

Growth of Revolutionary Organizations

Q.1) Who among the following was NOT related to swarijists Party?

- a) Motilal Nehru
- b) Ajmal Khan
- c) C.R. Das
- d) M.A. Ansari

ANS: D

Explanation: After Gandhi's arrest (March 1922), there was disintegration, disorganization and demoralization among nationalist ranks.

- A debate started among Congressmen on what to do during the transition period, i.e., the passive phase of the movement.
- One section led by C.R. Das, Motilal Nehru and Ajmal Khan wanted an end to the boycott of legislative councils so that the nationalists could enter them to expose the basic weaknesses of these assemblies and use these councils as an arena of political struggle to arouse popular enthusiasm.
- They wanted, in other words, to 'end or mend' these councils, i.e., if the government did not respond to the nationalists' demands, then they would obstruct the working of these councils.
- Those advocating entry into legislative councils came to be known as the 'Swarajists'.

Source: Spectrum Modern India

Q.2) Which of the following was/were related to the Communist Party of India (CPI)?

- 1. Abani Mukherji
- 2. Nalini Gupta
- 3. S.A. Dange

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The Communist Party of India (CPI) was formed in 1920 in Tashkent (now, the capital of Uzbekistan) by M.N. Roy, Abani Mukherji and others after the second Congress of Commintern.

- M.N. Roy was also the first to be elected to the leadership of Commintern.
- In 1924, many communists—S.A. Dange, Muzaffar Ahmed, Shaukat Usmani, Nalini Gupta—were jailed in the Kanpur Bolshevik Conspiracy Case.

Source: Spectrum Modern India



Q.3) Which of the following statements is/are correct about Trade Union movement in India?

- 1. All India Trade Union Congress (AITUC) founded in 1923.
- 2. In 1923, the first May Day was celebrated in India in Madras.
- 3. Lala Lajpat Rai was the first president of All India Trade Union Congress.

Choose the correct answer from below given codes:

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

ANS: C

Explanation: The trade union movement was led by All India Trade Union Congress (AITUC) founded in 1920.

- Lala Lajpat Rai was its first president and Dewan Chaman Lal its general secretary.
- Tilak was also one of the moving spirits. The major strikes during the 1920s included those in Kharagpur Railway Workshops, Tata Iron and Steel Works (Jamshedpur), Bombay Textile Mills (this involved 1,50,000 workers and went on for 5 months), and Buckingham Carnatic Mills.
- In 1928, there were a number of strikes involving 5 lakh workers. In 1923, the first May Day was celebrated in India in Madras.

Source: Spectrum Modern India

Q.4) Who among the following had written "Bandi Jiwan"?

- a) Sachin Sanyal
- b) Aurbindo Ghosh
- c) Sharatchandra Chatterjee
- d) Ramprasad Bismil

ANS: A

Explanation: Novels and books such as Bandi Jiwan by Sachin Sanyal and Pather Dabi by Sharatchandra Chatterjee (a government ban only enhanced its popularity). **Source:** Spectrum Modern India

Q.5) Which of the following was/were influence/s the Revolutionary Activity in 1920's?

- 1. Upsurge of working class trade unionism.
- 2. Russian Revolution.
- 3. Newly sprouting communist groups.
- Choose the correct answer from below given codes:
- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: Nearly all major leaders of revolutionary policies had been enthusiastic participants in the Non-Cooperation Movement and included Jogesh Chandra Chatterjee,



Surya Sen, Bhagat Singh, Sukhdev, Chandrasekhar Azad, Shiv Verma, Bhagwaticharan Vohra, Jaidev Kapur and Jatin Das.

Two separate strands of revolutionary groups emerged during this period—one operating in Punjab-UP-Bihar and the other in Bengal.

Major Influences:

- (i) Upsurge of working class trade unionism after the War; the revolutionaries wanted to harness the revolutionary potential of the new emergent class for nationalist revolution.
- (ii) Russian Revolution (1917) and the success of the young Soviet state in consolidating itself.
- (iii) Newly sprouting communist groups with their emphasis on Marxism, socialism and the proletariat.
- (iv) Journals publishing memoirs and articles extolling the self-sacrifice of revolutionaries, such as Atmasakti, Sarathi and Bijoli.

Source: Spectrum Modern India

Q.6) Which of the following was/were associated with Hindustan Republican Association?

- 1. Ramprasad Bismil
- 2. Jogesh Chandra Chatterjee
- 3. Sachin Sanyal

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The revolutionary activity in this region was dominated by the Hindustan Republican Association/Army or HRA (later renamed Hindustan Socialist Republican Association or HSRA).

The HRA was founded in October 1924 in Kanpur by Ramprasad Bismil, Jogesh Chandra Chatterjee and Sachin Sanyal, with an aim to organize an armed revolution to overthrow the colonial government and establish in its place the Federal Republic of United States of India whose basic principle would be adult franchise.

Source: Spectrum Modern India

Q.7) Which of the following was/were associated with Kakori Robbery case?

- 1. Ashfaqullah
- 2. Roshan Singh
- 3. Rajendra Lahiri
- Choose the correct answer from below given codes:
- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: The most important action of the HRA was the Kakori robbery. The men held up the 8-Down train at Kakori, an obscure village near Lucknow, and looted its official railway cash.



Government crackdown after the Kakori robbery led to arrests of many, of whom 17 were jailed, four transported for life and four—Bismil, Ashfaqullah, Roshan Singh and Rajendra Lahiri—were hanged. Kakori proved to be a setback.

Source: Spectrum Modern India

Q.8) The Philosophy of the Bomb book was written by?

