

AFCAT Memory Based Paper - 25 Aug 2023

General Awareness

Q1 Who presided over 1907 Indian National Congress Session at Surat ?

- (A) Dadabai Naoroji
(B) B.G. Tilak
(C) RasBehari Ghosh
(D) LalaLajpat Rai

Q2 The Council of Ministers during the time of Shivaji Maharaj was known as:

- (A) Agraharam (B) Navaratnas
(C) Ashta Diggajas (D) Ashta Pradhan

Q3 Match the List I with List II and select the correct answer using the code given below:

List I	List II
A. Gulbadan Begum	1. Sakinat-ul-Auliya
B. Abul Fazl	2. Humayun Nama
C. Nizamuddin Ahmad	3. Tabaqat-i-Akbari
D. Dara Shikoh	4. Ain-i-Akbar

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

Q4 The rock which is made up of molten magma is -

- (A) Igneous
(B) Sedimentary
(C) Metamorphic
(D) Extrusive Igneous

Q5 At what temperature the density of water is maximum?

- (A) 273°C (B) 4°C
(C) 0°C (D) 100°C

Q6 Which country announced the introduction of the Debbie Hockley Medal to honour the outstanding female cricketer?

- (A) England (B) New Zealand

- (C) West Indies (D) Australia

Q7 Consider the following statements in respect of the Olympics:

1. The first modern Olympic Games were held in 1896 in Athens (Greece).
2. The games were not held during World War II considering the turmoil across the world.
3. In 1940, Japan was to be the first Asian country to host the Olympics.

Which of the above statement is/are correct?

- (A) 1 and 2 only (B) 2 and 3 only
(C) 1 and 3 only (D) 1, 2, and 3

Q8 Which sport was introduced for the first time in the Commonwealth Games of 2022?

- (A) Women's cricket
(B) Breaking
(C) Rope cycling
(D) All of the above

Q9 National Research Centre for Agro-forestry is located at?

- (A) Agra (B) Jhansi
(C) Kanpur (D) Lucknow

Q10 Which of the following is the folk music of Rajasthan?

- (A) Lotia (B) Pandwani
(C) Chakri (D) Tappa

Q11 When is 'World Earth Day' celebrated?

- (A) 28 Februar (B) 22 April
(C) 21 March (D) 3 April

Q12 Which Article of the Constitution deals with financial emergency?

- (A) Article 356 (B) Article 358
(C) Article 360 (D) Article 362

Q13 Consider the following statements:

1. The term of Prime Minister in five years.



2. The constitution provides that the President has to appoint the leader of the majority party in the Lok Sabha as Prime Minister.

3. Nominated members of the Rajya sabha cannot become the Prime Minister.

Which of the statements given above is/are incorrect?

- (A) 1 and 3 only (B) 2 only
(C) 2 and 3 only (D) 1, 2 and 3

Q14 Bolometer is used to measure which one of the following given below options?

- (A) Air pressure
(B) Electromagnetic Radiation
(C) Height of cloud base
(D) Specific Gravity of liquids

Q15 Consider the following statements regarding the AI Supercomputer 'AIRAWAT' and its significance in the context of India's AI endeavors:

1. AIRAWAT's recent ranking of 75th in the Top 500 Global Supercomputing List positions India as a leading nation in the field of AI supercomputing.
2. The AI Research Analytics and Knowledge Dissemination Platform (AIRAWAT) is a Proof of Concept (PoC) with a peak compute capacity of 410 AI Petaflops Mixed Precision, integrated with PARAM Siddhi-AI, contributing to India's ambitious National Program on AI (NPAI).
3. MeitY has outlined plans to scale AIRAWAT to a compute capacity of 1,000 AI Petaflops Mixed Precision, aligning with Prime Minister Shri Narendra Modi's vision of leveraging technology and AI for the welfare of citizens and socio-economic growth.

