

AFCAT Memory Based Paper - 9 Aug 2024 (Shift 2)

Q1 The rank of "Major" in the Indian Army is equivalent to which rank in the Indian Air Force?

- (A) Wing Commander
- (B) Squadron Leader
- (C) Flight Lieutenant
- (D) Group Captain

Q2 Match the List I with List II and select the correct answer using the code given below:

List I	List II
A. Lord Dalhousie	1. Introduction of local self government in India
B. Lord Ripon	2. Doctrine of Lapse
C. Lord Curzon	3. Abolished sati system
D. Lord William Bentinck	4. Partition of Bengal

- (A) A-2, B-1, C-3, D-4
- (B) A-3, B-4, C-1, D-2
- (C) A-2, B-1, C-4, D-3
- (D) A-2, B-4, C-1, D-3

Q3 Which of the following statements best describes the stellar day?

- (A) The time it takes for the Earth to complete one orbit around the Sun.
- (B) The time it takes for the Earth to rotate once on its axis relative to the Sun.
- (C) The time it takes for the Earth to rotate once on its axis relative to distant stars.
- (D) The time between two consecutive sunrises.

Q4 Surya Kiran joint military exercise was commenced between India and which country?

- (A) Myanmar
- (B) Nepal
- (C) Singapore
- (D) Oman

Q5 Consider the following statements with reference to INS Jatayu:

1. INS Jatayu is the new naval base established by the Indian Navy in the Lakshadweep Islands.

2. It will serve as a naval detachment there, enhancing the Indian Navy's operational reach in the region.

Which of the above statements is/are correct?

- (A) 1 only
- (B) 2 only
- (C) Both 1 and 2
- (D) Neither 1 nor 2

Q6 Who among the following became the new Prime Minister of Nepal in July 2024?

- (A) Raj Sharma
- (B) Ram Chandra
- (C) Sher Bahadur Deuba
- (D) KP Sharma Oli

Q7 Nalanda University was built by which of the following rulers?

- (A) Kumaragupta
- (B) Chandragupta I
- (C) Chandragupta II
- (D) Samudragupta

Q8 Which of the following seas has the highest salinity?

- (A) Red sea
- (B) Dead Sea
- (C) Mediterranean Sea
- (D) Black Sea

Q9 Recently added to the Ramsar List, the Nagi and Nakti Bird sanctuaries are situated in which state?

- (A) Uttar Pradesh
- (B) Bihar
- (C) Rajasthan
- (D) Haryana

Q10 What percentage of posts in the Supreme Court Bar Association (SCBA) must be reserved for women according to the recent Supreme Court directive?

