Agniveer Army GD 1 July 2025 (Shift 1) Memory-Based Paper (Previous Year Paper)

Army GD Agniveer • 2025 • 50 questions • 60 minutes • Answer key and solutions

Take this paper as a timed mock test

Practise under exam conditions, then review your answers after you submit.

yourmocktest.com/pyq/army-gd-agniveer/agniveer-army-gd-1-july-2025-shift-1-memory-based-…

Scan the QR code or click the link to open it.

YourMockTest.com — Free Study Material

GENERAL KNOWLEDGE

Q1. What is the motto of the Indian Army?

(a) Satyameva Jayate
(b) Karo Ya Maro
(c) Service Before Self
(d) Vande Mataram

Q2. Which of the following tribal groups are mostly found in Chhattisgarh?

(a) Santhal
(b) Maria
(c) Gond
(d) Parja

Q3. When was the freedom fighter ‘Mangal Pandey’ executed?

(a) 10 May, 1857
(b) 8 April, 1857
(c) 13 July, 1856
(d) 21 February, 1859

Q4. Who is the current Governor of RBI in 2025?

(a) Dr. Raghuram G. Rajan
(b) Dr. Urjit R. Patel
(c) Sanjay Malhotra
(d) Shaktikanta Das

Q5. Which dance form is performed on a brass plate (peetal ki thaali)?

(a) Kathak
(b) Bharatanatyam
(c) Odissi
(d) Kuchipudi

Q6. How many operational commands are there in the Indian Army?

(a) 3
(b) 5
(c) 7
(d) 9

Q7. The idea of Directive Principles of State Policy was borrowed from:

(a) Britain
(b) France
(c) The US

(d) Ireland

Q8. Pattachitra Art is the folk painting of which state?

(a) Andhra Pradesh
(b) Bihar
(c) Gujarat
(d) Odisha

Q9. Who was the President of Congress during Belgaum Summit of Congress in 1924?

(a) K.L. Nehru
(b) M.K. Gandhi
(c) Charu Majumdar
(d) J.L. Nehru

Q10. Which ruler of Kanpur called himself ‘Peshwa’?

(a) Nana Saheb
(b) Bajirao I
(c) Bajirao II
(d) Bahadur Shah Zafar

Q11. What is the motto of 'Indian Air Force'?

(a) Sewa Paramo Dharma
(b) Nabha Sparsham Deeptam
(c) Sham-no Varuna
(d) Aakasey Satrun Jahi

Q12. Which freedom fighter from Goa received the Padma Shri Award in 2025?

(a) Ramakant Kamat
(b) Libia Lobo Sardesai
(c) Manohar Borkar
(d) Shyam Rao Bhat

Q13. In which Part of the Constitution, Panchayati Raj related Provisions have been implemented?

(a) Part - 6
(b) Part - 7
(c) Part - 8
(d) Part - 9

Q14. 'Lothal' is located near which of the following rivers?

(a) Sutlej
(b) Ghaggar
(c) Ravi
(d) Bhogavo

Q15. Who was the first Deputy Chairman of the Planning Commission of India?

(a) Vallabhbhai Jhaverbhai Patel
(b) Gulzarilal Nanda
(c) KC Neogy
(d) Jawaharlal Nehru

GENERAL SCIENCE

YourMockTest.com — Free Study Material

Q16. Which of the following are micronutrients required by a human body?

(a) Minerals
(b) Roughage
(c) Fats
(d) Proteins

Q17. Washing the rice many times using a large amount of water before cooking leads to

(a) loss of vitamin 'E'
(b) less of vitamin 'B'
(c) loss of water-soluble carbohydrates
(d) loss of the surface protein

Q18. Which glass is used to make spectacles?

(a) Soda glass
(b) Potash glass
(c) Crookes glass
(d) Jena glass

Q19. In which part of the human body is the blood purified?

(a) Heart
(b) Kidney
(c) Lungs
(d) Intestine

Q20. _____ is a lustrous non-metal.

(a) Sodium
(b) Iodine
(c) Sulphur
(d) Phosphorus

Q21. Emergency hormone is-

(a) Aldosterone
(b) Parathormone
(c) Adrenalin
(d) Thyroxine

Q22. Which of these creatures is not found in dense forests?

(a) Camel
(b) Kangaroo
(c) Elephant
(d) Monkey

Q23. Which of the following is NOT required for photosynthesis?

(a) Sunlight
(b) Oxygen
(c) Carbon dioxide
(d) Chlorophyll

Q24. Acid rain is because of

(a) SO_x
(b) CO_x
(c) COH
(d) H2S

YourMockTest.com — Free Study Material

Q25. Iron rusts because of _____ reaction.

(a) Oxidation
(b) Reduction
(c) Corrosion
(d) Redox

Q26. The SI unit of electric charge is a.

(a) coulomb
(b) watt
(c) newton
(d) joule

Q27. Zinc coated iron is known as:

(a) Galvanised iron
(b) Black iron
(c) Cast iron
(d) Stainless sheet

Q28. The sun gets its energy from which of the following?

(a) Nuclear Fission
(b) Photoelectric effect
(c) Chemical Reaction
(d) Nuclear Fusion

Q29. The phenomena that links current induced in a coil and change in magnetic flux is known as:

(a) electromagnetic wave
(b) electromagnetic wave propagation
(c) electromagnetic radiation
(d) electromagnetic induction

Q30. What gets destroyed by cutting and washing fruits and vegetables?

(a) Fiber
(b) Water
(c) Carbohydrates
(d) Vitamin

MATHEMATICS

Q31. Out of a total of 16 eggs, 12 are rotten. What is the percentage of eggs that are good?

(a) 75%
(b) 50%
(c) 25%
(d) 20%

Q32. Find the LCM of 15, 30, 42.

(a) 42
(b) 210
(c) 150
(d) 180

Q33. Find the average of first 20 natural numbers.

(a) 12
(b) 10.5
(c) 11
(d) 21

YourMockTest.com — Free Study Material

Q34. 67% of 200 = ?

(a) 134
(b) 120
(c) 140
(d) 144

Q35. Ratio of 2 kg and 690 g is:

(a) 2 : 690
(b) 690 : 2
(c) 200 : 69
(d) 69 : 200

Q36. The area of a square is 144 m^2. What is the perimeter of the square?