- a) Bhagwaticharan Vohra
- b) Bhagat Singh
- c) Fakir Ahmed Mian
- d) Santi Ghosh

ANS: A

Explanation: The famous statement of the revolutionary position is contained in the book The Philosophy of the Bomb written by Bhagwaticharan Vohra. **Source:** Spectrum Modern India

Q.9) The "Dehing Patkai National Park" is often seen in news is located at?

- a) Assam
- b) Nagaland
- c) Arunachal Pradesh
- d) Mizoram

ANS: A

Explanation: Dehing Patkai National Park is located in the Dibrugarh and Tinsukia districts of Assam and covers an area of 231.65 km² rainforest.

It was declared a wildlife sanctuary on 13 June 2004. On 13 December 2020 Government of Assam upgraded it into a national park.

Source: Spectrum Modern India

Q.10) The "Coringa Wildlife Sanctuary" is recently seen in news is located at?

- a) Tamil Nadu
- b) Kerala
- c) Karnataka
- d) Andhra Pradesh

ANS: D

Explanation: Coringa Sanctuary is at a distance of about 15 Km from Kakinada on Kakinada Yanam Road.

- Coringa Sanctuary, named after a tiny village coringa in East Godavari District of Andhra Pradesh a part of Godavari Mangroves was declared as a wildlife sanctuary by Govt. of Andhra Pradesh vide G.O.Ms.No 484, Forests and Rural Development (For.III) Department dated 5-7-1978 was to conserve the mangrove vegetation of the estuary, extending in an area of about 235.Sq.Kms.
- It is located between 160-30' to 170-00' N latitudes and 820-14' to 820-23'E longitudes.
- Mangroves are salt tolerent forest ecosystems of tropical and sub tropical intertidal regions of the world.
- They normally occur between high waterlevel and near about mean sea level along the sheltered shores, estuaries, tidal creeks, back-waters, lagoons, marshes and mud-flats. **Source:** https://eastgodavari.ap.gov.in/tourist-place/coringa-sanctuary/



Peasants, Tribal Movements and Women Movements

Q.1) Which of the following was/were have direct impact on Indian Peasantry during British period?

- 1. The Colonial economic policies.
- 2. The ruin of the handicrafts.
- 3. The new land revenue system.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The impoverishment of the Indian peasantry was a direct result of the transformation of the agrarian structure due to—

- colonial economic policies,
- ruin of the handicrafts leading to overcrowding of land,
- the new land revenue system,
- Colonial administrative and judicial system.

Source: Spectrum Modern India

Q.2) Which of the following statements was/were correct about Indigo Movement?

- 1. Europeans forced the Bengal local peasants to grow Indigo on their land.
- 2. The planters forced the peasants to take advance sums and enter into fraudulent contracts.
- 3. Digambar Biswas and Bishnu Biswas decided not to grow indigo.

Choose the correct answer from below given codes:

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

ANS: D

Explanation: In Bengal, the indigo planters, nearly all Europeans, exploited the local peasants by forcing them to grow indigo on their lands instead of the more paying crops like rice.

- The planters forced the peasants to take advance sums and enter into fraudulent contracts which were then used against the peasants.
- The planters intimidated the peasants through kidnappings, illegal confinements, flogging, attacks on women and children, seizure of cattle, burning and demolition of houses and destruction of crops.
- The anger of the peasants exploded in 1859 when, led by Digambar Biswas and Bishnu Biswas of Nadia district, they decided not to grow indigo under duress and resisted the



physical pressure of the planters and their lathiyals (retainers) backed by police and the courts.

Source: Spectrum Modern India

Q.3) Which of the following was/were the causes of Deccan Riots?

- 1. The moneylenders who exploited the peasants were outsiders.
- 2. The Deccan region of western India suffered heavy taxation under the Zamindari system.
- 3. The end of Boers war.

Choose the correct answer from below given codes:

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

ANS: A

Explanation: The ryots of Deccan region of western India suffered heavy taxation under the Ryotwari system.

- Here again the peasants found themselves trapped in a vicious network with the moneylender as the exploiter and the main beneficiary. These moneylenders were mostly outsiders—Marwaris or Gujaratis.
- The conditions had worsened due to a crash in cotton prices after the end of the American Civil War in 1864, the Government's decision to raise the land revenue by 50% in 1867, and a succession of bad harvests.

Source: Spectrum Modern India

Q.4) Which of the following ws/were related to the United Provinces Kisan Sabha?

- 1. Gauri Shankar Mishra
- 2. Indra Narayan Dwivedi
- 3. Baba Ramchandra

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Mainly due to the efforts of the Home Rule activists, kisan sabhas were organised in UP.

- The United Provinces Kisan Sabha was set up in February 1918 by Gauri Shankar Mishra and Indra Narayan Dwivedi.
- Madan Mohan Malaviya supported their efforts. By June 1919, the UP Kisan Sabha had 450 branches. Other prominent leaders included Jhinguri Singh, Durgapal Singh and Baba Ramchandra.
- In June 1920, Baba Ramchandra urged Nehru to visit these villages. During these visits, Nehru developed close contacts with the villagers.

Source: Spectrum Modern India



Q.5) The famous "Mappila Revolt" was related to which of the following?

- a) Goa
- b) Assam
- c) Kerala
- d) Telangana

ANS: C

Explanation: The Mappilas were the Muslim tenants inhabiting the Malabar region where most of the landlords were Hindus.

- The Mappilas had expressed their resentment against the oppression of the landlords during the nineteenth century also.
- Their grievances centred on lack of security of tenure, high rents, renewal fees and other oppressive exactions.

Source: Spectrum Modern India

Q.6) Who among the following founded the All India Kisan Congress/Sabha?

- a) Swami Sahjanand Saraswati
- b) Lala Lajpat Rai
- c) Lalji Naranji
- d) K.M. Munshi

ANS: A

Explanation: The All India Kisan Congress/ sabha founded in Lucknow in April 1936 with Swami Sahjanand Saraswati as the president and N.G. Ranga as the general secretary.

