

UP BEd JEE General Knowledge

Sample Paper – 3

Duration: 90 Minutes

Maximum Marks: 100

Instructions

- This paper contains **50 Multiple Choice Questions** (Single Correct Answer), modelled on the General Knowledge portion of **UP BEd JEE** entrance.
- Each correct answer carries **+2 marks**. **1/3 mark is deducted** for each incorrect answer. No marks are deducted for unattempted questions.
- Only **one** option is correct. Choose carefully.
- Syllabus covers Current Affairs, Indian History, Geography, Indian Polity, General Science, Sports, UP Culture & Art, and Economics.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Q1. The India–Australia Economic Cooperation and Trade Agreement (ECTA), which significantly reduced tariffs on hundreds of goods between the two nations, was signed in which year?

- (A) 2019
- (B) 2020
- (C) 2021
- (D) 2022

Q2. India hosted the Shanghai Cooperation Organisation (SCO) Heads of State Summit in 2023. The summit was held in a *virtual* format chaired from which city?

- (A) New Delhi
- (B) Mumbai



- (C) Varanasi
- (D) Jaipur

Q3. Under the India Semiconductor Mission (2023), the Government of India provides fiscal support equivalent to what percentage of project cost for setting up greenfield semiconductor fabrication facilities?

- (A) 25%
- (B) 50%
- (C) 75%
- (D) 100%

Q4. The PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) scheme, launched in 2020, primarily aims to provide affordable working capital loans to:

- (A) Small and marginal farmers
- (B) Women entrepreneurs in rural areas
- (C) Street vendors affected by the COVID-19 lockdown
- (D) Tribal artisans and craftspersons

Q5. India's first hydrogen-fuel-cell-powered train pilot project was launched on which railway section in Haryana?

- (A) Mumbai–Pune section
- (B) Delhi–Agra section
- (C) Chennai–Bengaluru section
- (D) Jind–Sonipat section

Q6. The National Logistics Policy, launched in September 2022, aims to reduce India's logistics cost as a percentage of GDP to approximately:

- (A) 8%
- (B) 10%



(C) 12%

(D) 15%

Q7. ISRO's Aditya-L1 spacecraft, India's first dedicated solar observatory launched in September 2023, was placed in a halo orbit around which Sun–Earth Lagrange point?

(A) L2

(B) L1

(C) L3

(D) L4

Q8. TATA Electronics Private Limited announced India's first semiconductor fabrication plant in partnership with Powerchip Semiconductor Manufacturing Corp (PSMC) of Taiwan. This plant will be set up in which Indian state?

(A) Maharashtra

(B) Karnataka

(C) Gujarat

(D) Telangana

Q9. In early Rigvedic society, the *varna* system was primarily based on:

(A) Hereditary birth alone

(B) Occupation and personal qualities (*guna*, *karma*)

(C) Geographic region of origin

(D) Physical appearance and complexion

Q10. Emperor Ashoka's concept of *Dhamma* (as inscribed on his edicts) was primarily centred on:

(A) Expansion of the Mauryan Empire through military conquest



- (B) Strict enforcement of Brahmanical caste hierarchy
- (C) Performance of elaborate Vedic sacrificial rituals
- (D) Non-violence, compassion, and religious tolerance

Q11. Who among the following was **NOT** a member of Akbar's *Navratnas* (Nine Gems — his celebrated court luminaries)?

- (A) Malik Muhammad Jayasi
- (B) Abul Fazl
- (C) Raja Birbal (Mahesh Das)
- (D) Miyan Tansen

Q12. In Shivaji's *Ashtapradhan* (council of eight ministers), which minister held the highest position and served as the chief executive officer of the Maratha administration?

- (A) Amatya (Finance Minister)
- (B) Senapati (Commander-in-Chief)
- (C) Peshwa (Prime Minister)
- (D) Nyayadhish (Chief Justice)

Q13. The First Anglo-Mysore War (1767–1769) was fought between the British East India Company and the Kingdom of Mysore. Who was the ruler of Mysore during this war?

- (A) Tipu Sultan
- (B) Hyder Ali
- (C) Krishnaraja Wadiyar II
- (D) Chikka Devaraja Wadiyar

Q14. The Bengal Sati Regulation of 1829, which legally abolished the practice of *Sati* (widow immolation) in British India, was enacted largely due to the persistent efforts of which social reformer?



- (A) Ishwar Chandra Vidyasagar
- (B) Dayanand Saraswati
- (C) Swami Vivekananda
- (D) Raja Ram Mohan Roy

Q15. The Jallianwala Bagh massacre, in which British troops under General Dyer opened fire on an unarmed gathering, took place on which date in 1919?

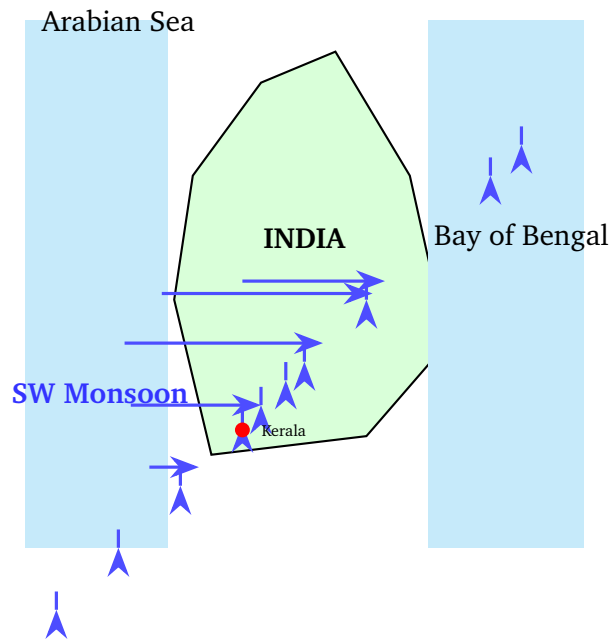
- (A) 13 April
- (B) 15 August
- (C) 26 January
- (D) 30 January

Q16. Netaji Subhas Chandra Bose reorganised the Indian National Army (Azad Hind Fauj) and launched a military campaign against British India. His famous battle cry that called for a march on the Indian capital was:

- (A) “Vande Mataram”
- (B) “Jai Hind” (Victory to India)
- (C) “Dilli Chalo” (March to Delhi)
- (D) “Sarfarooshi ki Tamanna”

Q17. The diagram below represents the onset of the Southwest monsoon over the Indian subcontinent. The Southwest monsoon typically reaches the Kerala coast (marking its official onset in India) around:





- (A) March
- (B) April
- (C) May
- (D) June

Q18. Which type of soil covers the largest area in the Indo-Gangetic Plains of India and is considered the most fertile for agricultural purposes due to its high moisture-retaining capacity and rich mineral content?