- (A) 25%
- (B) 40%
- (C) 33%
- (D) 50%



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- Q11** Under which ministry is the Namami Gange Programme implemented?
 (A) Ministry of Environment, Forest, and Climate Change
 (B) Ministry of Water Resources, River Development, and Ganga Rejuvenation
 (C) Ministry of Urban Development
 (D) Ministry of Jal Shakti
- Q12** How many players can be on a basketball court?
 (A) Four (B) Five
 (C) Six (D) Seven
- Q13** Which international alliance is heavily involved in the Orion 23 military exercise alongside the Indian Air Force?
 (A) NATO (B) OPEC
 (C) BRICS (D) ASEAN
- Q14** Which among the following sectors includes the industries where finished products are made from natural materials?
 (A) Primary Sector
 (B) Secondary Sector
 (C) Tertiary Sector
 (D) Quaternary Sector
- Q15** "Dunk" term is associated with which of the following sports?
 (A) Table tennis (B) Golf
 (C) Volleyball (D) Basketball
- Q16** What is the cultivation of woody plants called?
 (A) Sericulture (B) Horticulture
 (C) Viticulture (D) Arboriculture
- Q17** Windmills primarily convert which type of energy into which other type of energy?
 (A) Kinetic energy into Electrical energy
 (B) Solar energy into Thermal energy
 (C) Mechanical energy into Chemical energy
 (D) Potential energy into Nuclear energy
- Q18** The 46th Antarctic Treaty Consultative Meeting (ATCM) was organised in which of the following countries?
 (A) Greenland (B) Norway
 (C) India (D) Switzerland
- Q19** Which of the following books was **not** written by an Indian author?
 (A) The God of Small Things
 (B) The White Tiger
 (C) To Kill a Mockingbird
 (D) Midnight's Children
- Q20** With reference to Ecosystem, consider the following statements:
 1. Producer is a starting point of any Ecosystem.
 2. Flow of nutrients in Ecosystem is cyclic.
 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
- Q21** Which is the first state in India to impose an agriculture tax?
 (A) Uttar Pradesh (B) Bihar
 (C) Madhya Pradesh (D) Maharashtra
- Q22** What is the length of the Atal Setu bridge in Maharashtra in kilometers?
 (A) 17.8 km (B) 18.8 km
 (C) 19.8 km (D) 21.8 km
- Q23** What are the core values of the Indian Air Force (IAF)?
 (A) Mission, Integrity, Excellence
 (B) Touch the Sky with Glory
 (C) Strength, Honor, Valor
 (D) Service Before Self
- Q24** INS Garuda is an Indian naval air station located in which Indian state?
 (A) Tamil Nadu (B) Kerala
 (C) Karnataka (D) Andhra Pradesh
- Q25** 'Kalasam' is a dance sequence in which of the following classical dances of India?
 (A) Kathak (B) Kathakali



(C) Bharatanatyam

(D) Manipuri



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Answer Key

Q1 (B)
Q2 (C)
Q3 (C)
Q4 (B)
Q5 (C)
Q6 (D)
Q7 (A)
Q8 (B)
Q9 (B)
Q10 (C)
Q11 (D)
Q12 (B)
Q13 (A)

Q14 (B)
Q15 (D)
Q16 (D)
Q17 (A)
Q18 (C)
Q19 (C)
Q20 (C)
Q21 (B)
Q22 (D)
Q23 (A)
Q24 (B)
Q25 (B)

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Hints & Solutions

Q1 Text Solution:**Explanation:**

- **Indian Army:** Major
- **Indian Air Force:** Squadron Leader
- This equivalence is part of the structured ranking system across the Indian Armed Forces, which ensures that ranks reflect similar levels of responsibility and authority across different branches

Hence, the correct answer is option (B).

Q2 Text Solution:**Explanation:**

- **Lord Dalhousie:**
- Known for the **Doctrine of Lapse**.
- **Lord Ripon:**
- Known for the **Introduction of local self-government**.
- **Lord Curzon:**
- Known for the **Partition of Bengal**.
- **Lord William Bentinck:**
- Known for the **Abolition of sati system**.

Hence, the correct answer is option (C).

Q3 Text Solution:**Explanation:**

- A **stellar day**, also known as a **sidereal day**, is the **time it takes for the Earth to complete one full rotation on its axis relative to distant stars**.
- It is approximately **23 hours, 56 minutes, and 4 seconds**.
- This period is slightly shorter than a solar day, which is about 24 hours, because the Earth is also moving along its orbit around the Sun, requiring a little extra rotation to face the Sun again.

Hence, the correct answer is option (C).

Q4 Text Solution:**Explanation:**

- The 17th edition of Joint Military Exercise SURYA KIRAN was conducted in Pithoragarh, Uttarakhand, from November 24th to December 7th, 2023.
- It is a joint military exercise between the **Indian army and the Nepali army**.
- It is an annual event and is conducted alternately in the two countries.
- The Indian Army contingent, comprising 354 personnel, is being led by a battalion from the Kumaon Regiment. The Nepal Army contingent is represented by the Tara Dal Battalion.
- The aim of the exercise is to enhance interoperability in jungle warfare, counter-terrorism operations in mountainous terrain, humanitarian assistance, and disaster relief under the United Nations Charter on peacekeeping operations.