- A kisan manifesto was issued and a periodical under Indulal Yagnik started. The AIKS and the Congress held their sessions in Faizpur in 1936.
- The Congress manifesto (especially the agrarian policy) for the 1937 provincial elections was strongly influenced by the AIKS agenda.

Source: Spectrum Modern India

Q.7) Who among the following was/were kept close relationship with the All India Trade Union Congress?

- 1. Lala Lajpat Rai
- 2. Dewan Chaman Lal
- 3. Sarojini Naidu

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The All India Trade Union Congress was founded on October 31, 1920.

- The Indian National Congress president for the year, Lala Lajpat Rai, was elected as the first president of AITUC and Dewan Chaman Lal as the first general secretary.
- Other leaders who kept close contacts with the AITUC included Nehru, Subhas Bose, C.F. Andrews, J.M. Sengupta, Satyamurthy, V.V. Giri and Sarojini Naidu.

Source: Spectrum Modern India



Q.8) The famous "Pahariyas' Rebellion" is related to which of the following?

- a) Raja Mahal Hills
- b) Seshachalam Hills
- c) Horsley Hills
- d) Annamallai Hills

ANS: A

Explanation: The British expansion on their territory led to an uprising by the martial Pahariyas of the Raj Mahal Hills in 1778.

The British were forced to usher in peace by declaring their territory as damni-kol area. **Source:** Spectrum Modern India

Q.9) The term "Ulgulan" was associated with which of the following Tribes?

- a) Kol tribes
- b) Munda tribes
- c) Koya tribes
- d) Gond tribes

ANS: B

Explanation: In 1899-1900, the Mundas in the region south of Ranchi rose under Birsa Munda. The Ulgulan was one of the most significant tribal uprisings in the period 1860-1920.

- The rebellion which began as a religious movement gathered political force to fight against introduction of feudal, zamindari tenures, and exploitation by money-lenders and forest contractors.
- The Mundas claimed Chhotanagpur as their area in 1879. British armed forces were then deployed. Birsa was captured and imprisoned.

Source: Spectrum Modern India

Q.10) The "Koya Revolts" was related to which of the following?

- a) Godavari Area
- b) Krishna Area
- c) Kaveri Area
- d) Pennar Area

ANS: A

Explanation: The Koyas of the eastern Godavari track (modern Andhra), joined by Khonda Sara chiefs, and rebelled in 1803, 1840, 1845, 1858, 1861 and 1862.

- They rose once again in 1879-80 under Tomma Sora.
- Their complaints were oppression by police and moneylenders, new regulations and denial of their customary rights over forest areas.
- After the death of Tomma Sora, another rebellion was organised in 1886 by Raja Anantayyar.

Source: Spectrum Modern India



Consolidation of India after Independence

Q.1) Which of the following was/were related to INA trials?

- 1. Prem Kumar Sehgal
- 2. Shah Nawaz Khan
- 3. Gurbaksh Singh Dhillon

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The British had initially decided to hold public trials of several hundreds of INA prisoners besides dismissing them from service and detaining without trial around 7,000 of them.

They compounded the folly by holding the first trial at the Red Fort in Delhi in November 1945 and putting on dock together a Hindu, Prem Kumar Sehgal, a Muslim, Shah Nawaz Khan, and a Sikh, Gurbaksh Singh Dhillon.

Source: Spectrum Modern India

Q.2) Which of the following was/were the nerve centre/s of INA agitation?

- 1. Coorg
- 2. Baluchistan
- 3. Assam

Choose the correct answer from below given codes:

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

ANS: D

Explanation: The campaign spread over a wide area of the country and witnessed the participation of diverse social groups and political parties.

While the nerve centres of the agitation were Delhi, Bombay, Calcutta, Madras, United Provinces towns and Punjab, the campaign spread to distant places such as Coorg, Baluchistan and Assam.

Source: Spectrum Modern India



Q.3) Arrange the following in chronological order:

- 1. INA trials in Calcutta
- 2. Sevenyear sentence to INA officer Rashid Ali
- 3. Strike by the Royal Indian Navy ratings

Choose the correct answer from below given codes:

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

ANS: A

Explanation: The nationalist sentiment which reached a crescendo around the INA trials developed into violent confrontations with the authority in the winter of 1945-46. There were three major upsurges—

- November 21, 1945—in Calcutta over the INA trials.
 - February 11, 1946—in Calcutta against the sevenyear sentence to INA officer Rashid Ali.
- February 18, 1946—in Bombay, strike by the Royal Indian Navy ratings.

Source: Spectrum Modern India

Q.4) The famous "Dalhousie Square" is located at which of the following?

- a) Calcutta
- b) Bombay
- c) Madras
- d) Delhi

ANS: A

Explanation: In the first instance of this stage (November 21, 1945), a student procession comprising some Forward Bloc sympathizers, Student Federation of India (SFI) activists and Islamia College students, who had joined up with the League and the Congress, tied flags as a symbol of anti-imperialist unity, marched to Dalhousie Square—the seat of government in Calcutta.

Source: Spectrum Modern India

Q.5) Which of the following is NOT a member of Cabinet Mission?

- a) Winston Churchill
- b) Pethick Lawrence
- c) Stafford Cripps
- d) A.V. Alexander

ANS: A

Explanation: The Attlee government announced in February 1946 the decision to send a highpowered mission of three British cabinet members (Pethick Lawrence, Secretary of State for India; Stafford Cripps, President of the Board of Trade; and A.V. Alexander, First Lord of Admiralty) to India to find out ways and means for a negotiated, peaceful transfer of power to India. (Pethick Lawrence was the chairman of the mission.)