- (A) Black (Regur) soil
- (B) Alluvial soil
- (C) Red and Yellow soil
- (D) Laterite soil

Q19. According to the India State of Forest Report 2021 released by the Forest Survey of India, the total forest and tree cover of India is approximately what percentage of its total geographical area?

- (A) 15%
- (B) 20%
- (C) 24%



(D) 30%

Q20. The Palk Strait is a narrow stretch of water that separates the southeastern coast of India (Tamil Nadu) from:

- (A) Sri Lanka
- (B) Maldives
- (C) Bangladesh
- (D) Myanmar

Q21. Chilika Lake, designated as a Ramsar Wetland of International Importance and recognized as the largest coastal lagoon in India, is located in which state?

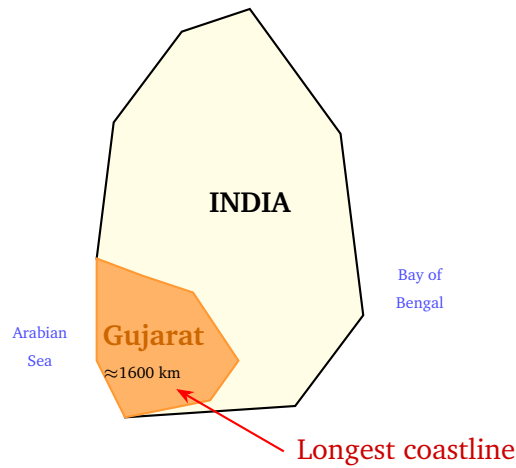
- (A) Tamil Nadu
- (B) Kerala
- (C) Andhra Pradesh
- (D) Odisha

Q22. The Rann of Kutch, a vast seasonal salt marsh that floods during the monsoon and dries into a white salt desert in winter, is located in which Indian state?

- (A) Rajasthan
- (B) Gujarat
- (C) Maharashtra
- (D) Madhya Pradesh

Q23. The map below highlights (in orange) the Indian state that possesses the **longest coastline** among all Indian states. Identify the state:





- (A) Tamil Nadu
- (B) Andhra Pradesh
- (C) Gujarat
- (D) Kerala

Q24. The Fundamental Duties of Indian citizens (enshrined in Part IV-A, Article 51A of the Constitution) were added by which Constitutional Amendment Act, on the recommendation of the Swaran Singh Committee?

- (A) 42nd Amendment Act, 1976
- (B) 44th Amendment Act, 1978
- (C) 86th Amendment Act, 2002
- (D) 73rd Amendment Act, 1992

Q25. Which of the following subjects is included in the **Concurrent List** (List III) of the Seventh Schedule of the Indian Constitution — meaning both the Union and the State legislatures can make laws on it?

- (A) Defence and armed forces
- (B) Railways
- (C) Banking and insurance
- (D) Education



- Q26.** Under Article 110 of the Indian Constitution, a Money Bill can be introduced **only** in:
- (A) The Rajya Sabha (Council of States)
 - (B) The Lok Sabha (House of the People)
 - (C) Either House of Parliament at the discretion of the Speaker
 - (D) A joint sitting of both Houses of Parliament
- Q27.** The Finance Commission of India, which recommends the distribution of tax revenues between the Union and the States, is constituted under which Article of the Constitution?
- (A) Article 268
 - (B) Article 270
 - (C) Article 280
 - (D) Article 312
- Q28.** The Chief Election Commissioner of India enjoys security of tenure and can be removed from office only through a process similar to the removal of a:
- (A) Judge of the Supreme Court of India
 - (B) Governor of a State
 - (C) Cabinet Minister of the Union Government
 - (D) Member of Parliament
- Q29.** Which of the following writs literally means “you shall have the body” and is issued by a court directing that a detained person be brought before the court to examine the legality of his detention?
- (A) Certiorari
 - (B) Mandamus
 - (C) Quo Warranto

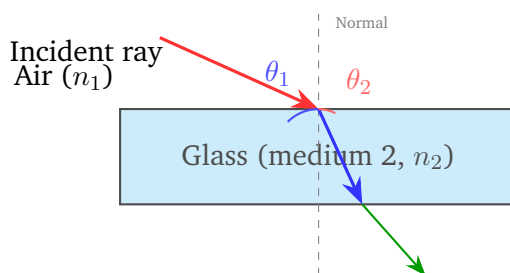


(D) Habeas Corpus

Q30. Article 44 of the Indian Constitution, which is a Directive Principle of State Policy, directs the State to endeavour to secure for the citizens throughout the territory of India:

- (A) Free and compulsory education for children
- (B) A Uniform Civil Code
- (C) Equal pay for equal work for both men and women
- (D) Right to adequate means of livelihood

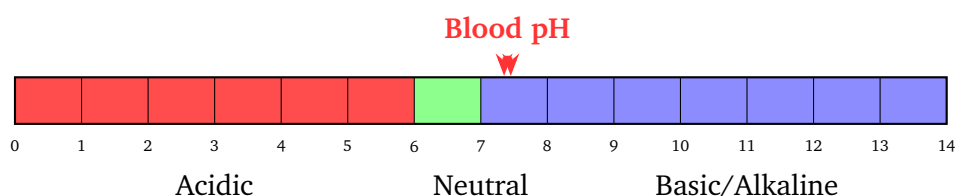
Q31. The diagram below shows a ray of light passing from air (medium 1) into a glass slab (medium 2). According to Snell's Law of Refraction, $\sin \theta_1 / \sin \theta_2$ equals:



Snell's Law: $n_1 \sin \theta_1 = n_2 \sin \theta_2$

- (A) The sum of the refractive indices $n_1 + n_2$
- (B) The difference of the refractive indices $n_2 - n_1$
- (C) The refractive index of medium 2 relative to medium 1 (n_2/n_1)
- (D) The product of the refractive indices $n_1 \times n_2$

Q32. The diagram below shows a simplified pH scale. The normal pH range of healthy human blood (arterial) is indicated by the red bracket. What is this normal range?

