

Exam Study Notes

General Knowledge - Revision Notes, Practice Questions & Answers

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How to use: read the key notes of each subject, attempt the questions without looking at the green answer lines, then check yourself. A combined answer key is given on the last page.

1. History

Key Notes

- **Indus Valley Civilisation:** Harappa discovered 1921 (Daya Ram Sahni), Mohenjo-daro 1922 (R. D. Banerjee). Known for town planning and the Great Bath.
- **Mauryan Empire:** Chandragupta Maurya (founder), Bindusara, Ashoka. Kalinga War 261 BCE led Ashoka to Buddhism. Kautilya's *Arthashastra*.
- **Medieval:** Delhi Sultanate (1206 onwards); First Battle of Panipat 1526 began Mughal rule; Akbar's Din-i-Ilahi and Mansabdari system.
- **Freedom struggle:** 1857 Revolt; INC founded 1885 (first session in Bombay, W. C. Bonnerjee presiding); Champaran 1917; Non-Cooperation 1920; Dandi March 12 March 1930; Quit India 8 Aug 1942; Independence 15 Aug 1947.
- **Kerala renaissance:** Sree Narayana Guru (Aruvippuram 1888), Ayyankali, Chattampi Swamikal; Vaikom Satyagraha 1924; Guruvayur Satyagraha 1931-32; Temple Entry Proclamation 1936.
- **Formation of Kerala:** 1 November 1956 under the States Reorganisation Act.

Exam-Style Questions

Q1. Who presided over the first session of the Indian National Congress in 1885?

- (A) A. O. Hume
- (B) W. C. Bonnerjee
- (C) Dadabhai Naoroji
- (D) Surendranath Banerjee

Answer: (B) W. C. Bonnerjee. The first session was held in Bombay. Hume was the founder-organiser; Bonnerjee was the president.

Q2. Which war led Emperor Ashoka to embrace Buddhism?

- (A) Kalinga War
- (B) Battle of Hydaspes
- (C) Second Battle of Tarain
- (D) First Battle of Panipat

Answer: (A) Kalinga War. The Kalinga War of 261 BCE caused immense bloodshed and remorse.

Q3. The Vaikom Satyagraha (1924) was launched for:

- (A) Abolition of salt tax
- (B) Right of lower castes to use roads near the Vaikom temple
- (C) Boycott of foreign cloth
- (D) Farmers' rent relief

Answer: (B) Right of lower castes to use roads near the Vaikom temple. Led by T. K. Madhavan, K. Kelappan and K. P. Kesava Menon; Gandhi visited in 1925.

Q4. The Temple Entry Proclamation of Travancore (1936) was issued by:

- (A) Swathi Thirunal
- (B) Marthanda Varma
- (C) Sree Chithira Thirunal Balarama Varma
- (D) Rama Varma Sakthan Thampuran

Answer: (C) Sree Chithira Thirunal Balarama Varma. It opened state temples to all Hindus irrespective of caste.

Q5. The slogan 'Do or Die' is associated with which movement?

- (A) Non-Cooperation Movement
- (B) Civil Disobedience Movement
- (C) Swadeshi Movement
- (D) Quit India Movement

Answer: (D) Quit India Movement. Gandhi gave the call at Gowalia Tank, Bombay, in August 1942.

2. Geography

Key Notes

- **Tropic of Cancer** passes through 8 Indian states: Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura, Mizoram.
- **Rivers:** Ganga is the longest river of India. Godavari is the longest peninsular river. Himalayan rivers are perennial; peninsular rivers are mostly seasonal.
- **Peaks:** Kanchenjunga is the highest peak wholly in India. Anamudi (2695 m, Idukki) is the highest peak in South India.
- **Kerala geography:** 14 districts, 44 rivers (41 west-flowing, 3 east-flowing). Periyar is the longest (244 km). Palakkad Gap lies between the Nilgiri Hills and the Anamalai Hills.
- **Lakes:** Vembanad is Kerala's largest lake (Ramsar site); Sasthamkotta is the largest freshwater lake.
- **Others:** Rajasthan is the largest state by area; Thar is the major desert; Western Ghats are a biodiversity hotspot.