Source: Spectrum Modern India



Q.6) Which of the following was/were the main point/s of Cabinet Mission?

- 1. Accepted the demand for a full-fledged Pakistan.
- 2. Grouping of existing provincial assemblies into three sections.
- 3. A constituent assembly was to be elected by provincial assemblies by proportional representation.

Choose the correct answer from below given codes:

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

ANS: C

Explanation: Rejection of the demand for a full-fledged Pakistan, because -

- the Pakistan so formed would include a large nonMuslim population—38 per cent in the North-West and 48 per cent in the North-East.
- the very principle of communal self-determination would claim separation of Hindumajority western Bengal and Sikh- and Hindu-dominated Ambala and Jullundur divisions of Punjab.

Grouping of existing provincial assemblies into three sections:

- Section-A: Madras, Bombay, Central Provinces, United Provinces, Bihar and Orissa (Hindu-majority provinces)
- Section-B: Punjab, North-West Frontier Province and Sindh (Muslim-majority provinces)
- Section-C: Bengal and Assam (Muslim-majority provinces).

A constituent assembly was to be elected by provincial assemblies by proportional representation (voting in three groups—General, Muslims, Sikhs). This constituent assembly would be a 389-member body with provincial assemblies sending 292, chief commissioner's provinces sending 4, and princely states sending 93 members.

Source: Spectrum Modern India

Q.7) Which of the following is NOT correct about Cabinet Mission?

- a) A common centre would control defense, communication and external affairs.
- b) Communal questions in the central legislature were to be decided by a simple majority of both communities present and voting.
- c) Provinces were to have full autonomy and residual powers will be given to a common centre.
- d) Princely states were no longer to be under paramount of the British government.

ANS: C

Explanation: A common centre would control defense, communication and external affairs. A federal structure was envisaged for India.

- Communal questions in the central legislature were to be decided by a simple majority of both communities present and voting.
- Provinces were to have full autonomy and residual powers.
- Princely states were no longer to be under paramount of the British government. They would be free to enter into an arrangement with successor governments or the British government.



• After the first general elections, a province was to be free to come out of a group and after 10 years, a province was to be free to call for a reconsideration of the group or the union constitution.

• Meanwhile, an interim government was to be formed from the constituent assembly. **Source:** Spectrum Modern India

Q.8) Who among the following was the finance minister of Interim Government?

- a) Baldev Singh
- b) Dr. John Mathai
- c) Liaquat Ali Khan
- d) C. Rajagopalachari

ANS: C

Explanation: 14 Ministers of Interim Government (September 2, 1946–August 15, 1947)

1. Jawaharlal Nehru: Vice President of Executive Council, External Affairs and Common Wealth Relations

- 2. Vallabhbhai Patel: Home, Information and Broadcasting
- 3. Baldev Singh: Defence
- 4. Dr. John Mathai: Industries and Supplies
- 5. C. Rajagopalachari: Education
- 6. C.H. Bhabha: Works, Mines and Power
- 7. Rajendra Prasad: Agriculture and Food
- 8. Jagjivan Ram: Labour
- 9. Asaf Ali: Railway
- 10. Liaquat Ali Khan (Muslim League): Finance
- 11. Ibrahim Ismail Chundrigar (Muslim League): Commerce
- 12. Abdur Rab Nishtar (Muslim League): Communications
- 13. Ghazanfar Ali Khan (Muslim League): Health
- 14. Jogendra Nath Mandal (Muslim League): Law

Source: Spectrum Modern India

Q.9) The "Bhitarkanika National Park" is often seen in news is located at?

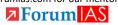
- a) Odisha
- b) West Bengal
- c) Tamil Nadu
- d) Andhra Pradesh

ANS: A

Explanation: Bhitarkanika National Park is a 145 km² large national park in northeast Kendrapara district in Odisha in eastern India.

- It was designated on 16 September 1998 and obtained the status of a Ramsar site on 19 August 2002.
- The area is also been designated as second Ramsar site of the State after the Chilika Lake.

Source: FORUMIAS



Q.10) The famous "Keoladeo National Park" is recently seen in news is located at?

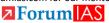
- a) Tamil Nadu
- b) Punjab
- c) Rajasthan
- d) Gujarat

ANS: C

Explanation: Keoladeo National Park is a vast bird sanctuary and former royal game reserve in the north Indian state of Rajasthan.

- South of the ancient city of Bharatpur, the park's woods and man-made wetlands protect over 350 species of migratory and resident birds, including herons, cormorants and eagles.
- To the southeast, Fatehpur Sikri is home to sandstone temples and a mosque, built by Emperor Akbar in the 16th century.

Source: FORUMIAS



Science & Technology

Q.1) Under which of the following act, recently the Department of Biotechnology (DBT) issued Guidelines for Safety Assessment of Genome Edited Plants, 2022 easing norms for research into genetically modified (GM) crops?

- a) Seed Act, 1968
- b) Drugs and Cosmetics Act, 1947
- c) Environment (Protection) Act, 1986
- d) Protection of Plant Varieties & Farmers Rights Act, 2009

ANS: C

Explanation: Recently the Department of Biotechnology (DBT) issued Guidelines for Safety Assessment of Genome Edited Plants, 2022 easing norms for research into genetically modified (GM) crops.

- Guidelines exempts Genome Edited plants falling under the categories of Site directed nuclease (SDN)1 and SDN2, from Manufacture, Use, Import, Export and Storage of hazardous Microorganisms/ Genetically Engineered Organisms or Cells, Rules, 1989, under the Environment (Protection) Act (1986).
- It is based on an earlier exemption by the Ministry of Environment, Forest and Climate Change to avoid a long process for approval of GM crops through GEAC.