(a) 48 m
(b) 36 m
(c) 12 m
(d) 64 m

Q37. In a class, the ratio of boys to girls is 5:6, and the total number of students is 66. How many girls are there in the class?

(a) 45
(b) 36
(c) 30
(d) 40

Q38. A principal amount of 100 Rs is invested at an interest rate of 10% for 1 year. What is the simple interest?

(a) 20 Rs
(b) 25 Rs
(c) 10 Rs
(d) 15 Rs

Q39. Three times a certain number equals 145. What is the number?

(a) 45.33
(b) 48.33
(c) 45
(d) 50

Q40. The ratio of the ages of Dinesh and Mukesh is 4:5. If the sum of their ages is 45, what is Mukesh's age?

(a) 20
(b) 25
(c) 30
(d) 27

Q41. Average of first 7 even nutural numbers is:

(a) 6
(b) 9
(c) 8
(d) 7

Q42. $\sqrt{625} + \sqrt{4} - \sqrt{400} = ?$

(a) 10
(b) 9
(c) 7
(d) 5

YourMockTest.com — Free Study Material

Q43. 160 × 8 ÷ √100 = ?

(a) 128
(b) 16
(c) 80
(d) 144

Q44. 60 + 51 + 90 + 21 = ?

(a) 230
(b) 220
(c) 150
(d) 222

Q45. The average weight of A, B, and C is 78 kg, and the average weight of A and B is 94 kg. What is the weight of C?

(a) 140 kg
(b) 80 kg
(c) 46 kg
(d) 49 kg

LOGICAL REASONING

Q46. In a row of 37 students all facing north, Saurav is 19^(th)from the right end. What is his position from the left end?

(a) 21
(b) 19
(c) 20
(d) 18

Q47. Which letter is the 9th to the right of the 15th letter from your left in the following alphabet series?

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

(a) W
(b) U
(c) S
(d) X

Q48. In a certain code language, 'DAME' is coded as '2976', 'TIME' is coded as ' 9254 ', 'SAPE' is coded as '8369', 'MOST' is coded as '1523'. What is the code for 'ATP' in that code language?

(a) 851
(b) 658
(c) 651
(d) 869

Q49. If in a certain code 'YELLOW' is written as 'XFKMNX', how is 'BORDER' coded?

(a) AQPESD
(b) APSEFS
(c) ANSCFQ
(d) APQEDS

Q50. If South-west becomes north and East becomes South-west, then what will North-west become?

(a) North-east
(b) South-east
(c) South
(d) East

YourMockTest.com — Free Study Material

ANSWER KEY

1	c	2	c	3	b	4	c	5	d	6	c	7	d	8	d	9	b	10	a
11	b	12	b	13	d	14	d	15	b	16	a	17	b	18	c	19	b	20	b
21	c	22	a	23	b	24	a	25	d	26	a	27	a	28	d	29	d	30	d
31	c	32	b	33	b	34	a	35	c	36	a	37	b	38	c	39	b	40	b
41	c	42	c	43	a	44	d	45	c	46	b	47	d	48	b	49	d	50	d

SOLUTIONS

Q1. Answer: (c) Service Before Self

The correct answer is Service Before Self.

Key Points

• Indian Army

• Army Day: 15 January

• Motto: Service Before Self

• Chief of the Army Staff: General Manoj Pande

• Vice-Chief of the Army Chief: Lieutenant General Baggavalli Somashekar Raju

Force	Day	Motto	Chief
Indian Navy	4 December	May the Lord of Water be auspicious unto us	Admiral DINESH K TRIPATHI
Indian Air Force	8 October	Touch the Sky with Glory	Air Chief Marshal Vivek Ram Chaudhari

Additional Information

• Satyameva Jayate

• It is a part of a mantra from the Hindu scripture Mundaka Upanishad.

• It was adopted as the national motto of India on 26 January 1950.

• It is inscribed in the Devanagari script at the base of the Lion Capital of Ashoka and forms an integral part of the Indian National Emblem and inscribed on one side of all Indian currency and national documents.

• Vande Mataram

• It is the National Song of India and was written by Bankim Chandra Chatterjee in his novel Anandmath in 1882.

• On 24 January 1950, it was adopted as a national song of India by the Constituent Assembly of India.

• 1896 session of the Indian National Congress held at Calcutta is the first political event where the National Song was sung.

Q2. Answer: (c) Gond

The correct answer is Gond.

Key Points

• Gond Tribe has mostly found in Chhattisgarh.

• The Gond tribe of Bastar is one of the most famed tribes in India, recognized for their exceptional Ghotul system of marriages.

• The Gond Tribals, who are also acknowledged as the Koytorias are extensively dispersed throughout Chhattisgarh.

Additional Information

• Santhal tribe is the ethnic group of eastern India.

• Their greatest concentration is in the states of Bihar, Jharkhand, West Bengal, and Orissa.

• They belong to the Pre-Aryan period and were the great fighters during the British regime in India.

Q3. Answer: (b) 8 April, 1857

• Mangal Pandey was executed on 8th April 1857.

• He was the first martyr of the revolt of 1857.

• He was a Sepoy in 34th Bengal Native Infantry regiment of British East India Company.

YourMockTest.com — Free Study Material

Q4. Answer: (c) Sanjay Malhotra

The correct answer is Sanjay Malhotra.

Key Points

• Revenue Secretary Sanjay Malhotra has been appointed as the new RBI Governor on December 12, 2024.

Additional Information

List of all the Governors of the Reserve Bank of India (RBI) since its establishment in 1935:

1. Osborne Smith (1935–1937)
2. James Braid Taylor (1937–1943)
3. C. D. Deshmukh (1943–1949)
4. Benegal Rama Rau (1949–1957)
5. K. G. Ambegaonkar (1957–1957)
6. H. V. R. Iyengar (1957–1962)
7. P. C. Bhattacharya (1962–1967)
8. L. K. Jha (1967–1970)
9. B. N. Adarkar (1970–1970)
10. S. Jagannathan (1970–1975)
11. N. C. Sen Gupta (1975–1975)
12. K. R. Puri (1975–1977)
13. M. Narasimham (1977–1977)
14. I. G. Patel (1977–1982)
15. Manmohan Singh (1982–1985)
16. Amitav Ghosh (1985–1985)
17. R. N. Malhotra (1985–1990)
18. S. Venkitaramanan (1990–1992)
19. C. Rangarajan (1992–1997)
20. Bimal Jalan (1997–2003)
21. Y. V. Reddy (2003–2008)
22. D. Subbarao (2008–2013)
23. Raghuram Rajan (2013–2016)
24. Urjit Patel (2016–2018)
25. Shaktikanta Das (2018–2024)
26. Sanjay Malhotra (2024-Present)

Q5. Answer: (d) Kuchipudi

The correct answer is "Kuchipudi".