Exam-Style Questions

Q1. Which state is NOT crossed by the Tropic of Cancer?

- (A) Gujarat
- (B) Jharkhand
- (C) Tripura
- (D) Odisha

Answer: (D) Odisha. Odisha lies south of the Tropic of Cancer.

Q2. The highest peak in South India is:

- (A) Anamudi
- (B) Doddabetta
- (C) Mullayanagiri
- (D) Agasthyamala

Answer: (A) Anamudi. Anamudi, in the Anamalai range of Idukki, rises to 2695 m.

Q3. The longest river in Kerala is:

- (A) Bharathapuzha
- (B) Periyar
- (C) Pamba
- (D) Chaliyar

Answer: (B) Periyar. Periyar is about 244 km long; Bharathapuzha is second.

Q4. The Palakkad Gap is a low pass in the Western Ghats between:

- (A) Cardamom Hills and Palani Hills
- (B) Anamalai Hills and Cardamom Hills
- (C) Nilgiri Hills and Anamalai Hills
- (D) Agasthyamala and Anamalai Hills

Answer: (C) Nilgiri Hills and Anamalai Hills. Nilgiris lie to the north and Anamalais to the south of the gap.

Q5. The largest freshwater lake in Kerala is:

- (A) Vembanad
- (B) Ashtamudi
- (C) Vellayani
- (D) Sasthamkotta

Answer: (D) Sasthamkotta. Vembanad is larger but brackish. Sasthamkotta (Kollam) is the largest freshwater lake.

3. Economics

Key Notes

- **RBI:** Established 1 April 1935 under the RBI Act 1934; nationalised 1949; headquartered in Mumbai. Regulates currency, credit and monetary policy.
- **Monetary tools:** Repo rate (RBI lends to banks), reverse repo rate (RBI borrows), CRR, SLR, bank rate.
- **NITI Aayog** replaced the Planning Commission on 1 January 2015. First Five Year Plan: 1951-56.
- **GST** was introduced on 1 July 2017 via the 101st Constitutional Amendment; administered with the GST Council.
- **Fiscal deficit** = total expenditure minus total receipts excluding borrowings. Fiscal year runs April to March.
- **1991 reforms:** Liberalisation, Privatisation, Globalisation (LPG). **Kerala model:** high human development despite modest per capita income; large remittance inflow.

Exam-Style Questions

Q1. The Reserve Bank of India commenced operations in:

- (A) 1921
- (B) 1935
- (C) 1949
- (D) 1969

Answer: (B) 1935. RBI began on 1 April 1935; nationalised in 1949.

Q2. The rate at which the RBI lends short-term funds to commercial banks against securities is the:

- (A) Reverse repo rate
- (B) Bank rate
- (C) CRR
- (D) Repo rate

Answer: (D) Repo rate. Repo = repurchase option rate; reverse repo is the rate at which RBI borrows.

Q3. GST was implemented in India with effect from:

- (A) 1 April 2016
- (B) 1 July 2017
- (C) 1 January 2018
- (D) 1 April 2017

Answer: (B) 1 July 2017. Introduced by the 101st Constitutional Amendment Act.

Q4. NITI Aayog replaced which body?

- (A) Planning Commission
- (B) Finance Commission
- (C) National Development Council
- (D) Economic Advisory Council

Answer: (A) Planning Commission. NITI = National Institution for Transforming India.

Q5. Fiscal deficit is defined as:

- (A) Revenue expenditure minus revenue receipts
- (B) Total expenditure minus total receipts excluding borrowings
- (C) Exports minus imports
- (D) Total receipts minus total expenditure including borrowings

Answer: (B) Total expenditure minus total receipts excluding borrowings. It shows the government's total borrowing requirement.