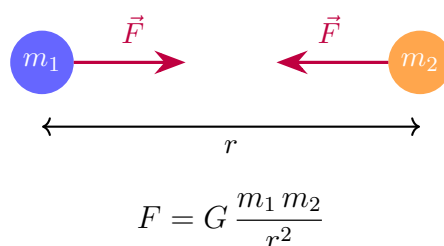


- (A) 7.35–7.45
- (B) 6.50–7.00
- (C) 7.80–8.20
- (D) 5.50–6.50

Q33. Chlorophyll pigments, which are essential for absorbing light energy during photosynthesis, are located in the:

- (A) Mitochondria (the powerhouse of the cell)
- (B) Cell nucleus (site of genetic material)
- (C) Cell membrane (outer boundary)
- (D) Grana of the chloroplasts (stacked thylakoid membranes)

Q34. The diagram below depicts two masses m_1 and m_2 separated by a distance r , experiencing mutual gravitational attraction. According to Newton's Law of Universal Gravitation, the magnitude of the gravitational force F is:



- (A) Directly proportional to the square of the distance r between them
- (B) Inversely proportional to the square of the distance r between them
- (C) Directly proportional to the cube of the distance r between them
- (D) Independent of the distance r between them

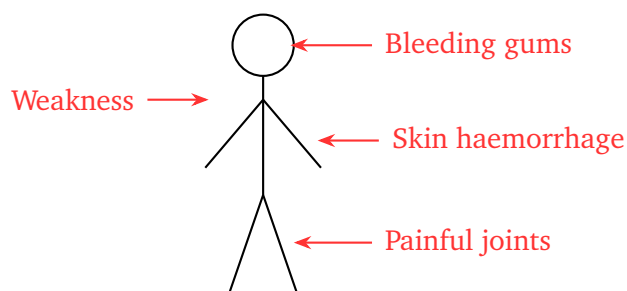
Q35. The noble gases (also called inert gases), such as Helium (He), Neon (Ne), Argon (Ar), Krypton (Kr), Xenon (Xe), and Radon (Rn), are placed in which group of the modern periodic table?

- (A) Group 1 (Alkali metals)



- (B) Group 2 (Alkaline earth metals)
- (C) Group 18
- (D) Group 17 (Halogens)

Q36. The diagram below illustrates key symptoms associated with a vitamin deficiency disease that was historically common among sailors on long voyages without fresh fruits and vegetables. This disease, caused by deficiency of Vitamin C (Ascorbic Acid), is called:



Symptoms of Vitamin C Deficiency

- (A) Scurvy
 - (B) Rickets
 - (C) Beriberi
 - (D) Night Blindness
- Q37.** Pusarla Venkata (PV) Sindhu became the first Indian woman to win a silver medal in Badminton at the Olympics. In which Olympic Games did she achieve this historic feat?
- (A) London 2012
 - (B) Beijing 2008
 - (C) Tokyo 2020
 - (D) Rio de Janeiro 2016
- Q38.** Sachin Tendulkar set a world record for the most centuries in One Day International (ODI) cricket. How many ODI centuries did Sachin Tendulkar score before Virat Kohli eventually surpassed this landmark?



- (A) 45
- (B) 49
- (C) 52
- (D) 41

Q39. Sunil Gavaskar was the first batsman in cricket history to score 10,000 runs in Test cricket and held the record for most Test centuries for many years. Which cricketer eventually broke Gavaskar's record for most centuries in Test cricket?

- (A) Brian Lara
- (B) Ricky Ponting
- (C) Sachin Tendulkar
- (D) Virat Kohli

Q40. Saikhom Mirabai Chanu won India's first medal (Silver) at the Tokyo 2020 Olympics in the sport of Weightlifting. She competed in which weight category?

- (A) 49 kg
- (B) 55 kg
- (C) 59 kg
- (D) 64 kg

Q41. India has won the ICC Cricket World Cup (50-over format) on two occasions. In which years did India lift the World Cup trophy?

- (A) 1975 and 1983
- (B) 1983 and 2003
- (C) 1996 and 2011
- (D) 1983 and 2011



- Q42.** The sacred *Triveni Sangam* at Prayagraj (Allahabad) is the confluence of three rivers — the Ganga, the Yamuna, and a third river believed to flow invisibly underground. What is the name of this mythical third river?
- (A) Saryu
 - (B) Saraswati
 - (C) Betwa
 - (D) Ken
- Q43.** Ayodhya, revered as the birthplace of Lord Rama and one of the seven sacred cities (*Sapta Puri*) of Hinduism, is situated on the banks of which river?
- (A) Yamuna
 - (B) Ganga
 - (C) Saryu (Sarayu)
 - (D) Gomti
- Q44.** The famous *Lathmar Holi*, celebrated in the Braj region of Mathura–Vrindavan (Uttar Pradesh) about a week before the main Holi festival, is best characterized by:
- (A) Women playfully chasing and beating men with wooden sticks (*lathis*) in a re-enactment of a Krishna legend
 - (B) Men throwing coloured powder (*gulal*) on women from a distance
 - (C) Burning of Holika effigies in a grand midnight procession
 - (D) Floral (*phoolon ki Holi*) float processions on the Yamuna river
- Q45.** Rani Lakshmibai of Jhansi, one of the leading figures of the Indian Revolt of 1857, died in battle while fighting the British. In which battle/location did she fall fighting the British forces in June 1858?
- (A) Battle of Plassey (1757)
 - (B) Battle of Buxar (1764)



(C) Battle of the Third Panipat (1761)

(D) Battle of Gwalior (1858)

Q46. Sonbhadra district of Uttar Pradesh, home to a significant tribal population, is particularly known for which vibrant art form associated with the indigenous tribal communities of the region?

(A) Warli paintings (Maharashtra tribal tradition)

(B) Gond tribal art (intricate paintings depicting nature and mythologies)

(C) Madhubani (Mithila) paintings (Bihar tradition)

(D) Pithora art (Gujarat/Madhya Pradesh tribal tradition)

Q47. Prime Minister Narendra Modi launched the flagship “Make in India” initiative, aimed at transforming India into a global manufacturing hub, on which date?