Key Points

• The dance shape Kuchipudi advanced in what's now called the country of Andhra Pradesh in southern India.

• Kuchipudi derives its call from the village Kuchelapuram, which it becomes nurtured by excellent students and artists who constructed the repertoire and delicate dance technique.

• A precise piece to the Kuchipudi repertoire in which the dancer plays rhythmic sequences at the same time as dancing on the rim of a brass plate concurrently balancing a pot of water on their head.

• The word 'Tarangam' interprets to 'waves', consequently the actions supplied in a tarangam are reflective of the motion of waves of an ocean or river.

• Tarangams are offered to songs written with the aid of using Narayana Theertha from his ‘Sri Krishna Leela Tarangini’.

• This encompasses the testimonies and existence of Lord Krishna, from his early life to all his pranks, to his marriage to Rukmini.

• Performing this feat has an extra symbolic meaning.

• As said via way of means of the second president of the Indian Republic, Dr Sarvepalli Radhakrishnan, in the Indian Express, ‘There is philosophical importance to the waterpot and plate.

• It is the analogy to life itself.’

Additional Information

• Manduk Shabdam:

• A tale of the frog is accomplished withinside the Kuchipudi dance form.

YourMockTest.com — Free Study Material

• Kuchipudi is one of the classical dances sorts of India from the nation of Andhra Pradesh.
• This dance shape was given patronage by each of the Vijayanagara and Golconda rulers.
• Kuchipudi dance especially depicts the ‘Earthly Elements’.
• Jala Chitra Nitrayam:
• In this element, the dancer draws a picture on the floor with his or her toes while dancing.
• Tandava:
• Tandava also known as Tandava Natyam, is a divine dance performed by the Hindu god Shiva.
• Shiva is depicted as dancing the Tandava in the shape of Nataraja.
• The Natya Shastra, a Sanskrit treatise on the appearing arts describes numerous elements of the Tandava.
• Tandava, as achieved withinside the sacred dance-drama of India, has vigorous, brisk movements.
• Performed with joy, the dance is referred to as Ananda Tandava.
• Performed in a violent mood, the dance is referred to as Raudra or Rudra Tandava.
• The kinds of Tandava observed withinside the Hindu texts are Ananda Tandava, Tripura Tandava, Sandhya Tandava, Samhara Tandava, Kali (Kalika) Tandava, Uma Tandava, Shiva Tandava, Krishna Tandava and Gauri Tandava.

Q6. Answer: (c) 7

The correct answer is 7.

Key Points

• Number of Operational Commands: The Indian Army has a total of 7 operational commands.
• Geographical Division: These commands are divided based on geographical regions across India to address different operational requirements.
• Leadership: Each command is led by a Lieutenant General.
• List of Commands:
• Northern Command: Headquartered in Udhampur, Jammu & Kashmir.
• Western Command: Headquartered in Chandimandir, Haryana.
• Southern Command: Headquartered in Pune, Maharashtra.
• Eastern Command: Headquartered in Kolkata, West Bengal.
• Central Command: Headquartered in Lucknow, Uttar Pradesh.
• South-Western Command: Headquartered in Jaipur, Rajasthan.
• Army Training Command (ARTRAC): Headquartered in Shimla, Himachal Pradesh.
• These commands help in the effective management and deployment of the Indian Army's forces across different regions.

Q7. Answer: (d) Ireland

The correct answer is Ireland.

Key Points

• Constitutional Provisions: Part IV of the Constitution of India (Article 36–51) contains the Directive Principles of State Policy (DPSP).
• They are borrowed from the Constitution of Ireland, which copied it from the Spanish Constitution.
• Article 37 of the Indian Constitution states the application of the Directive Principles.
• These principles aim at ensuring socio-economic justice to the people and establishing India as a welfare state whereas fundamental rights ensure political justice.

Additional Information

• Borrowed Features of the Indian Constitution:
• Irish Constitution - Directive Principles of State Policy, Nomination of Rajya Sabha members & Method of the election of the President.
• US Constitution - Fundamental rights, Independent judiciary and judicial review, Impeachment of the President, Removal of Supreme Court and High Court judges & Post of Vice-President.
• France Constitution - Republic, Ideals of liberty, equality, and fraternity in the Preamble.
• Britain (UK) Constitution - Parliamentary government, Rule of Law, Legislative procedure, Single Citizenship, Cabinet system, Prerogative writs, Parliamentary privileges, Bicameralism.

Q8. Answer: (d) Odisha

The correct answer is Odisha.

• Pattachitra Art is the folk painting of Odisha.

YourMockTest.com — Free Study Material

• It contains the scenes related to the life of Lord Krishna.

• Madhubani is the folk painting of Bihar.

• Warli Art is the folk painting of Maharashtra.

• Kalamkari Paintings is from Andhra Pradesh and Telangana but they are not folk paintings.

Additional Information

State	Famous Art/Culture
Bihar	Madhubani folk art
Madhya Pradesh	Mandana
Orissa	Pattachitra
Andhra Pradesh, Telengana	Kalamkari
Kolkata	Kalighat

Q9. Answer: (b) M.K. Gandhi

Option 2 is correct, i.e. M.K. Gandhi.

• Mahatma Gandhi commanded extraordinary influence over Congress all his life.

• Belgaum was an important center of the Freedom movement.

• Lokmanya Tilak launched his Home Rule League from Belgaum in 1916.

• The town had the honor of hosting the All India 39th Congress session in 1924 that was the only session which was presided over by Mahatma Gandhi, and the only session held in Karnataka.

Note: He was President of the Indian National Congress only for once in Belgaum Session in 1924.

Q10. Answer: (a) Nana Saheb

The correct answer is Nana Saheb.

Peshwas served as the Prime minister of the Maratha Kingdom. With the help of Peshwas, the Marathas had a successful military organisation.