4. Indian Constitution

Key Notes

- **Making:** Constituent Assembly (President: Dr. Rajendra Prasad); Drafting Committee chaired by Dr. B. R. Ambedkar. Adopted 26 Nov 1949; in force 26 Jan 1950.
- **Preamble:** Sovereign, Socialist, Secular, Democratic, Republic. 'Socialist' and 'Secular' added by the 42nd Amendment (1976).
- **Fundamental Rights** (Part III, Arts 12-35): equality, freedom, against exploitation, religion, cultural and educational rights, constitutional remedies. Art 21: life and personal liberty; Art 21A: education (6-14 yrs).
- **Writs (Art 32 and 226):** habeas corpus, mandamus, prohibition, certiorari, quo warranto.
- **DPSP:** Part IV (Arts 36-51). **Fundamental Duties:** Part IVA, Art 51A, added by the 42nd Amendment; 11 duties after the 86th Amendment.
- **Local government:** 73rd Amendment (Panchayats) and 74th Amendment (Municipalities), 1992.

Exam-Style Questions

Q1. Who was the Chairman of the Drafting Committee of the Constitution?

- (A) Dr. Rajendra Prasad
- (B) Jawaharlal Nehru
- (C) B. N. Rau
- (D) Dr. B. R. Ambedkar

Answer: (D) Dr. B. R. Ambedkar. B. N. Rau was the Constitutional Adviser; Rajendra Prasad chaired the Assembly.

Q2. Which Article provides the Right to Constitutional Remedies?

- (A) Article 32
- (B) Article 14
- (C) Article 21
- (D) Article 19

Answer: (A) Article 32. Ambedkar called it the 'heart and soul' of the Constitution.

Q3. Fundamental Duties were added to the Constitution by which Amendment?

- (A) 24th
- (B) 44th
- (C) 42nd
- (D) 73rd

Answer: (C) 42nd. Based on the Swaran Singh Committee recommendations (1976).

Q4. The 73rd Constitutional Amendment deals with:

- (A) Municipalities
- (B) Panchayati Raj
- (C) GST
- (D) Right to Education

Answer: (B) Panchayati Raj. It came into force on 24 April 1993; Part IX of the Constitution.

Q5. The writ of 'Habeas Corpus' means:

- (A) We command
- (B) To be certified
- (C) To have the body
- (D) By what authority

Answer: (C) To have the body. It is used to produce a detained person before the court and test the legality of detention.

5. Kerala - Governance & Administration

Key Notes

- **Formation:** 1 Nov 1956. First Governor: B. Ramakrishna Rao. First Chief Minister: E. M. S. Namboodiripad (1957). Capital: Thiruvananthapuram.
- **Institutions:** Kerala High Court at Ernakulam (1956); Legislative Assembly with 140 elected seats; 20 Lok Sabha and 9 Rajya Sabha seats.
- **Kerala PSC:** Constitutional body under Articles 315-323; headquartered at Thiruvananthapuram; established 1 Nov 1956.
- **Districts:** 14 in total. Malappuram formed 1969; Kasaragod became the 14th district on 24 May 1984.
- **Local self-government:** Kerala Panchayat Raj Act 1994; People's Plan Campaign 1996 (decentralised planning); Kudumbashree (1998) women's self-help network.
- **IT:** Technopark, Thiruvananthapuram (1990) was among India's first IT parks; Akshaya e-literacy project began in Malappuram in 2002.

Exam-Style Questions

Q1. Who was the first Chief Minister of Kerala?

- (A) E. M. S. Namboodiripad
- (B) C. Achutha Menon
- (C) Pattom Thanu Pillai
- (D) R. Sankar

Answer: (A) E. M. S. Namboodiripad. Sworn in on 5 April 1957 after the first Assembly election.

Q2. The Kerala Public Service Commission is a constitutional body under which Article?

- (A) Article 280
- (B) Article 324
- (C) Article 243
- (D) Article 315

Answer: (D) Article 315. Article 315 provides for PSCs for the Union and the States.