(A) 15 August 2014

(B) 26 January 2015

(C) 25 September 2014

(D) 2 October 2014

Q48. According to DPIIT data, which sector has consistently attracted the **highest** Foreign Direct Investment (FDI) equity inflows into India in recent years (including 2022–23)?

(A) Computer software and hardware

(B) Pharmaceuticals and drugs

(C) Automobile industry

(D) Trading (wholesale/retail)

Q49. The Human Development Index (HDI), which measures a country’s development based on life expectancy, education, and per-capita income, is published annually by:



- (A) The World Bank
- (B) The International Monetary Fund (IMF)
- (C) The World Economic Forum (WEF)
- (D) The United Nations Development Programme (UNDP)

Q50. The United Nations 2030 Agenda for Sustainable Development, adopted at the UN Sustainable Development Summit in September 2015, consists of how many Sustainable Development Goals (SDGs)?

- (A) 15
- (B) 17
- (C) 19
- (D) 21



Detailed Solutions

Q1.

Solution

Concept — Current Affairs (India–Australia ECTA): The India–Australia Economic Cooperation and Trade Agreement (ECTA) was signed on 2 April **2022** in New Delhi by Union Commerce Minister Piyush Goyal and Australian Trade Minister Dan Tehan. It was the first trade agreement India signed with a developed nation in over a decade. The agreement eliminated or reduced tariffs on over 85% of Australian goods and 96% of Indian goods.

Answer: (D) [Go Back to Q1](#)

Q2.

Solution

Concept — Current Affairs (SCO Summit 2023): India held the Presidency of the Shanghai Cooperation Organisation (SCO) in 2022–23 and hosted the SCO Council of Heads of State Summit on 4 July 2023 in a **virtual format** chaired from **New Delhi** by Prime Minister Narendra Modi. It was the first SCO summit hosted by India. The summit was notable as Pakistani PM Shehbaz Sharif also participated virtually.

Answer: (A) [Go Back to Q2](#)

Q3.

Solution

Concept — Current Affairs (India Semiconductor Mission 2023): Under the India Semiconductor Mission, the Government of India provides fiscal support of **50%** of the project cost for setting up greenfield semiconductor wafer fabrication facilities (fabs). For display fabs, the support is 50% on a pari-passu basis. For compound semiconductors and ATMP/OSAT units, the support is 50% of capital expenditure. This policy aims to position India as a global semiconductor design and manufacturing hub.

Answer: (B) [Go Back to Q3](#)



Q4.

Solution

Concept — Current Affairs (PM SVANidhi): The PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) scheme was launched on 1 June 2020 to provide affordable working capital loans to **street vendors** whose livelihoods were adversely affected by the COVID-19 lockdown. Under the scheme, vendors could avail collateral-free loans of Rs.10,000 (later Rs.20,000 and Rs.50,000 for subsequent loans) to restart their businesses. The scheme also incentivises digital transactions.

Answer: (C) [Go Back to Q4](#)

Q5.

Solution

Concept — Current Affairs (Hydrogen Train Pilot): India's first hydrogen-fuel-cell-powered train pilot was launched by Indian Railways on the **Jind–Sonipat** railway section in Haryana. The project, developed by RDSO (Research Designs and Standards Organisation), aimed to demonstrate the viability of hydrogen propulsion in Indian conditions as part of the Railways' decarbonisation roadmap. Hydrogen fuel cell trains emit only water vapour and are environment-friendly.

Answer: (D) [Go Back to Q5](#)

Q6.

Solution

Concept — Current Affairs (National Logistics Policy 2022): The National Logistics Policy (NLP) was launched by PM Narendra Modi on 17 September 2022. Its primary objective is to reduce India's logistics cost from the then-current ~13–14% of GDP to approximately **8% of GDP** (comparable to global best practices) by 2030. The policy focuses on the PM GatiShakti National Master Plan, service improvement, human resource development, and a data-driven decision support system (ULIP).

Answer: (A) [Go Back to Q6](#)



Q7.

Solution

Concept — Current Affairs (ISRO Aditya-L1): ISRO's Aditya-L1 spacecraft was launched on 2 September 2023 and successfully inserted into a halo orbit around the **Sun–Earth Lagrange Point 1 (L1)** on 6 January 2024. L1 is located approximately 1.5 million km from Earth toward the Sun. A spacecraft at L1 can observe the Sun continuously without any occultation/eclipse, making it ideal for solar observations. The mission studies the solar corona, chromosphere, and solar wind.

Answer: (B) [Go Back to Q7](#)

Q8.

Solution

Concept — Current Affairs (TATA Semiconductor Fab): TATA Electronics Private Limited (TEPL) announced a semiconductor fabrication plant in **Gujarat** (Dholera Special Investment Region, near Ahmedabad) in partnership with PSMC (Powerchip Semiconductor Manufacturing Corp) of Taiwan, under the India Semiconductor Mission. The plant represents India's first true wafer fab, with an investment of approximately \$11 billion. A second TATA ATMP (Assembly, Testing, Marking, and Packaging) facility was also announced in Morigaon, Assam.

Answer: (C) [Go Back to Q8](#)

Q9.

Solution

Concept — Indian History (Rigvedic Varna System): In early Rigvedic society, the *varna* system was a **functional/occupational** classification based on one's *guna* (qualities) and *karma* (occupation or deeds), not on birth alone. The famous Purusha Sukta (Rigveda 10.90) metaphorically describes the four varnas (Brahmin, Kshatriya, Vaishya, Shudra) as different parts of the cosmic Purusha. However, in the later Vedic and post-Vedic period, the system became increasingly hereditary and birth-based.

Answer: (B) [Go Back to Q9](#)



Q10.

Solution

Concept — Indian History (Ashoka's Dhamma): Emperor Ashoka (r. 268–232 BCE) propagated his concept of *Dhamma* (Pali for Dharma) through rock edicts and pillar edicts across his empire. His Dhamma was a practical, humanistic code of conduct emphasising **non-violence (*ahimsa*)**, **compassion**, **tolerance**, and **respect for all religions**. It was not a specific religious doctrine but a moral guide. After the bloody Kalinga War (~261 BCE), Ashoka renounced military conquest (*Digvijaya*) and adopted the “conquest through righteousness” (*Dhammavijaya*).