Source: FORUMIAS

Q.2) Consider the following statements:

- 1. Genome editing is manipulation of genome of organism itself by knocking out or replacing targeted gene which resulting in individuals with intentionally selected and desired traits.
- 2. In Transgenic technology genome of an organism is altered by introduction of one or more foreign DNA sequences from another species by artificial means.

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

ANS: C

Explanation: Cells are grown in tissue culture which develops into plants and seeds produced by these plants will inherit the new DNA.

- Indian Council of Agricultural Research (ICAR) promotes the science-based innovative technology including research on GM crops.
- Genome editing is manipulation of genome of organism itself by knocking out or replacing targeted gene which resulting in individuals with intentionally selected and desired traits.
- In Transgenic technology genome of an organism is altered by introduction of one or more foreign DNA sequences from another species by artificial means.

Source: FORUMIAS



Q.3) Which of the following statement is NOT correct about the Genetic Engineering Appraisal Committee (GEAC)?

- a) It functions under the Ministry of Environment, Forest and Climate Change (MoEF&CC).
- b) It is responsible for appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
- c) The committee is also responsible for appraisal of proposals relating to release of genetically engineered (GE) organisms and products into the environment including experimental field trials.
- d) It has 12 members and meets every month to review the applications.

ANS: D

Explanation: The Genetic Engineering Appraisal Committee (GEAC) functions in the Ministry of Environment, Forest and Climate Change (MoEF&CC).

- As per Rules, 1989, it is responsible for appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
- The committee is also responsible for appraisal of proposals relating to release of genetically engineered (GE) organisms and products into the environment including experimental field trials.
- GEAC is chaired by the Special Secretary/Additional Secretary of MoEF&CC and cochaired by a representative from the Department of Biotechnology (DBT).
- Presently, it has 24 members and meets every month to review the applications in the areas indicated above.

Source: http://geacindia.gov.in/about-geac-india.aspx

Q.4) The site directed nucleases is recently seen in news is related to?

- a) Genome editing
- b) Space debris
- c) Super Computers
- d) Machine Learning

ANS: A

Explanation: Department of Biotechnology revised guidelines for plants and products thereof developed using genome editing techniques employing sitedirected nucleases (SDN).

- SDN or sequence specific nuclease (SSN) refers to the practice of cleaving DNA strands to affect the subsequent genome editing.
- SDN technology takes advantage of targeted DNA break and host's natural repair mechanisms to introduce specific small changes at the site of the DNA break.

Source: FORUMIAS



Q.5) The scientists "Emmanuelle Charpentier and Jennifer Doudna" is often seen in news is related to?

- a) CRISPR-Cas9
- b) James Webb Telescope
- c) Nuclear Energy
- d) CoVID 19 Vaccines

ANS: A

Explanation: It's been ten years since microbiologist Emmanuelle Charpentier and biochemist Jennifer Doudna published research that paved way for CRISPR-Cas9 gene editing (Both awarded Nobel Prize for the same in 2022).

Source: FORUMIAS

Q.6) Which of the following Indian Institute of Technology (IIT) indigenously developed the Chimeric Antigen Receptor T (CAR-T) Cell Therapy?

- a) IIT Madras
- b) IIT Kanpur
- c) IIT Hyderabad
- d) IIT Bombay

ANS: D

Explanation: First time that CAR-T therapy, indigenously developed by IIT Bombay and Tata Memorial Centre, was tested on patients in India.

Research is funded under National Biopharma Mission (NBM) by Biotechnology Industry Research Assistance Council (BIRAC).

Source: FORUMIAS

Q.7) Recently, the first national repository for life science data in India - Indian Biological Data Center (IBDC) was inaugurated at?

- a) Hyderabad
- b) Ahmadabad
- c) Faridabad
- d) Allahabad

ANS: C

Explanation: Recently, Indian Biological Data Center (IBDC) was inaugurated at Faridabad, Haryana. First national repository for life science data in India.

Also, as per the Biotech-PRIDE guidelines, released last year, IBDC is mandated to archive all life science data generated from publiclyfunded research in India.

Source: FORUMIAS



Q.8). The "BioRRAP" is recently seen in news is related to?

- a) Regulatory approvals
- b) Research centers of Genome editing
- c) Genome guidelines
- d) New Bacteria

ANS: A

Explanation: Department of Biotechnology has developed Biological Research Regulatory Approval Portal (BioRRAP) to track the regulatory approvals for a research proposal on a single portal.

- BioRRAP provides a single route to direct the applicant to regulatory agencies providing requisite approval relevant to the biological research.
- BioRRAP ID generated through this portal is linked with the portals of various regulatory agencies.
- This will provide more credibility to such biological research and will strengthen interdepartmental synergies and increase efficacy in functioning of agencies regulating **various aspect of biological research**.

Source: FORUMIAS

Q.9) The "Nameri National Park" is recently seen in news is located at?

- a) Assam
- b) Arunachal Pradesh
- c) Tamil Nadu
- d) Andhra Pradesh

ANS: A

Explanation: Nameri National Park is a national park in the foothills of the eastern Himalayas in the Sonitpur District of Assam, India, about 35 km from Tezpur.

Nameri is about 9 km from Chariduar, the nearest village. Nameri shares its northern boundary with the Pakhui Wildlife Sanctuary of Arunachal Pradesh.

Source: FORUMIAS

Q.10) The "Mukandra Hills Tiger Reserve" is recently seen in news is located at?

- a) Rajasthan
- b) Chhattisgarh
- c) Bihar
- d) West Bengal

ANS: A

Explanation: Mukandra Hills Tiger Reserve is named after two continuous flat topped, almost parallel hills with narrow central ridges, forming part of the Vindhyan range and extending from river Chambal to Kalisindh, with a length of almost 80 km. and the width ranging from 2 to 5 km.