Q3. Kudumbashree, Kerala's poverty eradication and women empowerment mission, was launched in:

- (A) 1991
- (B) 1998
- (C) 1996
- (D) 2002

Answer: (B) 1998. Launched in 1998 by the State Poverty Eradication Mission with local self-governments.

Q4. Kasaragod was formed as the 14th district of Kerala in:

- (A) 1957
- (B) 1969
- (C) 1984
- (D) 1990

Answer: (C) 1984. Malappuram (1969) came earlier; Kasaragod was carved out of Kannur.

Q5. Who was the first Governor of Kerala?

- (A) V. V. Giri
- (B) B. Ramakrishna Rao
- (C) Bhagwan Sahay
- (D) N. Rajagopalachari

Answer: (B) B. Ramakrishna Rao. B. Ramakrishna Rao held office from 1 Nov 1956 to 1960.

6. Biology & Public Health

Key Notes

- **Vitamin deficiencies:** A - night blindness; B1 - beriberi; C - scurvy; D - rickets; K - delayed blood clotting.
- **Vectors:** Malaria - *Plasmodium* via female *Anopheles*; Dengue and Chikungunya - *Aedes*; Cholera - *Vibrio cholerae*; TB - *Mycobacterium tuberculosis*; Typhoid - *Salmonella typhi*.
- **Cell:** Mitochondria = powerhouse; ribosomes make proteins; lysosomes = 'suicide bags'; nucleus holds DNA.
- **Human body:** 206 bones in adults; heart has 4 chambers; insulin is secreted by the pancreas (deficiency causes diabetes). O negative is the universal donor; AB positive the universal recipient.
- **Public health:** WHO (HQ Geneva, founded 7 April 1948). Smallpox eradicated 1980. India declared polio-free by WHO in 2014.
- **Kerala:** Nipah virus outbreak (bat-borne) at Perambra, Kozhikode in May 2018; Kerala has historically low infant mortality.

Exam-Style Questions

Q1. Deficiency of which vitamin causes scurvy?

- (A) Vitamin A
- (B) Vitamin B1
- (C) Vitamin C
- (D) Vitamin D

Answer: (C) Vitamin C. Vitamin C (ascorbic acid) is needed for collagen formation; found in citrus fruits and amla.

Q2. Dengue fever is transmitted by:

- (A) Anopheles mosquito
- (B) Culex mosquito
- (C) Tsetse fly
- (D) Aedes mosquito

Answer: (D) Aedes mosquito. *Aedes aegypti*, a day-biting mosquito.

Q3. Insulin is secreted by which organ?

- (A) Liver
- (B) Pancreas
- (C) Kidney
- (D) Adrenal gland

Answer: (B) Pancreas. Beta cells of the islets of Langerhans produce insulin.

Q4. India was certified polio-free by the WHO in:

- (A) 2011
- (B) 2012
- (C) 2014
- (D) 2016

Answer: (C) 2014. The last case was reported in January 2011; certification came on 27 March 2014.

Q5. The 2018 outbreak in Kozhikode, Kerala was caused by which virus?

- (A) Nipah virus
- (B) Zika virus
- (C) Ebola virus
- (D) Chikungunya virus

Answer: (A) Nipah virus. Fruit bats of the genus *Pteropus* are the natural reservoir.

Q6. Which cell organelle is called the 'powerhouse of the cell'?

- (A) Lysosome
- (B) Ribosome
- (C) Golgi apparatus
- (D) Mitochondria

Answer: (D) Mitochondria. Mitochondria produce ATP through cellular respiration.

7. Physics

Key Notes

- **SI units:** force - newton; energy/work - joule; power - watt; pressure - pascal; frequency - hertz; charge - coulomb.
- **Constants:** speed of light about 3×10^8 m/s; $g = 9.8 \text{ m/s}^2$; escape velocity from Earth about 11.2 km/s.
- **Laws:** Newton's three laws of motion; Ohm's law $V = IR$; kinetic energy $= (1/2)mv^2$.
- **Optics:** concave mirror - shaving mirror and headlights; convex mirror - vehicle rear-view mirror (wider field of view). Total internal reflection is used in optical fibres and diamonds' sparkle.
- **Sound:** needs a material medium; speed is highest in solids; unit of loudness is the decibel.