Hence, the correct answer is option (B).

Q5 Text Solution:**Key Concept: Defence and Security****Explanation:**

- Naval Detachment Minicoy will be commissioned as **INS Jatayu**, an upgraded naval base by the **Indian Navy** to resolve to incrementally augment security infrastructure at the strategic Lakshadweep Islands.
- **INS Jatayu will effectively be the country's second naval base in Lakshadweep**.
- India has had a naval detachment in Minicoy, the southernmost atoll of the Lakshadweep archipelago, since the 1980s,
- The **Navy's first base on the islands, INS Dweep prakshak in Kavaratti, was commissioned in 2012**.
- INS Jatayu is being commissioned days after the inauguration of an airstrip and a jetty that India has built on Agaléga, Mauritius.

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- It will **enhance the operational reach of the Navy in the Indian Ocean**, a vital strategic imperative as China seeks to increase its footprint in the region.
- Hence, the correct answer is (C).

Q6 Text Solution:**Key Concept: Person in news****Why in news?**

- **K P Sharma Oli was appointed Nepal's Prime Minister** for the third time on to lead the new coalition government.

Explanation:

- K P Sharma Oli, 72, succeeds Pushpa Kamal Dahal Prachanda **who lost the vote of confidence in the House of Representatives**, leading to the formation of the new government process as per Article 76 (2) of the Constitution.
- President Ram Chandra Paudel appointed **K P Sharma Oli as the new Prime Minister of the Communist Party** of Nepal-Unified Marxist Leninist (CPN-UML)-Nepali Congress (NC) coalition.

Hence, the correct answer is Option (D).**Q7 Text Solution:****Explanation:**

- **Nalanda University** was founded by the **Gupta Dynasty in the 5th century CE** during the reign of **Kumaragupta I**.
- The Gupta Empire ruled over parts of present-day **India, Pakistan, Nepal, and Bangladesh**.
- The university flourished under the patronage of the Gupta Empire in the **5th and 6th centuries CE**.
- It attracted scholars and students from near and far, including **Tibet, China, Korea, and Central Asia**.
- The Gupta Dynasty is known for its **cultural achievements and the liberal traditions** that resulted in a period of growth and prosperity for Nalanda until the 9th century CE.

- Kumaragupta I's successor, **Samudragupta**, is famously known as the '**Napoleon of India**'.

Hence, the correct answer is option (A).**Q8 Text Solution:****Explanation:**

- **Red Sea:** While it has high salinity, it is not as high as that of the Dead Sea.
- **Dead Sea:** The Dead Sea has an **extremely high salinity level**, approximately **240 parts per thousand (ppt)**, making it one of the saltiest bodies of water in the world.
- **Mediterranean Sea:** The Mediterranean Sea has a salinity of about **38 ppt**, which is significantly lower than that of the Dead Sea.
- **Black Sea:** The Black Sea has a much lower salinity, averaging around **15-18 ppt**, due to the influx of freshwater from rivers.

Hence, the correct answer is option (B).**Q9 Text Solution:****Key Concept: Environment and Geography****Explanation:**

- The **Nagi and Nakti Bird sanctuaries situated in Jamui district in Bihar** are human-made wetlands and provide a natural habitat for a wide variety of flora and fauna, especially birds.
- The sanctuaries are spread across 791 and 333 hectares and were developed primarily for irrigation through the construction of Nakti Dam.
- Ramsar Sites are **designated because they meet the Criteria for identifying Wetlands of International Importance**.
- The first criterion refers to Sites containing representative, rare or unique wetland types, and the other eight cover Sites of international importance for conserving biological diversity.
- Hence, the correct answer is b.