• Nana Saheb: Balaji Baji Rao was popularly known as “Nana Saheb”.

• He was a Peshwa of the Maratha Empire in India.

• Born in Bithoor of Kanpur district.

• Adopted by Peshwa Baji Rao II who was residing in an estate in Bithoor after the Third-Anglo Maratha war.

• As the adopted son of Bajirao II, he sought to restore the Maratha confederacy and the Peshwa tradition.

• After the death of Peshwa Bajirao II, Nana Saheb was not accepted as the heir by the British as he was the adopted son of the Peshwa and they also refused to give him a pension.

• All this led him to participate in the Revolt of 1857.

• Nana Saheb was an inspiration to many other freedom fighters as he supported the ideology of Independence and tried to diminish the British impact through the rebellion of 1857.

• He attacked the British Barricade at Kanpur and captured it. Then he declared himself as the Peshwa and the governor under Emperor Bahadur Shah Zafar.

Additional Information

• Bajirao I was the Peshwa of Chatrapati Shahu whose administrative capital was Satara. He was considered a highly skilled courageous warrior. He was the force behind the expansion of the Maratha empire, especially in the North.

• Bajirao II was the Peshwa of Poona and a puppet ruler installed by the Maratha nobles. After being defeated by Yashwantrao Holkar(ruler of Indore) at the Battle of Poona, he fled to British protection and signed the Treaty of Bassein. During the reign of Bajirao II, the Second Anglo-Maratha war and the Third Anglo-Maratha war happened.

• Bahadur Shah Zafar was the last Mughal ruler. The sepoys of Meerut proclaimed Bahadur Shah Zafar as their leader and captured Delhi. Again Delhi was recaptured by the British in September 1857 and Bahadur Shah Zafar was sentenced to life imprisonment.

Hence, it becomes clear that Nana Saheb, the ruler of Kanpur called himself ‘Peshwa’.

Q11. Answer: (b) Nabha Sparsham Deeptam

The Correct Answer is Option (2) i.e. Nabha Sparsham Deeptam.

Key Points

• The motto of the Indian Air Force is "Nabha Sparsham Deeptam" or "Touch the Sky with Glory".

YourMockTest.com — Free Study Material

• It was founded on 8^(th) October 1932. Its headquarters are in New Delhi.

• The present Chief of Air Staff of India is Vivek Ram Chaudhari as of Nov 2022.

Force	Motto	Translation	Founded In
Indian Army	Sewa Paramo Dharam	Service is our duty	1^(st) April 1895
Indian Navy	Sham-no Varuna	May the Lord of the Oceans, be auspicious unto us	5^(th) September 1612
Corps of Army Air Defence	Aakasey Saturn Jahi	Win over the enemy in the sky.	1939

Q12. Answer: (b) Libia Lobo Sardesai

The correct answer is Libia Lobo Sardesai.

Key Points

• Historical Significance: Libia Lobo Sardesai was a prominent freedom fighter who contributed to Goa's Liberation Movement against Portuguese rule.

• Underground Radio: She, along with Vaman Sardesai and Nicolau Menezes, started an underground radio station, Voice of Freedom, to boost the morale of the people of Goa. This radio operated secretly to bypass censorship imposed by Portuguese authorities.

• Broadcasts: The underground radio station began broadcasting on November 25, 1955. Libia played a significant role by broadcasting in Konkani, while Sardesai did so in Portuguese.

• Legacy: Libia was also the first lady lawyer in Goa, contributing significantly to the legal profession after the liberation.

• Recognition: She was honored with the Padma Shri award as part of the 30 "unsung heroes" of India for her selfless contribution to the freedom movement and her role in Goa’s liberation struggle.

Q13. Answer: (d) Part - 9

The correct answer is Part - 9.

• In Part - 9 of the Constitution, Panchayati Raj related Provisions have been implemented.

• The 73^(rd) Amendment 1992 added a new Part IX to the constitution.

• Part-6 of the Constitution consists of "The States".

• Part-7 was repealed by the Constitution (7th Amendment) Act, 1956.

• Part-8 of the Constitution consists of "The Union Territories".

Important Points

• Part-1 of the Constitution consists of the Union and its territory.

• Part-2 of the Constitution consists of Citizenship.

• Part-3 of the Constitution consists of Fundamental Rights.

• Part-4 of the Constitution consists of Directive Principles.

• Part-4A of the Constitution consists of Fundamental Duties.

• Part-5 of the Constitution consists of "The Union".

Q14. Answer: (d) Bhogavo

The correct answer is Bhogavo.

Key Points

• Lothal was an ancient Indus Valley Civilization site in India.

• It was located in Gujarat.

• 'Lothal' is located near the Bhogavo river.

• Lothal was discovered in 1954.

• It was excavated by S. R Rao.

• Lothal is a lower town and dockyard.

• Evidence of rice has been found from Lothal.

• The ancient Indus Valley Civilization site Ropar is located near the Sutlej river.

• The ancient Indus Valley Civilization site Kalibangan is located near the Ghaggar river.

• The ancient Indus Valley Civilization site Harappa is located near the Ravi river.

YourMockTest.com — Free Study Material

Q15. Answer: (b) Gulzarilal Nanda

The correct answer is Gulzarilal Nanda.

Key Points

• The Planning Commission is a department of the Indian government, formed on March 15, 1950, to oversee the economic and social growth of the nation, primarily through the creation of five-year plans.

• The head of the serving government, the Prime Minister of India, also happen to be the chairman of the Planning Commission.

• The first Prime Minister of India, Jawaharlal Nehru was the Chairman of Planning Commission.

• Former Indian Prime Minister Gulzarilal Nanda served as the first deputy chairman of the planning commission from 17 February 1953 until 21 September 1963.

• Planning commission is currently abolished. Today, the Planning Commission is known as NITI Aayog.

• The Planning Commission of India's deputy chairperson is chosen by the central cabinet because the prime minister serves as the body's ex-officio chair.

• Mr Montek Singh Ahluwalia is the former and current deputy chairperson of the Planning Commission.

Additional Information

• Vallabhbhai Jhaverbhai Patel:

• Vallabhbhai Jhaverbhai Patel, also known as Sardar Patel, was an Indian lawyer, statesman, and powerful political figure.

• From 1947 until 1950, he held the positions of India's first Deputy Prime Minister and Home Minister.