Answer: (D) [Go Back to Q10](#)

Q11.

Solution

Concept — Indian History (Akbar's Navratnas): Akbar's celebrated *Navratnas* (Nine Gems) were: (1) Abul Fazl, (2) Faizi, (3) Miyan Tansen, (4) Raja Birbal (Mahesh Das), (5) Raja Todar Mal, (6) Raja Man Singh, (7) Abdul Rahim Khan-i-Khana, (8) Fakir Aziao-Din, and (9) Mulla Do Piazza. **Malik Muhammad Jayasi** (author of the epic Sufi poem *Padmavat*, 1540 CE) was a prominent Bhakti–Sufi poet but was **not** a member of Akbar's Navratnas. He belonged to the earlier Sultanate period and pre-dates Akbar's court.

Answer: (A) [Go Back to Q11](#)

Q12.

Solution

Concept — Indian History (Shivaji's Ashtapradhan): Shivaji Maharaj established the *Ashtapradhan* (council of eight ministers) to administer his Maratha kingdom efficiently. The **Peshwa** (Prime Minister) was the head of this council and the principal executive officer responsible for overall administration. Other ministers included the Amatya (Finance), Sachiv (Record-keeper), Mantri (Chronicle/Royal court), Senapati (Military), Sumant (Foreign Affairs), Nyayadhish (Justice), and Panditrao (Religious affairs). The Peshwas later became de facto rulers of the Maratha Empire after Shivaji's death.

Answer: (C) [Go Back to Q12](#)



Q13.

Solution

Concept — Indian History (First Anglo-Mysore War): The First Anglo-Mysore War (1767–1769) was fought between the British East India Company (allied with Hyderabad and the Marathas initially) and the Kingdom of Mysore under **Hyder Ali**. Hyder Ali, who had seized effective control of Mysore, proved a formidable opponent and forced the British to sign the Treaty of Madras (1769), which was humiliating for the British. Tipu Sultan (Hyder Ali's son) fought in the later Anglo-Mysore Wars (2nd, 3rd, and 4th).

Answer: (B) [Go Back to Q13](#)

Q14.

Solution

Concept — Indian History (Sati Abolition 1829): The Bengal Sati Regulation (Regulation XVII) of 4 December 1829 was enacted by Governor-General Lord William Bentinck, declaring the practice of *Sati* illegal in British India. This landmark legislation was largely the result of persistent advocacy by **Raja Ram Mohan Roy**, the founder of the Brahmo Samaj and a leading social reformer of the 19th century. Roy argued against Sati on both religious grounds (citing Vedic scriptures) and humanitarian grounds. He is often called the “Father of the Indian Renaissance.”

Answer: (D) [Go Back to Q14](#)

Q15.

Solution

Concept — Indian History (Jallianwala Bagh Massacre): On 13 April 1919 (the day of Baisakhi festival), a large peaceful gathering had assembled at Jallianwala Bagh, Amritsar, Punjab. Brigadier-General Reginald Dyer ordered his troops to open fire on the unarmed crowd without warning. Hundreds of men, women, and children were killed (official British estimate: 379; Indian estimates: over 1,000). The massacre triggered widespread outrage, leading Rabindranath Tagore to renounce his knighthood, and deeply radicalised the Indian independence movement.

Answer: (A) [Go Back to Q15](#)



Q16.

Solution

Concept — Indian History (Subhas Chandra Bose and INA): Netaji Subhas Chandra Bose reorganised the Indian National Army (Azad Hind Fauj) in Singapore in 1943 after escaping British surveillance. He launched a military campaign against British India with the famous battle cry “**Dilli Chalo**” (March to Delhi), urging his soldiers to advance toward the Indian capital. His provisional government (Azad Hind Government) received recognition from several Axis powers. The INA advanced into northeastern India, capturing Moirang (Manipur) and briefly planting the Indian national flag on Indian soil before being repulsed.

Answer: (C) [Go Back to Q16](#)

Q17.

Solution

Concept — Geography (Southwest Monsoon): The Southwest (SW) monsoon is the most important rainfall mechanism in India, responsible for about 70–75% of India’s total annual rainfall. It originates from the Indian Ocean/Arabian Sea, driven by the low-pressure area created over the Thar Desert. The SW monsoon officially arrives at the Kerala coast around **1 June** (i.e., the month of **June**), then advances northward and eastward, covering the entire Indian subcontinent by mid-July. This seasonal reversal of winds is caused by the differential heating of land and ocean.

Answer: (D) [Go Back to Q17](#)

Q18.

Solution

Concept — Geography (Indian Soil Types): **Alluvial soil** is the most extensively found soil type in India, covering the vast Indo-Gangetic-Brahmaputra plains (about 43% of total land area). It is composed of fine particles (silt, clay, and sand) deposited by rivers. Alluvial soil is extremely fertile due to its high moisture-retaining capacity, adequate mineral content (potash, phosphoric acid, lime), and organic matter. It is ideal for growing wheat, rice, sugarcane, and pulses. *Khadar* (new alluvium) and *Bhangar* (old alluvium) are its two types.

Answer: (B) [Go Back to Q18](#)



Q19.

Solution

Concept — Geography (Forest Cover India): According to the India State of Forest Report (ISFR) 2021, released by the Forest Survey of India (FSI), the total forest and tree cover of India is **80.9 million hectares**, which constitutes approximately **24.62%** of the country's total geographical area ($\approx 24\%$). Madhya Pradesh has the largest forest cover in terms of area, while Mizoram has the highest forest cover as a percentage of state area. India aims to achieve 33% forest/tree cover under its Paris Agreement commitments.

Answer: (C) [Go Back to Q19](#)

Q20.

Solution

Concept — Geography (Palk Strait): The **Palk Strait** is a narrow stretch of water (approximately 53–80 km wide) that separates the Coromandel Coast of south-eastern India (Tamil Nadu) from the Northern Province of **Sri Lanka**. It connects the Bay of Bengal in the north with the Palk Bay and Gulf of Mannar in the south. Adam's Bridge (Ram Setu), a chain of limestone shoals, lies between Pamban Island (India) and Mannar Island (Sri Lanka). The strait was named after Robert Palk, a Governor of Madras (1755–63).