The tiger reserve was constituted in the year 2013 which encompasses the area of Mukandra National Park, Dara Sanctuary, Jawahar Sagar Sanctuary and part of Chambal Sanctuary (from Garadia Mahadev to Jawahar Sagar Dam), forming its core / critical tiger habitat. The forests of Kota, Chittorgarh and Jhalawar are included in the buffer. **Source:** FORUMIAS



Science & Technology

Q.1) The GSAT 7 series satellites are related to which of the following?

- a) Deep space mission
- b) Defense communication needs
- c) Meteorological communication
- d) International space station

ANS: B

Explanation: GSAT 7 series satellites are advanced satellites developed by ISRO to meet the communication needs of the defense services.

- GSAT 7 satellite (launched in 2013) is mainly used by the Indian Navy for its communication needs. It helps the Navy to have a secure, real time communication link.
- GSAT 7A (launched in 2018) helps in boosting the connectivity between the ground radar stations, airbases and the airborne early warning and control aircraft (AEW&C) of the IAF (Indian Air Force).
- GSAT 7B will primarily fulfill the communication needs of the Army. It will help the Army enhance its surveillance in border areas.

Source: FORUMIAS

Q.2) The term "Sea Breaker" often seen in news is related to?

- a) Missile system
- b) Submarines
- c) Frigates
- d) Aircraft Carrier

ANS: A

Explanation: Israel's Sea Breaker, the 5th generation long range, autonomous, precisionguided missile system, is meant to hit high-value maritime and land target. **Source: FORUMIAS**

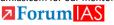
Q.3) Under which of the following country's technology transfer, India has build the Scorpene class Submarines?

- a) France
- b) Germany
- c) United States of America
- d) Russia

ANS: A

Explanation: Six Scorpene submarines are being built indigenously under Project-75 by Mazagon Dock Shipbuilders Limited (MDL) under technology transfer from Naval Group of France.

Source: FORUMIAS



Q.4) Consider the following statements regarding "INS Vikrant":

- 1. It has been designed by Indian Navy's Directorate of Naval Design.
- 2. It has built at Vishakhapatnam Shipyard Limited.

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

ANS: A

Explanation: PM commissioned India's first Indigenous Aircraft Carrier INS (Indian Naval Ship) Vikrant.

- INS Vikrant has been designed by Indian Navy's Directorate of Naval Design, and built at Cochin Shipyard Limited, a public sector shipyard under Ministry of Shipping.
- India has had aircraft carriers earlier too but those were built either by British (INS Vikrant and Viraat) or Russians (INS Vikramaditya).

Source: FORUMIAS

Q.5) The term "Dornier" is recently seen in news is related to?

- a) Commercial aircraft
- b) Submarines
- c) Drones
- d) Frigate

ANS: A

Explanation: Ministry of Civil Aviation has announced the launch of first commercial flight of the made-in-India Dornier-228.

- Do-228 has been made by Hindustan Aeronautics Limited (HAL) and delivered to Alliance Air.
- Alliance Air will be India's first commercial airline to fly an India- made aircraft for civil operations.

Source: FORUMIAS

Q.6) The term "Prachand" is often seen in news is related to?

- a) Radar System
- b) Light Combat Helicopter
- c) Ship destroyer
- d) Anti Tank Missile

ANS: B

Explanation: Indian Air Force inducted the indigenously developed (by Hindustan Aeronautics Ltd.) multi-role LCH-Prachand. India has become the seventh country to make attack helicopters.

- Only combat helicopter in the world which can land and takeoff at an altitude of 5,000 meter.
- Equipped with a countermeasure dispensing system that protects it from enemy radars or infrared seekers of the enemy missiles.

Source: FORUMIAS



Q.7) The famous "Carl-Gustaf M4" weapon system is related to which of the following country?

- a) Russia
- b) Sweden
- c) France
- d) Israel

ANS: B

Explanation: Sweden has announced plans to manufacture its Carl-Gustaf M4 weapon system in India.

- The Army has been using the Carl-Gustaf since 1976 and currently operates the Mk2 and Mk3 versions.
- The Carl-Gustaf recoilless rifle is a man-portable, multi-role weapon system.
- M4 weapon system is capable of firing a variety of ammunition, including anti armour and illumination rounds, with the maximum range being 1,500 metre.

Source: FORUMIAS

Q.8) Consider the following statements regarding "Nuclear Fusion":

- 1. It is a process in which splitting of nuclease happens.
- 2. It takes place in a state of matter called plasma.

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

ANS: B

Explanation: Nuclear Fusion is a process by which two light atomic nuclei (for example tritium and deuterium) combine to form a single heavier (Helium) one while releasing massive amounts of energy.

Fusion reactions take place in a state of matter called plasma a hot, charged gas made of positive ions and free-moving electrons with unique properties distinct from solids, liquids, or gases.

Source: FORUMIAS

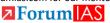
Q.9) The "Joint European Torus (JET)" is often seen in news is related to?

- a) Nuclear Fission
- b) Nuclear Fusion
- c) Plasma Research
- d) Army Exercise

ANS: B

Explanation: The Joint European Torus (JET): project for opening the way to future nuclear fusion grid energy.

Source: FORUMIAS



Q.10) The "Keibul Lamjao National Park" is often seen in news is related to?

- a) Mizoram
- b) Manipur
- c) Meghalaya
- d) Nagaland

ANS: B

Explanation: The Keibul Lamjao National Park is a national park in the Bishnupur district of the state of Manipur in Northeast India.

It is 40 km² in area, the only floating national park in the world, and an integral part of Loktak Lake.

Source: FORUMIAS



Science & Technology

Q.1) Consider the following statements regarding "analog chipset called ARYABHAT-1":

- 1. It was developed by Indian Institute of Technology Delhi.
- 2. It is faster and requires less power than the digital chips.