• He was a lawyer and a prominent member of the Indian National Congress who led the country's independence movement and oversaw its fusion into a single, sovereign state.

• KC Neogy:

• Kshitish Chandra Neogy, popularly known as KC Neogy, was a politician from West Bengal, India.

• He served as the chairman of India's first finance commission and was a member of the country's first independent cabinet as well as the Indian Constituent Assembly.

• Neogy, an Indian National Congress member, was chosen to represent Bengal in the Central Legislative Assembly in 1920, 1923, 1926, and 1930.

• He was re-elected to the body in subsequent elections.

• Jawaharlal Nehru:

• Jawaharlal Nehru was a prominent figure in India around the middle of the 20th century.

• He was an anti-colonial patriot, secular humanism, social democrat, statesman, and author.

• He was appointed India's first Prime Minister in 1947, taking power for 16 years.

• Nehru greatly influenced India's development into a modern nation in the 1950s by promoting parliamentary democracy, secularism, science, and technology.

Q16. Answer: (a) Minerals

The correct answer is Minerals.

Key Points

• Humans need energy delivering macronutrients (fat, carbohydrate, protein) and no energy delivering micronutrients.

• Micronutrients are the groups of nutrients required by our bodies in small amounts.

• These include vitamins and minerals which are essential for growth and energy.

• Since our body cannot produce vitamins and minerals, they are taken externally from different food products.

Additional Information

Micronutrients can be divided into the four types:

• Water-Soluble Vitamins

• Most vitamins can be dissolved in water.

• They are difficult to store in the body and get flushed out in urine when consumed in large quantities.

• Since they are not stored in the body, it is important to take them enough from different food sources.

• Fat-Soluble Vitamins

• These vitamins do not dissolve in water.

• These are stored in the liver and fatty tissues for future use.

• Vitamins A, D, E, and K are important fat-soluble vitamins.

• They play a major role in the proper functioning of the immune system, proper bone development, proper vision, and protection of cells from damage.

• Macrominerals

• Macrominerals are required in higher amounts as compared to trace minerals.
• The important macrominerals and their functions include:
• Calcium - For the proper structure and function of bones.
• Phosphorus - Cell membrane structure
• Magnesium - Enzyme reactions
• Sodium - Fluid balance and maintenance of blood pressure
• Chloride - Maintains fluid balance and formation of digestive juices.
• Potassium - Nerve impulse transmission and muscle function.
• Sulphur - present in all the living tissues
• Trace Minerals
• These are required in very small amounts, but perform various important functions in our body.
• Iron, manganese, copper, zinc, iodine, fluoride, and selenium are some of the important trace minerals required by the body.

Q17. Answer: (b) less of vitamin 'B'

Concept:

A balanced diet

• It is not a component of food.
• It is a diet that contains different kinds of food in certain quantities and proportions so that the requirements of a person shall meet.
• Requirements like calories, proteins, minerals, vitamins, and alternative nutrients are adequate and a small provision is reserved for additional nutrients to endure the short length of leanness.

Explanation:

• Fruits and vegetables should not be washed after cutting them. By doing this nutrients ate lost.
• Repeated washing of rice and pulses may remove some vitamins
• When rice is washed repeatedly, the vitamin that is lost is Vitamin B1.
• It has been observed that Vitamin B1 i.e. thiamine gets reduced as much as 25% in the rice when it is washed.
• Rice and pulses should not be washed several times.
• Foods containing Vitamin C is usually not cooked.

Q18. Answer: (c) Crookes glass

The correct answer is Crookes glass

Key Points

• Crookes glass contains cerium oxide which sharply absorbs the ultraviolet rays from the sunlight so utilized in making spectacles.
• The glass is the homogenous mixture of the silicates of various alkaline metals of non-crystalline and transparent or less transparent substances.
• The glass was manufactured first in Egypt.
• Crook's glass consists of Cesium oxide.
• It is also used in the making of Spectacles as it absorbs UV rays.

Additional Information

• Jena glass containing Boron Oxide(B_2O_3) and Alumina(Al_2O_3) is used in the making of laboratory bottles for keeping acids and alkalies.
• Milky glass is used for making Vases, Pitchers, Bowls, and Plates.
• Flint glass is also used in optical instruments like lenses, Prisms, etc.
• Omega glass is a brand selling glasses while others are types of glasses.
• Water glass is water-soluble and is made by heating sodium carbonate and silica.
• Photochromatic glass, also known as light-adaptive glasses or variable tint glasses turns black into sharp light.
• Pyrex glass is borosilicate glass.

Q19. Answer: (b) Kidney

The correct answer is Kidney.

• The kidney is responsible for the filtration of blood.
• The kidneys are two bean-shaped organs, each about the size of a fist.
• Kidneys are located just below the rib cage, one on each side of your spine.

YourMockTest.com – Free Study Material

• Healthy kidneys filter about a half cup of blood every minute.

• The kidney also removes waste material and extra fluid from the body in the form of Urine.

• kidneys also remove acid produced by the body's cells and maintain a healthy balance of water, salts, and minerals—such as sodium, calcium, phosphorus, and potassium—in the blood.

• The kidney also helps in developing hormones that control blood pressure, make red blood cells, and keep bones stronger.

Additional Information

• The heart is responsible to provide oxygenated blood to every part of the body.

• The gallbladder stores bile produced by the liver.

• Bile juice is slightly alkaline in nature which is used to digest food.

Q20. Answer: (b) Iodine

• Iodine is a lustrous non-metal.

• It shows lustre like metals and has lower electronegativity like other non-metals.

• It shows the properties of both metals and non-metals.

Q21. Answer: (c) Adrenalin

The correct answer is 'Adrenalin'.

Key Points

• Adrenalin:

• Adrenalin, also known as epinephrine, is a hormone produced by the adrenal glands.

• It is often referred to as the "emergency hormone" or "fight-or-flight hormone" because it prepares the body to respond to stressful situations.

• When released, adrenalin increases heart rate, dilates air passages, and boosts energy levels, enabling quick reactions.

• This hormone also triggers the release of glucose and fats from temporary storage sites in the body, providing a quick energy source.

Additional Information

• Aldosterone:

• Aldosterone is a hormone produced by the adrenal glands that helps regulate blood pressure by controlling sodium and potassium levels in the blood.