Exam-Style Questions

Q1. The SI unit of power is:

- (A) Joule
- (B) Newton
- (C) Pascal
- (D) Watt

Answer: (D) Watt. 1 watt = 1 joule per second.

Q2. Which mirror is used as a rear-view mirror in vehicles?

- (A) Concave
- (B) Convex
- (C) Plane
- (D) Parabolic

Answer: (B) Convex. A convex mirror gives an erect, diminished image and a wider field of view.

Q3. Optical fibres work on the principle of:

- (A) Total internal reflection
- (B) Refraction through a prism
- (C) Diffraction
- (D) Dispersion

Answer: (A) Total internal reflection. Light is trapped inside the core by repeated total internal reflection.

8. Chemistry

Key Notes

- **Periodic table:** 118 elements; atomic number = number of protons; noble gases (He, Ne, Ar, Kr, Xe, Rn) are inert.
- **pH scale:** below 7 acidic, 7 neutral, above 7 basic. Pure water is neutral at 25 degrees C.
- **Common compounds:** baking soda NaHCO_3 ; washing soda $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$; common salt NaCl ; quicklime CaO ; slaked lime Ca(OH)_2 ; marble/limestone CaCO_3 ; bleaching powder CaOCl_2 .
- **Alloys:** brass = copper + zinc; bronze = copper + tin; steel = iron + carbon; solder = lead + tin.
- **Facts:** hydrogen is the lightest element; nitrogen is the most abundant gas in air (about 78%); mercury is the only liquid metal at room temperature; soda water contains CO_2 .

Exam-Style Questions

Q1. The chemical formula of baking soda is:

- (A) Na_2CO_3
- (B) NaHCO_3
- (C) NaOH
- (D) CaCO_3

Answer: (B) NaHCO_3 . Sodium bicarbonate; washing soda is $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$.

Q2. Brass is an alloy of:

- (A) Copper and tin
- (B) Iron and carbon
- (C) Copper and zinc
- (D) Lead and tin

Answer: (C) Copper and zinc. Copper and tin make bronze.

Q3. The pH of pure water at 25 degrees C is:

- (A) 7
- (B) 0
- (C) 14
- (D) 5.6

Answer: (A) 7. A pH of 7 is neutral; below 7 is acidic and above 7 is basic.

9. Arts, Culture, Literature & Society

Key Notes

- **Classical dances:** Bharatanatyam, Kathak, Kathakali, Kuchipudi, Odissi, Manipuri, Mohiniyattam, Sattriya. Kerala's: Kathakali (male-dominant, elaborate makeup) and Mohiniyattam (lasya style, danced by women).
- **Kerala arts:** Koodiyattam (Sanskrit theatre; UNESCO-recognised), Theyyam (northern Kerala ritual art), Thullal (Kunchan Nambiar), Thrissur Pooram (started by Sakthan Thampuran), Aranmula Kannadi.
- **Festivals:** Onam (state festival); Nehru Trophy Boat Race at Punnamada Lake, Alappuzha, every August/September.
- **Malayalam literature:** Ezhuthachan (Adhyatma Ramayanam); Jnanpith winners: G. Sankara Kurup (1965, *Odakkuzhal*), S. K. Pottekkatt, Thakazhi, M. T. Vasudevan Nair, O. N. V. Kurup, Akkitham. Malayalam was given classical language status in 2013.
- **Famous works:** *Chemmeen* (Thakazhi), *Randamoozham* (M. T.), *Indulekha* (O. Chandu Menon, 1889).
- **Social reform:** Sree Narayana Guru - 'One caste, one religion, one God for man'; consecrated a Shiva idol at Aruvippuram in 1888.

Exam-Style Questions

Q1. Who received the first Jnanpith Award (1965) for the work *Odakkuzhal*?