Select the correct statement(s) from the options below:

- (A) 1 and 2 only (B) 2 and 3 only
(C) 1 and 3 only (D) 1, 2, and 3

Q16 Barak - 8 Missile (next generation) has been developed by India in collaboration with which of the following countries?

- (A) Russia (B) U.S.A

- (C) Israel (D) France

Q17 "Kavach" system introduced by Indian Railways is a/an?

- (A) Insurance scheme for passengers
(B) Automatic crossing system
(C) Automatic Train Protection System
(D) System to increase the speed of the trains

Q18 Which of the following is the capital of Bulgaria?

- (A) Sofia (B) Minsk
(C) Bridgetown (D) Zagreb

Q19 What is the country of origin of the winner of the 2023 International Booker Prize?

- (A) Bulgaria (B) France
(C) Sweden (D) Denmark

Q20 Identify the airline that is a joint venture between Tata Sons and Singapore Airlines?

- (A) Vistara Airlines
(B) Air Pegasus
(C) Air Asia India
(D) Turbojet Airways

Q21 Which is the highest peace time gallantry award in India?

- (A) Ashok Chakra
(B) Kirti Chakra
(C) Mahavir Chakra
(D) Param Vir Chakra

Q22 From which country has India purchased Airborne Warning and Control System (AWACS)?

- (A) Israel (B) Russia
(C) France (D) America

Q23 Which of the following pairs is not correctly matched?

- (A) Barak missile - ship-to-air, ship-to-surface
(B) Nag Missile - Surface-to-surface and air-to-surface
(C) Nirbhay Missile - Naval, Land, Air
(D) None of the above

Q24 Match the List I with List II and select the correct answer using the code given below:



List I (Name of Operation)	List II (Related to)
A. Operation Nistar	1. Rescue operation in Yemen
B. Operation Pawan	2. Control of Jaffna peninsula
C. Operation Karuna	3. To provide help to cyclone-hit Myanmar
D. Operation Devi Shakti	4. India evacuates citizens from war-torn Afghanistan

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

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

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

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

Q25 High Altitude Warfare School of Indian Army is located at?

(A) Manali

(B) Gulmarg

(C) Siachen

(D) Leh


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Answer Key

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

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

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Hints & Solutions

Q1 Text Solution:

Explanation:

- **Ras Behari Ghosh** presided over the **1907 Indian National Congress session at Surat**.
- This session was notably marked by the split between the **moderates and the extremists within the Congress**.
- Mainly there was an ideological difference between the two groups.
- The main objectives placed by the extremist were:
 1. Demand for the resolution of Swaraj.
 2. Lala Lajpat Rai to be made the President of INC.
- These two demands were not accepted by the moderates thus initiated the split.
- The Surat Split was a victory of the British policy of Divide and Rule.
- In **1916, Lucknow session** both the groups reunited again.

Hence, the correct answer is option (C).

Q2 Text Solution:

Explanation:

- **Ashta Pradhan** was the council of ministers during the time of Shivaji Maharaj.
- This council consisted of **eight prominent officials who assisted Shivaji in administering his empire**.
- The Ashta Pradhan included positions such as the **Peshwa (Prime Minister), Amatya (Finance Minister), Sachiv (Secretary), and Senapati (Commander-in-Chief)**, among others.
- Each member had specific responsibilities and played a crucial role in the governance and efficient functioning of Shivaji's administration.

Hence, the correct answer is option (D).

Q3 Text Solution:

Explanation:

- **Correct matching are as follows:**
- Gulbadan Begum - Humayun Nama

- Abul Fazl - Ain-i-Akbari
- Nizamuddin Ahmad - Tabaqat-i-Akbari
- Dara Shikoh - Sakinat-ul-Auliya

Hence, the correct answer is option (B).

