computing (CDAC), Mumbai. The Government notified the Merchant Shipping (Seafarers Bio-metric Identification Document) Rules in 2016. The issuance of SID involves the collection of biometric and demographic details of the seafarers, their verification and then issuance of the card to them.
- Every Indian seafarer who possesses a valid Continuous Discharge Certificate issued by the Govt. of India will be eligible for issue of a BSID.

Q.26) Consider the following statements with respect to 'New York Declaration on Forests'.

1. It is a voluntary and non-binding international declaration to take action to halt global deforestation.
2. It was first endorsed during the 2015 United Nations Climate Change Conference, COP 21 in Paris.

Select the correct statements

- a) 1 Only

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- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.26) Solution (a)

The New York Declaration on Forests is a voluntary and non-legally binding political declaration which grew out of dialogue among governments, companies and civil society, spurred by the United Nations Secretary-General's Climate Summit held in New York in 2014.

The Declaration pledges to halve the rate of deforestation by 2020, to end it by 2030, and to restore hundreds of millions of acres of degraded land. The proposed land restoration is described as covering "an area larger than India".

Q.27) 'Western Ghats Ecology Expert Panel (WGEEP)' was chaired by

- a) Krishnaswamy Kasturirangan
- b) Madhav Gadgil
- c) Oommen V Oommen
- d) Bibek Debroy

Q.27) Solution (b)

The Western Ghats Ecology Expert Panel (WGEEP), also known as the Gadgil Commission after its chairman Madhav Gadgil, was an environmental research commission appointed by the Ministry of Environment and Forest.

The Expert Panel approached the project through a set of tasks such as:

- Compilation of readily available information about Western Ghats
- Development of Geo-spatial database based on environmental sensitivity, and
- Consultation with Government bodies and Civil society groups.

Q.28) Consider the following statements with respect to 'the Bank for International Settlements (BIS)'.

1. Its head office is in Basel, Switzerland and it has two representative offices in Hong Kong SAR and in Mexico City.
2. It was established in 1930 by an intergovernmental agreement between the members of the Group of Seven (G7).

Select the correct statements

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

Q.28) Solution (a)

The Bank for International Settlements (BIS) is an international financial institution owned by central banks which "fosters international monetary and financial cooperation and serves as a bank for central banks". The BIS carries out its work through its meetings, programmes and through the Basel Process – hosting international groups pursuing global financial stability and facilitating their interaction. It also provides banking services, but only to central banks and other international organizations. It is based in Basel, Switzerland, with representative offices in Hong Kong and Mexico City.

The BIS was established in 1930 by an intergovernmental agreement between Germany, Belgium, France, the United Kingdom, Italy, Japan, the United States, and Switzerland.

Q.29) Which of the following statements with respect to 'Magnetospheric Multiscale (MMS)' mission is/are correct?

- a) It was launched by ISRO and Roscosmos.
- b) It was launched to study Earth's magnetosphere.
- c) Both (a) and (b)
- d) Neither (a) nor (b)

Q.29) Solution (b)

Magnetospheric Multiscale (MMS) mission

- It is NASA's robotic space mission launched to study Earth's magnetosphere.
- It consists of constellation of four identical spacecraft that orbit/fly in tetrahedral formation around Earth through dynamic magnetic system surrounding our planet to study Magnetic reconnection.
- It is also designed to gather information about microphysics of energetic particle turbulence and acceleration, processes that occur in many astrophysical plasmas.

Q.30) Consider the following statements with respect to 'GTIN'

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1. It is an internationally recognized system for identifying products.
2. It is a 14-digit long code developed by the World Trade Organisation (WTO).

Select the correct statements

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

Q.30) Solution (a)

GTIN, or a Global Trade Item Number, is an internationally recognized system for identifying products. It brought together several systems to ensure they all adhere to a common structure.

Helping both in-store barcode readers and online product databases. The non-profit organization GS1 developed the system.

GTINs can be 8, 12, 13, or 14 digits long. They are a numerical representation of the product's barcode. Different types of GTIN exist depending on where in the world the product comes from and the type of product.