- (A) Thakazhi Sivasankara Pillai
- (B) G. Sankara Kurup
- (C) Vallathol Narayana Menon
- (D) S. K. Pottekkatt

Answer: (B) G. Sankara Kurup. G. Sankara Kurup was also the first Jnanpith laureate in any Indian language.

Q2. The Nehru Trophy Boat Race is held at:

- (A) Ashtamudi Lake
- (B) Sasthamkotta Lake
- (C) Punnamada Lake
- (D) Kayamkulam Lake

Answer: (C) Punnamada Lake. Punnamada Lake, near Alappuzha, in the Vembanad backwaters.

Q3. The novel *Chemmeen* was written by:

- (A) Thakazhi Sivasankara Pillai
- (B) M. T. Vasudevan Nair
- (C) Basheer
- (D) O. V. Vijayan

Answer: (A) Thakazhi Sivasankara Pillai. A story of the fisherfolk community in Alappuzha; made into a 1965 film.

Q4. The Shiva idol installed at Aruvippuram in 1888 was consecrated by:

- (A) Chattampi Swamikal
- (B) Ayyankali
- (C) Vagbhatananda
- (D) Sree Narayana Guru

Answer: (D) Sree Narayana Guru. An act of defiance against caste restrictions on temple consecration.

Q5. Which classical dance form originated in Kerala and is performed mainly by women in the lasya style?

- (A) Kuchipudi
- (B) Odissi
- (C) Mohiniyattam
- (D) Kathak

Answer: (C) Mohiniyattam. 'Mohini' means enchantress; costume is white with a gold border.

10. Computer Fundamentals & Information

Key Notes

- **Basics:** Hardware = physical parts; software = programs. CPU = ALU + control unit + registers; called the 'brain' of the computer.
- **Memory:** RAM is volatile (contents lost when power is off); ROM is non-volatile. 1 byte = 8 bits; 1 KB = 1024 bytes. Secondary storage: HDD, SSD, pen drive.
- **Devices:** Input - keyboard, mouse, scanner. Output - monitor, printer, speaker.
- **Internet:** WWW invented by Tim Berners-Lee; HTTP/HTTPS, URL, IP address, browser, email, cloud computing.
- **Cyber security:** malware, phishing, firewall, antivirus, strong passwords. **IT Act 2000** is India's main cyber law (amended 2008).
- **Shortcuts:** Ctrl+C copy, Ctrl+V paste, Ctrl+X cut, Ctrl+Z undo, Ctrl+S save.

Exam-Style Questions

Q1. Which part of the computer is known as its 'brain'?

- (A) CPU
- (B) Monitor
- (C) RAM
- (D) Hard disk

Answer: (A) CPU. The Central Processing Unit executes instructions.

Q2. Which type of memory is volatile?

- (A) ROM
- (B) Hard disk
- (C) RAM
- (D) Flash drive

Answer: (C) RAM. RAM loses its data when power is switched off.

Q3. The Information Technology Act in India was enacted in:

- (A) 1998
- (B) 2000
- (C) 2005
- (D) 2008

Answer: (B) 2000. The IT Act 2000 was amended in 2008.

Combined Answer Key

Subject	Answers
1. History	Q1-B, Q2-A, Q3-B, Q4-C, Q5-D
2. Geography	Q1-D, Q2-A, Q3-B, Q4-C, Q5-D
3. Economics	Q1-B, Q2-D, Q3-B, Q4-A, Q5-B
4. Indian Constitution	Q1-D, Q2-A, Q3-C, Q4-B, Q5-C
5. Kerala - Governance & Administration	Q1-A, Q2-D, Q3-B, Q4-C, Q5-B
6. Biology & Public Health	Q1-C, Q2-D, Q3-B, Q4-C, Q5-A, Q6-D
7. Physics	Q1-D, Q2-B, Q3-A
8. Chemistry	Q1-B, Q2-C, Q3-A
9. Arts, Culture, Literature & Society	Q1-B, Q2-C, Q3-A, Q4-D, Q5-C
10. Computer Fundamentals & Information	Q1-A, Q2-C, Q3-B