Q4 Text Solution:

Explanation:

- **Igneous rock or magmatic rock** is made up of molten magma. It is one of the three main rock types; sedimentary and metamorphic.
- When magma **cools and solidifies, it forms igneous rocks**.
- These rocks can be classified into two main types: **intrusive (or plutonic) igneous rocks**, which form below the Earth's surface, and **extrusive (or volcanic) igneous rocks**, which form on the surface.
- Both types originate from the cooling and crystallization of molten magma.
- Examples include **granite (intrusive) and basalt (extrusive)**.

Hence, the correct answer is option (A).

Q5 Text Solution:

The correct answer is option B

Explanation

The density of water is maximum at 4°C.

- **Water Density Behavior:** Unlike most substances, water exhibits an unusual property where its density increases as the temperature decreases, but only down to a certain point..
- For most substances, the density continuously increases as the temperature decreases.
- **Anomalous Expansion of Water:** Water reaches its maximum density at approximately 4°C. Below this temperature, water starts to expand and becomes less dense.
- This is due to the hydrogen bonding in water, which causes the molecules to arrange themselves in a structure that is less dense than liquid water, leading to the formation of ice.



- **Temperature Effect:**

- At **273°C**: Water would be in a gaseous state (steam), and its density would be much lower compared to its liquid state.
- At **0°C**: Water is at the freezing/melting point, where it can exist as both solid (ice) and liquid. However, ice is less dense than liquid water.
- At **100°C**: Water is at the boiling point, where it transitions from liquid to gas (steam), and its density decreases significantly.

Therefore, the correct answer is:

B. 4°C

Q6 Text Solution:

Explanation:

- **New Zealand** announced the **introduction of the Debbie Hockley Medal** to honor the **outstanding female cricketer**.
- This award is named after Debbie Hockley, one of New Zealand's greatest female cricketers, recognizing her contributions to the sport and celebrating excellence in women's cricket.

Hence, the correct answer is option (B).

Q7 Text Solution:

Explanation:

- The first modern Olympic Games were indeed held in **1896 in Athens, Greece**.
- The Olympic Games were not held during **World War II (1940 and 1944) due to the global conflict**.
- In **1940, Japan** was to be the **first Asian country to host the Olympics**. Tokyo had been selected as the host city for the 1940 Summer Olympics, which were scheduled to take place from July 21 to August 4, 1940.

Hence, the correct answer is option (D).

Q8 Text Solution:

Explanation:

- The sport introduced for the first time in the Commonwealth Games of 2022 was **Women's cricket**.

- **Women's cricket** made its debut at the 2022 Commonwealth Games on July 29, with the final being played on August 7, 2022.
- The 2022 Commonwealth Games were held in **Birmingham, England**.
- This was a significant addition to the games, marking the first time cricket was included in the Commonwealth Games since the **1998 edition in Kuala Lumpur**.

Hence, the correct answer is option (A).

Q9 Text Solution:

Explanation:

- The **National Research Centre for Agroforestry** is located at **Jhansi, Uttar Pradesh**.
- It was established in **1988** and is a unit of the **Indian Council of Agricultural Research (ICAR)**.
- The institute focuses on integrating trees, crops, and livestock in the same farmland and conducts research on sustainable agroforestry practices.

Hence, the correct answer is option (B).

Q10 Text Solution:

Explanation:

- '**Lotia**' is sung in the **chaitra** month during the festival – '**Lotia**'.
- Women bring lotas (a vessel to fill water) and kalash (a vessel considered to be auspicious to fill water during worship) filled with water from ponds and wells.
- They decorate them with flowers and come home.

Hence, the correct answer is option (A).

Q11 Text Solution:

Explanation:

- **World Earth Day** is celebrated annually on **April 22** to **raise awareness about environmental protection and conservation**.
- It was first celebrated in **1970** and has since become a global event, with various activities and initiatives promoting sustainability and eco-friendliness.



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Hence, the correct answer is option (B).

Q12 Text Solution:

Explanation:

- **Article 360** of the Indian Constitution **empowers the President to invoke financial emergency**.
- Grounds of declaration – If the President is satisfied that a situation has arisen due to which the **financial stability or credit of India or any part of its territory is threatened**.