Answer: (A) [Go Back to Q20](#)

Q21.

Solution

Concept — Geography (Chilika Lake): Chilika Lake, located in **Odisha** along the eastern coast of India, is the **largest coastal lagoon in India** and the second largest in the world. It covers an area of about 1,100 sq km (varying seasonally between 900–1,165 sq km). Chilika was the first Indian wetland to be designated as a Ramsar site (1981). It is famous for the migratory flamingos and birds that visit in winter, the Irrawaddy dolphins, and the Nalbana Bird Sanctuary within it.

Answer: (D) [Go Back to Q21](#)



Q22.

Solution

Concept — Geography (Rann of Kutch): The Rann of Kutch is a vast seasonal salt marsh located in the Kutch district of **Gujarat**, India, extending into Pakistan's Sindh province. It is divided into the Great Rann (north) and Little Rann (east). During the monsoon, the low-lying basin floods with saltwater from the Arabian Sea, and during winter, it dries into a blindingly white salt flat. It is the world's largest salt desert and is famous for the *Rann Utsav* festival and the Indian wild ass (*Ghudkhur*) sanctuary in the Little Rann.

Answer: (B) [Go Back to Q22](#)

Q23.

Solution

Concept — Geography (Longest Coastline State): **Gujarat** has the longest coastline among all Indian states, stretching approximately **1,600 km** (about 1,214 km mainland coastline plus island coastlines). This is because Gujarat has a highly indented and irregular coastline with numerous gulfs, bays, and creeks — including the Gulf of Kutch and Gulf of Khambhat. Gujarat's coastline accounts for about 22% of India's total mainland coastline ($\approx 7,516$ km). Andhra Pradesh has the second-longest coastline (≈ 974 km), followed by Tamil Nadu (≈ 907 km).

Answer: (C) [Go Back to Q23](#)

Q24.

Solution

Concept — Indian Polity (Fundamental Duties): Fundamental Duties were added to the Indian Constitution by the **42nd Constitutional Amendment Act, 1976** (the “Mini-Constitution”) during the Emergency period under the Indira Gandhi government, on the recommendation of the Swaran Singh Committee. Ten Fundamental Duties were added as Article 51A in Part IV-A. An 11th duty (duty of parents to provide education to children between 6–14 years) was added by the **86th Amendment, 2002**. Fundamental Duties are non-justiciable (not enforceable by courts) but serve as moral obligations.

Answer: (A) [Go Back to Q24](#)



Q25.

Solution

Concept — Indian Polity (Concurrent List): The **Concurrent List** (List III, Seventh Schedule) contains subjects on which both Parliament and State Legislatures can make laws. In case of conflict, central law prevails. **Education** was moved to the Concurrent List by the 42nd Amendment Act, 1976 (it was earlier in the State List). Other Concurrent List subjects include criminal law, marriage/divorce, bankruptcy, forests, electricity, and labour welfare. Defence (Union List), Railways (Union List), and Banking (Union List) are exclusive Union subjects.

Answer: (D) [Go Back to Q25](#)

Q26.

Solution

Concept — Indian Polity (Money Bill): Under **Article 110** of the Indian Constitution, a Money Bill (dealing with taxation, government borrowing, Consolidated Fund of India, etc.) can be introduced **only in the Lok Sabha** (House of the People). After it is passed by the Lok Sabha, it is transmitted to the Rajya Sabha for its recommendations. The Rajya Sabha can only make recommendations (not amendments) and must return the bill within 14 days. The Lok Sabha may accept or reject Rajya Sabha's recommendations, and the bill is deemed passed in both Houses either way.

Answer: (B) [Go Back to Q26](#)

Q27.

Solution

Concept — Indian Polity (Finance Commission): The Finance Commission is a constitutional body established under **Article 280** of the Indian Constitution. It is constituted by the President of India every fifth year (or earlier) to recommend the distribution of the net proceeds of taxes between the Union and the States (vertical devolution) and among the States inter-se (horizontal devolution). It also recommends grants-in-aid to States. The 15th Finance Commission (Chairman: N.K. Singh) covered the award period 2021–26. The Finance Commission plays a pivotal role in India's fiscal federalism.

Answer: (C) [Go Back to Q27](#)



Q28.

Solution

Concept — Indian Polity (Chief Election Commissioner): As per Article 324(5) of the Indian Constitution, the Chief Election Commissioner (CEC) can be removed from office only by an order of the President of India, but only **in like manner and on like grounds as a Judge of the Supreme Court of India** — i.e., through a **special majority** (majority of total membership of each House + 2/3 majority of members present and voting) in each House of Parliament, after an address by each House. This security of tenure ensures the independence of the Election Commission from executive pressure.

Answer: (A) [Go Back to Q28](#)

Q29.

Solution

Concept — Indian Polity (Writs — Habeas Corpus): **Habeas Corpus** (Latin: “you shall have the body”) is a writ issued by the court to a person (or authority) who has detained another, directing them to **produce the detained person before the court** and justify the detention. If the detention is found to be illegal or without proper authority, the court orders immediate release. It is a fundamental safeguard against arbitrary detention and is available under Article 32 (Supreme Court) and Article 226 (High Courts). **Mandamus** commands a public officer to perform a duty; **Certiorari** quashes inferior court orders; **Quo Warranto** challenges holding of public office.

Answer: (D) [Go Back to Q29](#)

Q30.

Solution

Concept — Indian Polity (DPSP Article 44 — UCC): **Article 44** of the Indian Constitution, contained in Part IV (Directive Principles of State Policy), directs the State to endeavour to secure for all citizens throughout the territory of India a **Uniform Civil Code (UCC)**. A UCC means a common set of personal laws (marriage, divorce, inheritance, adoption) applicable to all citizens regardless of religion. Article 44 is non-justiciable (not enforceable by courts) but is a guide for the legislature. Goa is the only Indian state that currently has a common civil code (inherited from Portuguese colonial law).

Answer: (B) [Go Back to Q30](#)



Q31.

Solution

Concept — General Science (Snell's Law): **Snell's Law** (Law of Refraction) states that when a ray of light passes from one medium to another, the ratio of the sine of the angle of incidence (θ_1) to the sine of the angle of refraction (θ_2) equals the **refractive index of the second medium relative to the first** ($n_{21} = n_2/n_1$).