• It is not directly involved in the body's immediate response to stress.

• Parathormone:

• Parathormone, also known as parathyroid hormone (PTH), is produced by the parathyroid glands and regulates calcium levels in the blood.

• It does not play a role in the emergency response mechanisms of the body.

• Thyroxine:

• Thyroxine is a hormone produced by the thyroid gland that regulates metabolism, growth, and development.

• While it is vital for overall health, it is not specifically involved in the immediate response to emergency situations.

Q22. Answer: (a) Camel

The correct answer is Camel.

Key Points

• The camel is a creature typically found in deserts, not in dense forests, making it an incorrect option for forest habitat.

• Camel, known for its ability to survive in harsh desert climates, is specially adapted to live in dry, arid regions.

• In contrast, dense forests are home to creatures that thrive in moisture-rich, shaded, and biodiverse environments.

• Examples of animals found in dense forests include tigers, elephants, and various species of monkeys, unlike the camel.

• The camel's physical features, such as a hump for storing fat, are suited to its desert habitat, not a forested environment.

Additional Information

• Desert Ecosystem:

• Desert ecosystems are characterized by low rainfall, sparse vegetation, and animals adapted to hot, dry conditions.

• The camel is one of the most famous animals in desert ecosystems, known for its ability to go without water for extended periods.

• Forest Ecosystem:

• Dense forests, unlike deserts, have a rich biodiversity and are characterized by high rainfall and a variety of plant and animal life.

• Forests are home to animals like tigers, jaguars, and various primates, which are adapted to moist, dense, and shaded

YourMockTest.com — Free Study Material

environments.

• Adaptations of Camel:

• The camel's hump stores fat, which the animal uses as a source of energy when food is scarce.

• Its long legs help it avoid the hot ground in the desert, while its thick eyelashes protect against blowing sand.

• Impact of Habitat on Animal Life:

• Habitats like deserts and forests shape the physical and behavioral traits of animals to suit environmental conditions.

• In deserts, animals like camels have adaptations to conserve water and endure high temperatures, whereas forest animals have traits to navigate dense vegetation and humidity.

Q23. Answer: (b) Oxygen

• Oxygen is not required for photosynthesis.

• Oxygen is liberated during photosynthesis.

• Photosynthesis is the process through which green plants manufacture food by converting solar energy into chemical energy. In this process, water and carbon dioxide react in the presence of sunlight to give off oxygen and glucose molecules.

• Leaves of a plant contain green colour due to the presence of chloroplasts.

• Chloroplasts contain the green substance called chlorophyll.

• Chlorophyll absorbs sunlight for photosynthesis.

Q24. Answer: (a) SO_x

Explanation:

Acid Rain:

• Normal rain has a pH of about 5.6; it is slightly acidic because carbon dioxide (CO_2) dissolves into it forming weak carbonic acid.

• Acid rain usually has a pH between 4.2 and 4.4. Acid rain, or acid deposition, is a broad term that includes any form of precipitation with acidic components.

• Such as sulfuric or nitric acid that falls to the ground from the atmosphere in wet or dry forms.

• This can include; rain, snow, fog, hail, or even dust that is acidic.

• Acid rain results when sulfur dioxide (SO_2) and nitrogen oxides (NOX) are emitted into the atmosphere and transported by wind and air currents.

• The SO_2 and NOx react with water, oxygen, and other chemicals to form sulfuric and nitric acids and is the cause of its acidity

• These then mix with water and other materials before falling to the ground.

Q25. Answer: (d) Redox

Explanation:

Confusion Points

• During rusting, iron combines with oxygen in the presence of water. This is an oxidation reaction where oxygen acts as an oxidizing agent.

• Since oxygen also combines with the metal iron, this is a reduction reaction, where the metal iron acts as a reducing agent.

• So here both oxidation and reduction process is taking place. This combination of these processes is a redox reaction. So the correct answer is the redox reaction.

Key Points

Rusting of iron is an example of a Redox reaction.

• Redox reaction = Oxidation-Reduction reaction. In this reaction, an oxidation number of a molecule, atom, or ion changes either by gaining or losing an electron.

• The substance which gets reduced in a chemical reaction is known as the oxidizing agent and a substance that gets oxidized in a chemical reaction is known as the reducing agent.

• Rusting is the corrosion of iron. Iron forms red-brown hydrated metal oxide (rust) in the presence of water and air.

• Iron is oxidized to Fe^{2+} and oxygen is reduced to water. Rust keeps on forming due to the subsequent oxidation of Fe^{2+} by atmospheric oxygen.

• Therefore, we can say rusting is a redox reaction because oxygen acts as an oxidising agent, and iron acts as a reducing agent.

Rusting of Iron takes place:

• Rust is an iron oxide, a usually red oxide formed by the redox reaction of iron and oxygen in the presence of water or air moisture.

• $Fe + O_2 \rightarrow Fe_2O_3$ (Iron (III)oxide)

Important Points

YourMockTest.com – Free Study Material

Oxidation and Reduction:

• Rusting is an oxidation reaction. The iron reacts with water and oxygen to form hydrated iron(III) oxide, which we see as rust. Iron and steel rust when they come into contact with water and oxygen – both are needed for rusting to occur.

• When acidic substances (including water) come in contact with metals, such as iron and/or steel, rust begins to form. Rust is the result of corroding steel after the iron (Fe) particles have been exposed to oxygen and moisture (e.g., humidity, vapor, immersion).

• The addition of oxygen to a substance and the removal of hydrogen from a substance is called oxidation.

• The addition of Hydrogen in a substance and the removal of oxygen from a substance is called reduction.

Q26. Answer: (a) coulomb

The correct answer is Coulomb.

Key Points

• Coulomb

• The SI Unit of Charge is Coulomb.

• It is denoted as C.

• The coulomb is defined as the quantity of electricity transported in one second by a current of one ampere.

Additional Information

• - There are 7 base Units, which are -

Quantity	Unit
Length	Metre
Time	Second
Amount of Substance	Mole
Electric Current	Ampere
Temperature	Kelvin
Luminous Intensity	Candela
Mass	Kilogram

Q27. Answer: (a) Galvanised iron

Concept:

In sheet metal work, different types of metal sheets are used.