Hence, the correct answer is option (C).

Q13 Text Solution:

Explanation:

- The term of the **Prime Minister** is **not fixed at five years**; it is determined by the duration of the Lok Sabha.
- The President appoints the leader of the majority party in the Lok Sabha as Prime Minister, **not necessarily the leader of the majority party**.
- Additionally, **nominated members of the Rajya Sabha can become the Prime Minister**, as there is no constitutional bar against it.

Hence, the correct answer is option (D).

Q14 Text Solution:

The correct answer is option B i.e. electromagnetic radiation.

Explanation:

- A bolometer is a highly sensitive device that measures the energy of incident electromagnetic radiation.
- It operates by detecting the heat produced when electromagnetic radiation, such as light, infrared, or other forms of electromagnetic waves, is absorbed by a material. Here's how it works:
 1. **Absorption of Radiation:** The bolometer consists of an absorber that captures the incident electromagnetic radiation.
 2. **Temperature Change:** The absorbed radiation increases the temperature of the absorber.
 3. **Resistance Change:** The change in temperature affects the electrical resistance of the absorber

material.

4. **Measurement:** This change in resistance is measured and used to determine the amount of incident radiation.

Bolometers are used in a variety of applications, including astronomy (to measure cosmic microwave background radiation), atmospheric studies, and spectroscopy.

Why the Other Options are Incorrect:

- **Air pressure (Option A):** This is typically measured using a barometer, not a bolometer.
- **Height of cloud base (Option C):** This is measured using instruments like a ceilometer or a laser rangefinder, not a bolometer.
- **Specific gravity of liquids (Option D):** This is measured using a hydrometer or a pycnometer, not a bolometer.

Therefore, the correct answer is:

B. Electromagnetic Radiation

Q15 Text Solution:

Explanation:

1. Statement 1:

- AIRAWAT's ranking of 75th in the Top 500 Global Supercomputing List does position India as a notable player in AI supercomputing. This recognition highlights India's progress and capabilities in the field of high-performance computing and AI.

2. Statement 2:

- The AI Research Analytics and Knowledge Dissemination Platform (AIRAWAT) is indeed a Proof of Concept (PoC) with a peak compute capacity of 410 AI Petaflops Mixed Precision. This platform, integrated with PARAM Siddhi-AI, contributes significantly to India's National Program on AI (NPAI), showcasing the country's commitment to advancing AI research and development.

3. Statement 3:



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- The Ministry of Electronics and Information Technology (MeitY) has plans to scale AIRAWAT to a compute capacity of 1,000 AI Petaflops Mixed Precision. This aligns with Prime Minister Narendra Modi's vision of leveraging technology and AI for the welfare of citizens and socio-economic growth, reflecting a strategic national effort to harness the power of AI for broader development goals.

Hence, the correct answer is option (D).

Q16 Text Solution:

Explanation:

- **Barak-8**, also known as the **next-generation missile**, has been developed by India in collaboration with **Israel**.
- This **surface-to-air missile system** is designed to defend against a variety of airborne threats, including aircraft, helicopters, anti-ship missiles, and UAVs.
- The collaboration involves India's Defence Research and Development Organisation (DRDO) and Israel Aerospace Industries (IAI), combining their expertise to enhance the missile's capabilities and strengthen both nations' defense systems.

Hence, the correct answer is option (C).

Q17 Text Solution:

Explanation:

- The "**Kavach**" system introduced by **Indian Railways** is an **Automatic Train Protection System**.
- It is designed to **prevent train collisions, signal passing at danger, and ensure the safety of passengers by automatically controlling train speed and applying brakes** if the driver fails to do so.
- This technology enhances operational safety and efficiency, aiming to reduce the risk of accidents and improve overall train safety on Indian railways.

Hence, the correct answer is option (C).