Mathematically: $\frac{\sin \theta_1}{\sin \theta_2} = \frac{n_2}{n_1} = n_{21}$.

Since glass is optically denser than air ($n_2 > n_1$), the refracted ray bends *toward* the normal ($\theta_2 < \theta_1$). The refractive index of glass ≈ 1.5 ; for air $n_1 \approx 1.0$.

Answer: (C) [Go Back to Q31](#)

Q32.

Solution

Concept — General Science (Blood pH): The normal pH of human arterial blood is maintained within a narrow range of **7.35–7.45** (slightly alkaline). This tight regulation is critical for enzymatic activity and cellular function. pH is maintained by buffer systems (bicarbonate/carbonic acid being the primary one), respiratory regulation (CO_2 levels), and renal regulation. A blood pH below 7.35 is called **acidosis** (can cause confusion, arrhythmia), while a pH above 7.45 is called **alkalosis** (can cause muscle spasms, lightheadedness). Pure water has pH 7.0 (neutral).

Answer: (A) [Go Back to Q32](#)

Q33.

Solution

Concept — General Science (Chlorophyll Location): Chlorophyll pigments are found in the **grana** of the **chloroplasts** — specifically on the thylakoid membranes stacked into coin-like structures called grana (singular: granum). The thylakoid membrane contains chlorophyll a, chlorophyll b, and accessory pigments (carotenoids). These pigments absorb light energy (primarily red and blue wavelengths) that drives the light-dependent reactions of photosynthesis. The stroma of the chloroplast is the site of the Calvin Cycle (light-independent reactions). Mitochondria are the site of cellular respiration, not photosynthesis.

Answer: (D) [Go Back to Q33](#)



Q34.

Solution

Concept — General Science (Newton's Law of Gravitation): Newton's Law of Universal Gravitation (1687) states that every point mass attracts every other point mass by a force acting along the line joining them. The force is: $F = G \frac{m_1 m_2}{r^2}$. This shows that F is **directly proportional to the product** of the masses ($m_1 \cdot m_2$) and **inversely proportional to the square of the distance** (r^2) between their centres. This is called an **inverse-square law**. Here $G = 6.674 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$ is the universal gravitational constant. Both bodies exert equal and opposite forces on each other (Newton's Third Law).

Answer: (B) [Go Back to Q34](#)

Q35.

Solution

Concept — General Science (Noble Gases): The noble gases (also called inert gases or Group-18 elements) are located in **Group 18** (the rightmost column) of the modern periodic table. They are: Helium (He), Neon (Ne), Argon (Ar), Krypton (Kr), Xenon (Xe), Radon (Rn), and Oganesson (Og). They have completely filled valence electron shells (2 electrons for He; 8 electrons for the rest), making them extremely stable and chemically inert under normal conditions. Group 17 contains the halogens (F, Cl, Br, I, At), while Group 1 contains the alkali metals (Li, Na, K...).

Answer: (C) [Go Back to Q35](#)

Q36.

Solution

Concept — General Science (Vitamin C Deficiency — Scurvy): Deficiency of **Vitamin C (Ascorbic Acid)** causes **Scurvy**. Vitamin C is essential for the synthesis of collagen, the structural protein that maintains skin, blood vessels, bones, and gums. Symptoms of scurvy include: bleeding and swollen gums, skin haemorrhages (purpura), slow wound healing, painful joints, anaemia, and extreme weakness. Historically, scurvy devastated sailors on long sea voyages without access to fresh fruits. *James Lind* (1747) discovered that citrus fruits prevented/cured scurvy. Other deficiencies: Vitamin D → Rickets; Vitamin B1 → Beriberi; Vitamin A → Night Blindness.

Answer: (A) [Go Back to Q36](#)



Q37.

Solution

Concept — Sports (PV Sindhu): Pusarla Venkata (PV) Sindhu made history at the **Rio de Janeiro Olympics 2016** by winning the Silver medal in Women's Badminton singles, losing the gold medal match to Carolina Marin of Spain. She became the **first Indian woman to win an Olympic silver medal**. Sindhu then went on to win the Bronze medal at the Tokyo 2020 Olympics. She has also won the BWF World Championships gold (2019), making her a rare player to have won all major badminton titles.

Answer: (D) [Go Back to Q37](#)

Q38.

Solution

Concept — Sports (ODI Centuries Record): Sachin Tendulkar scored **49 centuries** in One Day International (ODI) cricket during his illustrious career (1989–2013), a record that stood for nearly a decade. Virat Kohli eventually broke this record in 2023, becoming the first player to score 50 ODI centuries. Sachin also held the record for most Test centuries (51), which he set on 14 March 2012. Sachin's 49 ODI centuries came across 463 ODI innings, while Kohli achieved his 50th ODI century in a shorter span.

Answer: (B) [Go Back to Q38](#)

Q39.

Solution

Concept — Sports (Sunil Gavaskar's Record): Sunil Gavaskar was the first batsman in Test cricket history to score 10,000 Test runs and held the record for most Test centuries (34) for nearly two decades. **Sachin Tendulkar** eventually surpassed this record, going on to score a total of **51 Test centuries** (and 49 ODI centuries). Gavaskar's record of 34 Test centuries was first equalled and then surpassed by Tendulkar. Later, Virat Kohli also surpassed the 30-century mark but Sachin's record of 51 Test centuries remains unbroken as of 2024.

Answer: (C) [Go Back to Q39](#)



Q40.

Solution

Concept — Sports (Mirabai Chanu): Saikhom Mirabai Chanu of Manipur won the **Silver medal** in the **49 kg** Women's Weightlifting event at the Tokyo 2020 Olympics (held in 2021), becoming India's first weightlifting silver medallist at the Olympics. She lifted a combined total of 202 kg (87 kg snatch + 115 kg clean & jerk). She had previously won the Gold medal at the 2017 World Weightlifting Championships in the 48 kg category. Her Olympic medal also gave India its first medal of the Tokyo Games.

Answer: (A) [Go Back to Q40](#)

Q41.