• Black iron sheets: The cheapest sheet metal is black iron, which is rolled to the desired thickness. The sheets are rolled into two conditions. When it is rolled in a cold state, it is called cold-rolled and when it is rolled in a hot state, it is called hot rolled. Hot-rolled sheets have a bluish-black appearance and are often referred to as uncoated sheets since they are uncoated. They corrode rapidly. Cold-rolled sheets have a plain silver-whitish appearance and are uncoated.

• Galvanised iron sheets: Zinc-coated iron is known as 'galvanized iron. This soft iron sheet is popularly known as a G.I sheet. The zinc coating resists corrosion and improves the appearance of the metal and permits it to be soldered with greater ease.

• Stainless sheets: This is an alloy of steel with nickel, chromium, and other metals. It has good corrosive resistance and can be welded easily.

• Copper sheets: Copper sheets are available either as cold rolled or hot rolled. They have very good resistance to corrosion and can be worked easily.

• Aluminium sheets: Aluminium cannot be used in its pure form, but is mixed with a very small amount of copper, silicon, manganese, and iron. Aluminium sheets are whitish in color and light in weight. They are highly resistant to corrosion and abrasion.

• Tinned plate: Tinned plate is sheet iron coated with tin, to protect it against rust. This is used for nearly all solder work, as it is the easiest metal to join by soldering.

• Lead sheets: Lead is very soft and heavy in weight. Lead sheets are used for making the highly corrosive acid tanks

Q28. Answer: (d) Nuclear Fusion

The correct answer is Nuclear Fusion.

Key Points

• Nuclear fusion is the process where the nuclei of two light atoms combine to form a new nucleus.

• Nuclear Fusion is a reaction in which two or more atomic nuclei are combined to form one or more different atomic nuclei and subatomic particles (neutrons or protons). The difference in mass between reactant and products is manifested as either the

YourMockTest.com — Free Study Material

release of the absorption of energy. This difference in mass arises due to the difference in atomic binding energy between the nuclei before and after the reaction.

• Fusion is the process that powers active or main sequence stars and other high-magnitude stars, where large amounts of energy are released.

• The fusion process that produces nuclei lighter than iron-56 or nickel=62 will generally release energy. These elements have a relatively small mass per nucleon and large binding energy per nucleon.

• A fusion of nuclei lighter than these releases energy (exothermic process) while the fusion of heavier nuclei results in energy retained by the product nucleons and the resulting reaction is endothermic.

Image of the working process of the Nuclear Fusion:

Additional Information

• The nucleus of a heavy atom (such as uranium, plutonium, or thorium), when bombarded with low-energy neutrons, can be split apart into lighter nuclei. This process is called nuclear fission.

• Fission occurs when a neutron slams into a larger atom, forcing it to excite and split into two smaller atoms—also known as fission products.

• A chain reaction refers to a process in which neutrons released in fission reaction produces an additional fission reaction in at least one further nucleus. This nucleus, in turn, produces neutrons, and the process repeats.

• During this reaction, a tremendous amount of energy is released.

Important Points

• Fission reaction can further be classified into controlled and uncontrolled fission reaction.

• In controlled fission, the chain reaction is controlled and only a controlled amount of reaction is allowed, nuclear reactors in nuclear power plants are one of the examples of the controlled fission reaction.

• And for an uncontrolled fission chain reaction, and it is allowed to happen unless fission material is over, the atomic bomb is one of the examples of an uncontrolled fission reaction.

Q29. Answer: (d) electromagnetic induction

The correct answer is electromagnetic induction.

Key Points

• A current can be made to flow as a result of a shifting magnetic field through a process called electromagnetic induction.

• Magnetic force, we examined the force that moving charges encounter in a magnetic field.

• By changing the magnetic field across a wire loop, electromagnetic induction creates an induced emf.

• Magnetic flux shifts when a magnet and a coil move in relation to one another, and the coil produces an electromotive force.

• This electromotive force is responsible for producing the induced current.

Additional Information

• According to Faraday's Law of Electromagnetic Induction, whenever there is a change in the magnetic field associated with the changes in the electric circuits, an emf is induced.

• The creation of an electromotive force across a conductor of electricity in a magnetic field that is changing is known as electromagnetic induction.

• Transformers and electric generators are two significant devices that rely on electromagnetic induction.

• In creating and controlling the electric current that is essential to our daily lives, both devices perform crucial roles.

• To convert kinetic energy to electrical energy, electric generators use electromagnetic induction.

Q30. Answer: (d) Vitamin

The correct answer is Vitamin.

Key Points

• Cutting and washing fruits and vegetables can lead to the loss of vitamins, especially water-soluble ones like vitamin C and B vitamins.

• Vitamins are sensitive to light, heat, and oxygen, and washing or cutting can expose them to these elements, causing degradation.

• Fruits and vegetables lose nutrients mainly through washing, cutting, and exposure to air, which accelerates oxidation.

• Cooking and prolonged storage can also contribute to the breakdown of vitamins, with vitamin C being particularly vulnerable.

• To preserve vitamins, it is recommended to wash and cut fruits and vegetables just before consumption or cooking.

Additional Information

• Water-Soluble Vitamins:

• Vitamin C and B vitamins are water-soluble and prone to degradation when exposed to heat, light, and oxygen.

• These vitamins are found in many fruits and vegetables and are essential for various body functions like immunity and energy

metabolism.

• Oxidation Process:

• Oxidation occurs when oxygen reacts with certain nutrients in fruits and vegetables, leading to the breakdown of vitamins.

• It can be minimized by reducing exposure to air, heat, and light, such as using airtight containers or refrigeration.

• Cooking Effects on Vitamins:

• Heat-sensitive vitamins, like vitamin C, can be destroyed during cooking, especially if boiled for long periods.

• Steaming or microwaving is a better method to retain more vitamins in fruits and vegetables.