Q10 Text Solution:**Explanation:**[Android App](#)[iOS App](#)[PW Website](#)

- According to the recent Supreme Court directive, the percentage of posts in the Supreme Court Bar Association (SCBA) that must be reserved for women is **33%**.
- The **Supreme Court mandated** that at least **one-third** of the posts in the executive committee of the SCBA should be reserved for women, which translates to a **minimum of 33%**.

Hence, the correct answer is option (C).

Q11 Text Solution:

Explanation:

- The **Namami Gange Programme** is implemented under the **Ministry of Jal Shakti**, specifically through the Department of Water Resources, River Development, and Ganga Rejuvenation.
- This integrated conservation mission was launched to address pollution and promote the rejuvenation of the Ganga River

Hence, the correct answer is option (D).

Q12 Text Solution:

Explanation:

- There are **5 players** in a basketball team.
- It is played between two teams of **five players each on a rectangular court, usually indoors**.
- Each team tries to score by tossing the ball through the opponent's goal, an elevated horizontal hoop and net called a basket.

Hence, the correct answer is option (B).

Q13 Text Solution:

Explanation:

- The **Indian Air Force's Rafale fighter jets** will be participating in a military exercise in **France called Orion 23**, which involves thousands of **NATO troops**.
- The exercise aims to enhance military cooperation and interoperability among participating nations.

- The Golden Arrows squadron, part of the Western Air Command, is likely to provide the aircraft for the exercise.
- The exercise includes multiple dimensions, such as ground troops, warships, aircraft carriers, and combat aircraft.

Hence, the correct answer is option (A).

Q14 Text Solution:

Explanation:

- The sector that includes the industries where finished products are made from natural materials is known as the **Secondary Sector**.
- The economic sectors are typically classified into three main categories:
 - **Primary Sector:** Involves the extraction and production of raw materials from the natural environment, such as agriculture, mining, forestry, and fishing.
 - **Secondary Sector:** Involves the processing and manufacturing of raw materials into finished goods. This sector includes industries like manufacturing, construction, and utilities.
 - **Tertiary Sector:** Involves the provision of services, such as retail, education, healthcare, and entertainment.
- Hence, the correct answer is option (B).

Q15 Text Solution:

Explanation:

- A slam dunk, also simply known as **dunk**, is a type of basketball shot that is performed when a player jumps in the air, controls the ball above the horizontal plane of the rim, and scores by shoving the ball directly through the basket with one or both hands.

Hence, the correct answer is option (D).

Q16 Text Solution:

Explanation:

- **Arboriculture** is the **cultivation, management, and study of individual trees, shrubs, vines,**



and other perennial woody plants.

- It focuses on the care of trees and shrubs primarily for landscape and ornamental purposes.
- **Sericulture** is related to the rearing of silkworms for silk production.
- **Horticulture** involves the cultivation of fruits, vegetables, flowers, and ornamental plants.
- **Viticulture** refers to the cultivation and harvesting of grapes, primarily for winemaking.

Hence, the correct answer is option (D).

Q17 Text Solution:

Correct Answer:

A) Kinetic energy into Electrical energy

Explanation

Windmills are devices that convert kinetic energy (the energy of motion) from the wind into electrical energy. Here's how it works:

1. **Wind's Kinetic Energy:** When the wind blows, it moves the blades of the windmill. The wind's movement contains kinetic energy, which is the energy that an object possesses due to its motion.
2. **Conversion to Mechanical Energy:** As the wind moves the blades, this kinetic energy is transferred to the blades, causing them to rotate. The rotation of the blades converts the wind's kinetic energy into mechanical energy.
3. **Generation of Electrical Energy:** The rotating blades are connected to a generator. As the blades spin, the generator converts the mechanical energy from the rotation into electrical energy.

This is why the correct answer is **A) Kinetic energy into Electrical energy**. Windmills do not directly convert solar, thermal, chemical, or nuclear energy into another form; they specifically harness the kinetic energy of the wind to produce electricity.