Solution

Concept — Sports (India Cricket World Cup): India has won the ICC Cricket World Cup (50-over format) on **two** occasions: (1) **1983** — India under captain Kapil Dev beat the two-time defending champions West Indies in the final at Lord's, London. (2) **2011** — India under captain MS Dhoni beat Sri Lanka in the final at Wankhede Stadium, Mumbai, with Dhoni's iconic six to win. India was runners-up in 2003 (lost to Australia) and in 2023 (lost to Australia). The 1983 win is considered the game-changer that transformed cricket's popularity in India.

Answer: (D) [Go Back to Q41](#)

Q42.

Solution

Concept — UP Culture & Art (Triveni Sangam): The *Triveni Sangam* at Prayagraj (Allahabad) is the sacred confluence of three rivers: the **Ganga**, the **Yamuna**, and the mythical underground river **Saraswati**. The Saraswati is believed to be an invisible (subterranean) river that joins the other two at this point, making it a *triveni* (triple confluence). The site is considered one of the holiest in Hinduism and is the venue of the *Kumbh Mela* (held every 12 years) and the *Ardh Kumbh* (every 6 years). Prayagraj hosted the Maha Kumbh Mela 2025.

Answer: (B) [Go Back to Q42](#)



Q43.

Solution

Concept — UP Culture & Art (Ayodhya): Ayodhya, one of the seven most sacred cities (*Sapta Puri*) of Hinduism and the birthplace of Lord Rama (as per the Ramayana), is situated on the banks of the **Saryu** river (also spelled Sarayu or Ghaghra in parts), in Faizabad district (now Ayodhya district) of Uttar Pradesh. The Ram Janmabhoomi temple complex was inaugurated in January 2024. Ayodhya is also the first city of the Ikshvaku dynasty. The city is called the “City of Temples” and is a major pilgrimage destination in India.

Answer: (C) [Go Back to Q43](#)

Q44.

Solution

Concept — UP Culture & Art (Lathmar Holi): *Lathmar Holi* is a unique tradition celebrated in Barsana and Nandgaon (near Mathura and Vrindavan, UP) about a week before the main Holi. It re-enacts the legendary visit of Lord Krishna to Barsana (Radha’s village) where the *gopis* (women) chase the *gopas* (men) and playfully **beat them with wooden sticks (lathis)**. The men try to protect themselves with shields, singing and dancing all along. The tradition symbolises the playful teasing between Krishna and Radha. *Lathmar* means “beating with sticks.”

Answer: (A) [Go Back to Q44](#)

Q45.

Solution

Concept — UP Culture & Art (Rani Lakshmibai): Rani Lakshmibai of Jhansi was one of the most celebrated leaders of the Indian Revolt of 1857. After the fall of Jhansi fort (April 1858), she escaped with her forces and captured Gwalior fort in June 1858. She died fighting the British forces on **18 June 1858 at Gwalior** (Battle of Gwalior / Kotah-ki-Serai), reportedly while riding into battle dressed as a cavalry soldier. According to British accounts, she was dressed as a man and died fighting. General Hugh Rose is said to have called her “the bravest and best military leader of the rebels.”

Answer: (D) [Go Back to Q45](#)



Q46.

Solution

Concept — UP Culture & Art (Sonbhadra Tribal Art): Sonbhadra, the southernmost district of Uttar Pradesh, has a significant tribal population (including Gond, Kol, Oraon, Baiga communities). The region is particularly associated with **Gond tribal art** — vibrant, intricate paintings depicting nature, animals, deities, and mythology using dots and dashes. Gond art uses vivid colours and is characterised by bold lines and detailed dot-work. Note: Warli is a Maharashtra tribal art; Madhubani (Mithila) is from Bihar; Pithora is from Gujarat/MP. Sonbhadra is also rich in minerals (coal, bauxite, limestone) and has several thermal power plants.

Answer: (B) [Go Back to Q46](#)

Q47.

Solution

Concept — Economics (Make in India): Prime Minister Narendra Modi launched the “Make in India” initiative on **25 September 2014** at Vigyan Bhawan, New Delhi. The initiative aims to transform India into a global design and manufacturing hub by encouraging foreign and domestic companies to manufacture in India, with the goal of raising the manufacturing sector’s contribution to GDP from 16% to 25% by 2022 (later revised) and creating 100 million jobs. It focuses on 25 (later expanded to 27) key sectors including automobiles, defence, electronics, food processing, and textiles.

Answer: (C) [Go Back to Q47](#)

Q48.

Solution

Concept — Economics (FDI in India): According to DPIIT (Department for Promotion of Industry and Internal Trade) data, **Computer Software and Hardware** has consistently attracted the highest FDI equity inflows in India in recent years (including FY 2022–23), driven by India’s booming IT/ITES sector, digital economy, and the presence of global technology majors. India received total FDI equity inflows of US\$71 billion in FY 2021–22 and US\$71.4 billion in FY 2022–23. Other top sectors include services, trading, telecommunications, and construction development. India is among the top global FDI destinations.

Answer: (A) [Go Back to Q48](#)



Q49.

Solution

Concept — Economics (Human Development Index): The Human Development Index (HDI) was developed by Pakistani economist Mahbub ul Haq and Indian economist Amartya Sen, and is published annually in the **Human Development Report** by the **United Nations Development Programme (UNDP)**. The HDI measures a country's development across three dimensions: (1) **Health** — Life expectancy at birth; (2) **Education** — Mean years of schooling and expected years of schooling; (3) **Standard of Living** — Gross National Income (GNI) per capita (PPP). Each dimension is given equal weight. Norway consistently tops the HDI rankings; India was ranked 134th out of 193 countries in HDR 2023/24.

Answer: (D) [Go Back to Q49](#)

Q50.

Solution

Concept — Economics (Sustainable Development Goals): The United Nations 2030 Agenda for Sustainable Development, adopted by all 193 UN member states at the UN Sustainable Development Summit on 25 September 2015, consists of **17 Sustainable Development Goals (SDGs)** and 169 associated targets. The SDGs succeeded the Millennium Development Goals (MDGs, 2000–2015) and cover a broad range of social, economic, and environmental challenges — including poverty, hunger, health, education, gender equality, clean energy, climate action, and peace. India has been actively tracking progress on SDGs through NITI Aayog's SDG India Index.

Answer: (B) [Go Back to Q50](#)



Answer Key

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