Q31. Answer: (c) 25%

Given:

Total number of eggs = 16

Number of rotten eggs = 12

Formula used:

Percentage of good eggs = [(Total eggs - Rotten eggs) / Total eggs] × 100

Calculation:

=> Good eggs = 16 - 12 = 4

=> Percentage of good eggs = (4 / 16) × 100

=> Percentage of good eggs = 0.25 × 100 = 25%

Therefore The percentage of good eggs is 25%

Q32. Answer: (b) 210

Given:

Numbers = 15, 30, 42

Calculation:

Prime Factorization

15 = 3 × 5

30 = 2 × 3 × 5

42 = 2 × 3 × 7

The highest powers of all prime factors

LCM = $2^1 \times 3^1 \times 5^1 \times 7^1$

LCM = 2 × 3 × 5 × 7 = 210

Therefore The Least Common Multiple (LCM) of 15, 30, and 42 is: 210

Q33. Answer: (b) 10.5

Given:

First 20 natural numbers are: 1, 2, 3, ..., 20

Formula used:

Average = (Sum of numbers) / (Total number of values)

The sum of the first n natural numbers = n × (n + 1) / 2

Calculation:

The sum of the first n natural numbers = n × (n + 1) / 2

For n = 20,

Sum = 20 × (20 + 1) / 2 = 20 × 21 / 2 = 420 / 2 = 210

Average = 210 / 20 = 10.5

Therefore The average of the first 20 natural numbers is: 10.5

Q34. Answer: (a) 134

Given:

Percentage = 67%

Value = 200

Formula used:

Value = (Percentage × Total) / 100

Calculation:

=> Value = (67 × 200) / 100
=> Value = 13400 / 100
=> Value = 134
Therefore 67% of 200 is: 134

Q35. Answer: (c) 200 : 69

Given:
First quantity = 2 kg
Second quantity = 690 g
Calculation:
Convert both quantities to the same unit
1 kg = 1000 g
So, 2 kg = 2 × 1000 = 2000 g
Ratio = 2000 g : 690 g
2000 ÷ 10 = 200
690 ÷ 10 = 69
So, the ratio is 200 : 69
Therefore The ratio of 2 kg to 690 g is: 200 : 69

Q36. Answer: (a) 48 m

Given:
Area of the square = 144 m^2
Formula used:
Area of a square = Side × Side
Perimeter of a square = 4 × Side
Calculation:
Side = √(Area) = √144 = 12 m
Perimeter = 4 × Side = 4 × 12 = 48 m
Therefore The perimeter of the square is: 48 m

Q37. Answer: (b) 36

Given:
Ratio of boys to girls = 5 : 6
Total number of students = 66
Calculation:
The total parts in the ratio
Total parts = 5 + 6 = 11 parts
One part = Total number of students / Total parts
One part = 66 / 11 = 6
Number of girls = 6 × 6 = 36
Therefore The number of girls in the class is: 36

Q38. Answer: (c) 10 Rs

Given:
Principal (P) = Rs. 100
Rate of interest (R) = 10%
Time (T) = 1 year
Formula used:
Simple Interest (SI) = (P × R × T) / 100
Calculation:
SI = (100 × 10 × 1) / 100
SI = 1000 / 100
SI = Rs. 10

YourMockTest.com — Free Study Material

Therefore The simple interest is: Rs. 10

Q39. Answer: (b) 48.33

Given:

Three times a certain number equals 145

Calculation:

Let the number be x.

3 × x = 145

=> x = 145 / 3

=> x = 48.33

Therefore The number is: 48.33

Q40. Answer: (b) 25

Given:

Ratio of ages of Dinesh and Mukesh = 4 : 5

Sum of their ages = 45

Calculation:

Let Dinesh's age be 4x and Mukesh's age be 5x.

Sum of their ages

4x + 5x = 45

=> 9x = 45

=> x = 45 / 9 = 5

Mukesh's age = 5x = 5 × 5 = 25

Therefore Mukesh's age is: 25 years

Q41. Answer: (c) 8

Given:

First 7 even natural numbers are: 2, 4, 6, 8, 10, 12, 14

Formula used:

Average = (Sum of numbers) / (Total number of values)

Calculation:

Sum = 2 + 4 + 6 + 8 + 10 + 12 + 14 = 56

Average = 56 / 7 = 8

Therefore The average of the first 7 even natural numbers is: 8

Q42. Answer: (c) 7

Given:

√625 + √4 - √400

Calculation:

The square roots

√625 = 25

√4 = 2

√400 = 20

Now, √625 + √4 - √400

=> 25 + 2 - 20 = 7

Therefore The result is: 7

Q43. Answer: (a) 128

Given:

160 × 8 ÷ √100

Calculation:

√100 = 10

Now, 160 × 8 ÷ √100

160 × 8 ÷ 10 = 160 × 0.8 = 128

YourMockTest.com — Free Study Material

Therefore The result is: 128

Q44. Answer: (d) 222

Given:

60 + 51 + 90 + 21

Calculation:

Perform the addition

60 + 51 = 111

111 + 90 = 201

201 + 21 = 222

Therefore The result is: 222

Q45. Answer: (c) 46 kg

Given:

Average weight of A, B, and C = 78 kg

Average weight of A and B = 94 kg

Calculation:

Total weight of A, B, and C = 78 × 3 = 234 kg

Total weight of A and B = 94 × 2 = 188 kg

Weight of C = Total weight of A, B, and C - Total weight of A and B

Weight of C = 234 - 188 = 46 kg

Therefore The weight of C is: 46 kg.

Q46. Answer: (b) 19

According to the question,

Total students = 37

Saurav's position = 19th from the right end.

Position of Saurav from the left end = 37 - 19 + 1 = 19

So, Saurav is 19th from the left end.

Q47. Answer: (d) X

The given alphabet series is: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Counting from A (which is the 1st letter from the left):

Position from left = 15 (initial position) + 9 (move to the right)

Position from left = 24

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

The 24th letter in the English alphabet is X.

Hence, the correct answer is "Option 4".

Q48. Answer: (b) 658

Given:

Here,

'A' is the code for '6'.

'T' is the code for '5'.

'P' is the code for '8'.

So, 'ATP' will be coded as '658'.

Hence, the correct answer is "Option 2".

Q49. Answer: (d) APQEDS

The pattern followed here is:

Similarly,

Hence, ‘APQEDS’ is the correct answer.

YourMockTest.com — Free Study Material

Q50. Answer: (d) East

Before the change original cardinal directions is shown below:

According to the questions,

i) South-west becomes north means 135º CW turn from South-west directions.

ii) East becomes South-west means 135º CW turn from East directions.

Similarly,

North-west becomes East when it take 135º CW turn from North-west directions.

Hence, the correct answer is "East".

More previous year papers and mock tests: **www.yourmocktest.com/pyq**

YourMockTest.com — Free Study Material