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

ANS: B

Explanation: Indian Institute of Science has built a prototype of an analog chipset called ARYABHAT-1 (Analog Reconfigurable Technology and Bias-scalable Hardware for AI Tasks).

- It will be faster and require less power than the digital chips found in most electronic devices.
- It would be helpful for Artificial Intelligence (AI)-based applications like object or speech recognition e.g., Alexa or Siri.
- Different machine learning architectures can be programmed on it and operate across a wide range of temperatures.

Source: FORUMIAS

Q.2) The term "Bluebugging" is recently seen in news is related to?

- a) Hacking
- b) Predatory bugs
- c) Virus on rice crops
- d) Artificial Intelligence

ANS: A

Explanation: Bluebugging is a form of hacking that lets attackers access a device through its discoverable Bluetooth connection.

- Once a Bluetooth connection is established, hackers use brute force attacks to bypass authentication.
- Once a device is blue bugged, a hacker can listen to the calls, read and send messages and steal and modify contacts.

Source: FORUMIAS



Q.3) Consider the following statements regarding "hermit":

- 1. It is a new spyware with capability to affect both Android and iOS devices.
- 2. It is a commercial spyware used by governments.

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

ANS: C

Explanation: Hermit is a new spyware with capability to affect both Android and iOS devices. Hermit is a commercial spyware known to be used by governments with victims in Kazakhstan, Italy and northern Syria.

Source: FORUMIAS

Q.4 Which of the following statement is NOT correct about National Super Computing Mission?

- a) PARAM PORUL is a state-of-the-art Supercomputer at NIT Warangal.
- b) PARAM PORUL is based on Direct Contact Liquid Cooling technology.
- c) PARAM Shivay was the first Supercomputer assembled indigenously.
- d) Majority of the components used to build PARAM PORUL have been manufactured and assembled within the country.

ANS: A

Explanation: PARAM PORUL is a state-of-the-art Supercomputer at NIT Tiruchirappalli under Phase 2 of the National Supercomputing Mission (NSM).

- Majority of the components used to build PARAM PORUL have been manufactured and assembled within the country.
- It is based on Direct Contact Liquid Cooling technology to obtain a high-power usage effectiveness and thereby reducing the operational cost.
- Under NSM, till date 15 supercomputers have been installed across the nation with a computing capacity of 24 petaflops.
- PARAM Shivay was the first Supercomputer assembled indigenously.

Source: FORUMIAS

Q.5) India's first Autonomous Navigation facility TiHAN (Technology Innovation Hub on Autonomous Navigation) is established at?

- a) IIT Hyderabad
- b) IIT Bombay
- c) IIT Madras
- d) IIT Delhi

ANS: A

Explanation: TiHAN, India's first Autonomous Navigation facility (for both ground and aerial vehicle testing), was inaugurated at IIT Hyderabad.

• TiHAN (by Ministry of Science & Technology) is a multidisciplinary initiative to make India a global player in futuristic and next generation 'smart mobility' technology.



- It will provide industries, research and development labs, and academia a platform for research in autonomous navigation.
- It is one of the 25 technology innovation hubs under National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS).

Source: FORUMIAS

Q.6) Which of the following mission/s is/are related to planet Mars?

- 1. Perseverance
- 2. Hope
- 3. Gaganyan

Choose the correct answer from below given codes:

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

ANS: B

Explanation: Mars Missions by different countries:



Source: FORUMIAS

Q.7) The term "BeiDou" is often seen in news is related to which of the following?

- a) Ballistic Missile
- b) Cruise Missile
- c) China's Global Position System
- d) China's Space Station

ANS: C

Explanation: Global Navigation satellite systems: GPS from U.S., GLONASS from Russia, Galileo from European Union, and BeiDou from China. **Source: FORUMIAS**

Q.8) Which of the following is/are Space based augmentation system/s?

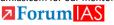
- 1. GAGAN
- 2. EGNOS
- 3. WAAS

Choose the correct answer from below given codes:

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

ANS: D

Explanation: GAGAN is an Indian Satellite Based Augmentation System (SBAS) jointly developed by AAI and ISRO for India and neighboring countries in the equatorial region.



It is one among the only four Space-Based augmentation systems available in the world which also includes US (WAAS) Europe (EGNOS) and Japan (MSAS).

Source: FORUMIAS

Q.9) The "Mission Prarambh" is often seen in news is related to which of the following?

- a) Rocket
- b) Ballistic Missile
- c) Submarines
- d) Nuclear reactors

ANS: A

Explanation: Mission Prarambh: Involved launch of Vikram-S (VKS), India's first privately built rocket by Hyderabadbased Skyroot Aerospace.

- VKS is a single-stage spin-stabilized (using 3-D printed solid thrusters) solid propellant rocket.
- Payload Capacity: 290 kg- 560 kg payloads into sun-synchronous polar orbits. Launched with support from ISRO and IN-SPACe.

Source: FORUMIAS

Q.10) The "Mouling National Park" is recently seen in news is related to?

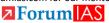
- a) Assam
- b) Mizoram
- c) Arunachal Pradesh
- d) Tripura

ANS: C

Explanation: Mouling National Park is a national park located in the Indian state of Arunachal Pradesh, spread primarily over the Upper Siang district and parts of the West Siang and East Siang district.

It was the second national park to be created in the state, after Namdapha National Park in 1972.

Source: FORUMIAS



Science & Technology

Q.1) The "Yotta D1" is recently seen in news is related to which of the following?

- a) Data centre
- b) Micro satellite
- c) New bacteria
- d) New rice variety

ANS: A

Explanation: Yotta D1: It is country's biggest and North India's first hyperscale data centre that was recently inaugurated in Greater Noida Uttar Pradesh.