Q18 Text Solution:

Explanation:

- **Sofia** is the capital and largest city of Bulgaria.
- The city is located at the foot of Mount Vitosha in the western part of the country. It is the largest city in the country and serves as the political, economic, and cultural center of Bulgaria.
- Located in the western part of the country, Sofia is known for its rich history and vibrant urban life.

Hence, the correct answer is option (A).

Q19 Text Solution:

Explanation:

- The winner of the 2023 International Booker Prize, **Georgi Gospodinov, is from Bulgaria**.
- He won the prestigious award for his novel "**Time Shelter**," making him the first Bulgarian author to receive this honor.
- The novel explores themes of memory and nostalgia, capturing the judges' acclaim.

Hence, the correct answer is option (A).

Q20 Text Solution:

Explanation:

- **Vistara** is a joint venture of Tata Sons Private Limited and Singapore Airlines Limited (SIA), wherein Tata Sons holds 51% stake in partnership and Singapore Airlines owns 49% stake.
- The company is registered as TATA SIA Airlines Limited.
- It combines the Tata group's extensive knowledge of the Indian market with Singapore Airlines' expertise in international aviation.
- Launched in 2015, Vistara aims to provide premium service and enhance the air travel experience in India.

Hence, the correct answer is option (A).

Q21 Text Solution:

Explanation:

- The **Ashok Chakra** is the highest peacetime gallantry award in India.
- It is awarded for **valor, courageous action, or self-sacrifice away from the battlefield**.



- **Established in 1952**, the Ashok Chakra is equivalent to the Param Vir Chakra, which is awarded for wartime gallantry.
- The recipients of this prestigious award are recognized for their exceptional bravery, and it can be awarded to both military and civilian personnel.

Hence, the correct answer is option (A).

Q22 Text Solution:

Explanation:

- India purchased Airborne Warning and Control System (AWACS) from **Israel**.
- India purchased the two Phalcon airborne warning and control systems (AWACS) from Israel at a cost of around USD 1 billion.
- AWACS is a mobile, long-range radar surveillance and control system used for air defence.
- The system, primarily provided by Israel Aerospace Industries (IAI), enhances India's aerial surveillance and defense capabilities, enabling the detection of incoming threats from a long distance and improving overall situational awareness.

Hence, the correct answer is option (A).

Q23 Text Solution:

Explanation:

- Nag Missile - Surface-to-surface and air-to-surface: **This pair is not correctly matched.**
- The Nag Missile is an anti-tank guided missile developed by India, designed primarily for surface-to-surface (launched from land-based platforms) and air-to-surface (launched from helicopters) roles, but it is not classified as a general surface-to-surface or air-to-surface missile.

- The other pairs, Barak missile and Nirbhay missile, are correctly matched with their respective roles.

Hence, the correct answer is option (B).

Q24 Text Solution:

Explanation:

- **A. Operation Nistar - 1. Rescue operation in Yemen:** Operation Nistar was conducted by the Indian Navy to rescue Indians stranded in Yemen.
- **B. Operation Pawan - 2. Control of Jaffna peninsula:** Operation Pawan was launched by the Indian Peace Keeping Force to control the Jaffna peninsula in Sri Lanka.
- **C. Operation Karuna - 3. To provide help to cyclone-hit Myanmar:** Operation Karuna involved providing humanitarian assistance to cyclone-hit Myanmar.
- **D. Operation Devi Shakti - 4. India evacuates citizens from war-torn Afghanistan:** Operation Devi Shakti was conducted to evacuate Indian citizens from Afghanistan after the Taliban takeover.

Hence, the correct answer is option (B).

Q25 Text Solution:

Explanation:

- The **High Altitude Warfare School (HAWs)** of the Indian Army is located in **Gulmarg, Jammu and Kashmir**.
- It specializes in training soldiers for mountain and high-altitude warfare, offering rigorous courses that prepare troops for operations in challenging and extreme environments.

Hence, the correct answer is option (B).



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