Q18 Text Solution:

Explanation:

- **India successfully concluded hosting of the 46th Antarctic Treaty Consultative Meeting (ATCM-46) and the 26th Committee on Environmental Protection (CEP26) in Kochi, Kerala.**
- The ATCM-46 was held with the overarching theme of *Vasudhaiva Kutumbakam*, a Sanskrit phrase that means one Earth, one family, one future.
- This resonates deeply with the Antarctic Treaty System, which promotes peace, scientific cooperation, and the preservation of Antarctica for mankind.

Hence, the correct answer is (C).

Q19 Text Solution:

Explanation:

- **"The God of Small Things"** was written by **Arundhati Roy**, an Indian author.
- **"The White Tiger"** was written by **Aravind Adiga**, also an Indian author.
- **"Midnight's Children"** was written by **Salman Rushdie**, an author of Indian descent.
- **"To Kill a Mockingbird"** was written by **Harper Lee**, an **American author**, making it the book not written by an Indian author.

Hence, the correct answer is option (C).

Q20 Text Solution:

Explanation:

- **Statement 1 is correct: Every food web in every ecosystem is built on producers, who occupy what is known as the first trophic level of the food web.**
- Primary consumers, also known as herbivores, or animals that consume plants, comprise the second trophic level.
- **Statement 2 is correct: Flow of nutrients in Ecosystem is cyclic.**
- The biogeochemical cycle is the term used to describe the periodic flow of nutrients through an ecosystem.



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- In an ecosystem, nutrients that are required for organism growth are continuously transferred from abiotic to biotic factors and from biotic to abiotic factors.

Hence, the correct answer is option (C).

Q21 Text Solution:

Explanation:

- **Bihar** was the first state in India to impose an **agricultural tax**.
- This tax was introduced to generate revenue from agricultural produce, given that agriculture is a significant part of the state's economy.

Hence, the correct answer is option (B).

Q22 Text Solution:

Explanation:

- The Mumbai Trans Harbour Link, officially named as **Atal Bihari Vajpayee Sewri-Nhava Sheva Atal Setu** and colloquially known as Atal Setu, is a **21.8 km (13.5 mi)** 6-lane grade separated expressway bridge, which connects **Mumbai with Navi Mumbai**, its satellite city.

Hence, the correct answer is option (D).

Q23 Text Solution:

Explanation:

- **Mission, Integrity, Excellence**, This is the correct answer based on the search results, which state that the IAF is guided by these three core values that form the foundation of its operational philosophy and organizational culture. The other options provided do not represent the core values of the IAF:
- **B) Touch the Sky with Glory** is the **motto of the IAF**, not a core value.
- **C) Strength, Honor, Valor** and **D) Service Before Self** are important military values but

do not specifically define the core values of the IAF as stated in the search results.

Hence, the correct answer is option (A).

Q24 Text Solution:

Explanation:

- **INS Garuda** is a **naval air station of the Indian Navy**.
- It is located in **Kochi, in the state of Kerala**.
- It serves as a base for various naval aircraft and is one of the major air stations under the Southern Naval Command of the Indian Navy.

Hence, the correct answer is option (B).

Q25 Text Solution:

Explanation:

- **"Kalasam"** is a dance sequence in the classical Indian dance form of **Kathakali**.
- **Kathakali**: A dance-drama that originated in Kerala in the 17th century.
- It combines dance, music, and acting, and is known for its elaborate makeup, costumes, and gestures.
- The dance is performed to dramatize stories, often adapted from Indian epics.
- The name **"Kathakali"** is a combination of the words **"Katha" (story)** and **"Kali" (art and performance)**.
- **"Kalasam"** is a sequence of foot movements between verse lines and at the end of songs.
- It's a pure dance sequence that allows the actor to express themselves and display their skills. **"Kalasam"** is characterized by leaps, quick turns, jumps, and rhythmic coordination.
- One type of **"Kalasam"** is the **"Ashtakalasam"**, which is a combination of eight dance types that expresses a character's joy.

Hence, the correct answer is option (B).



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