It is a dedicated secure space within a centralized location where computing and networking equipment is concentrated for collecting, storing and processing large amounts of data.

Source: FORUMIAS

Q.2) The term "MIMO (multiple input, multiple output)" is often seen in news is related to which of the following?

- a) Wireless communications
- b) Biotechnology
- c) Power grid technology
- d) Hybrid technology

ANS: A

Explanation: MIMO (multiple input, multiple output) is an antenna technology for wireless communications in which multiple antennas are used at both the source (transmitter) and the destination (receiver).

The antennas at each end of the communications circuit are combined to minimize errors, optimize data speed and improve the capacity of radio transmissions by enabling data to travel over many signal paths at the same time.

Source: FORUMIAS

Q.3) The "Hydra Market" is recently seen in news is related to which of the following?

- a) DarkNet market
- b) Automobile market
- c) Hydro power market
- d) Fossil fuel market

ANS: A

Explanation: Germany has shut down Russia-linked 'Hydra Market'- considered as world's biggest and oldest DarkNet marketplace of illegal items and services.

- Also known as Dark Web, it is that part of the Internet which cannot be accessed through traditional search engines like Google nor is it accessible by normal browsers like Chrome or Safari.
- It generally uses non-standard communication protocols which make it inaccessible to internet service providers (ISPs) or government authorities.

Source: FORUMIAS



Q.4) The term "LaMDA" is recently seen in news is related to?

- a) Artificial Intelligence
- b) New CoVID virus
- c) New Maize variety
- d) Pico Satellite

ANS: A

Explanation: LaMDA (Language Models for Dialog Applications) is a machine-learning language model created by Google as a chatbot that is supposed to mimic humans in conversation.

- Like BERT, GPT-3 and other language models, LaMDA is built on Transformer, neural network architecture that Google invented and open-sourced in 2017.
- It is designed to be able to engage in free-flowing conversations about virtually endless number of topics.

Source: FORUMIAS

Q.5) Which of the following is/are Non-fungible token/s?

- 1. Drawing
- 2. Animation
- 3. Photo

Choose the correct answer from below given codes:

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

ANS: D

Explanation: Non-fungible tokens (NFT) is a digital object that can be a drawing, animation, piece of music, photo, or video with a certificate of authenticity created by blockchain technology.

- Tokenizing these assets allows them to be bought, sold, and traded more efficiently while reducing the probability of fraud.
- Fungibility refers to an asset's ability to be exchanged with a similar asset without sacrificing its value (For ex: 100 rupee note is fungible).

Source: FORUMIAS

Q.6) Which of the following airport has become the first Indian airport to introduce Radio Frequency Identification (RFID)-enabled tag to track check-in luggage?

- a) Delhi
- b) Kochi
- c) Hyderabad
- d) Chennai

ANS: A

Explanation: Delhi airport has become the first Indian airport to introduce Radio Frequency Identification (RFID)-enabled tag to track check-in luggage. **Source: FORUMIAS**



Q.7) The term "IndiaStack" is often seen in news is related to?

- a) Digital public infrastructure
- b) Rice variety through stacks
- c) CoVID data base
- d) Genome editing

ANS: A

Explanation: India Stack is the collective name of a set of commonly used digital public infrastructure (DPIs) in India.

- It consists of three different layers -- unique identity (Aadhaar), complimentary payments systems (Unified Payments Interface, Aadhaar Payments Bridge, Aadhaar Enabled Payment Service), and data exchange (DigiLocker and Account Aggregator).
- Together they enable online, paperless, cashless, and privacy-respecting digital access to a variety of public and private services, a working paper titled 'Stacking up the Benefits: Lessons from India's Digital Journey' said.

Source:<u>https://www.outlookindia.com/business/india-s-world-class-digital-infra-worth-emulating-by-many-nations-imf-paper-news-276531</u>

Q.8) The term "2Africa Pearls" is often seen in news is related to?

- a) Subsea cable system
- b) Rare earth materials
- c) Satellite connection between states of Africa and Asia
- d) Agriculture cooperation between Africa and India

ANS: A

Explanation: Facebook parent Meta will partner with Bharti Airtel to expand 2Africa Pearls to India.

- 2Africa Pearls is one of world's longest subsea cable systems that will ultimately interconnect countries in Africa, Asia, and Europe.
- 2Africa Pearls will improve connectivity of fixed-line broadband internet in India.

Source: FORUMIAS

Q.9) Which of the following statement/s is/are correct about "DigiLocker"?

- 1. It is a flagship initiative of Ministry of Electronics & IT (MeitY) under Digital India program.
- 2. Documents in DigiLocker system are deemed to be at par with original physical documents.
- 3. It is a platform to issue/store and digitally verify government documents and certificates.

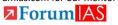
Choose the correct answer from below given codes:

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

ANS: D

Explanation: DigiLocker is a flagship initiative of MeitY under Digital India program.

• It is a platform to issue/store and digitally verify government documents and certificates.



- Documents in DigiLocker system are deemed to be at par with original physical documents under Information Technology Rules, 2016.
- Digital Locker is aimed at minimizing the usage of physical documents and enable sharing of e-documents across agencies.

Source: FORUMIAS

Q.10) The "Jambughoda Wildlife Sanctuary" is recently seen in news is related to?

- a) Gujarat
- b) Himachal Pradesh
- c) Tamil Nadu
- d) Chhattisgarh

ANS: A

Explanation: Jambughoda is a Wildlife Sanctuary situated in Jambughoda Tehsil, in the South-Central part of Gujarat, and the Khathiar-Gir dry deciduous forests' ecoregion in India. It is located 70 km from Vadodara and 20 km from prominent tourist places such as Pawagadh and Champaner.

Source: FORUMIAS

