1. **Correct Answer is : (a) Devika Rani**

The Dadasaheb Phalke Award is India's highest award in cinema. It is presented annually at the National Film Awards ceremony by the Directorate of Film Festivals, an organisation set up by the Ministry of Information and Broadcasting. The recipient is honoured for their "outstanding contribution to the growth and development of Indian cinema". The first recipient of the award was actress Devika Rani, who was honoured at the 17th National Film Awards.

2. **Correct Answer is : (b) Insect**

It has long been recognized and documented that insects are the most diverse group of organisms, meaning that the numbers of species of insects are more than any other group. In the world, some 900 thousand different kinds of living insects are known.

3. **Correct Answer is : (d) Ephedrine**

Ephedrine is a sympathomimetic amine commonly used as a stimulant, appetite suppressant, concentration aid, decongestant, and to treat hypotension associated with anaesthesia.

4. **Correct Answer is : (a) Bt. Brinjal**

An organism that is generated through genetic engineering is considered to be a genetically modified organism (GMO). The first GMOs were bacteria in 1973 and GM mice were generated in 1974. Insulin-producing bacteria were commercialized in 1982 and genetically modified food has been sold since 1994. Glofish, the first GMO designed as a pet, was first sold in the United States December in 2003.

The Bt brinjal is a suite of transgenic brinjals (also known as an eggplant or aubergine) created by inserting a crystal protein gene (Cry1Ac) from the soil bacterium Bacillus thuringiensis into the genome of various brinjal cultivars.

5. **Correct Answer is : (a) Widal test**

The Widal test is a presumptive serological test for enteric fever or undulant fever whereby bacteria causing typhoid fever are mixed with serum containing specific antibodies obtained from an infected individual. In case of Salmonella infections, it is a demonstration of the presence of O-soma false-positive result. Test results need to be interpreted carefully in the light of past history of enteric fever, typhoid vaccination, and the general level of antibodies in the populations in endemic areas of the world. Typhidot is the other test used to ascertain the diagnosis of typhoid fever.
6. Correct Answer is : (a) Lipid (Sterol)

**Cholesterol**, from the Ancient Greek *chole-* (bile) and *stereos* (solid) followed by the chemical suffix -*ol* for an alcohol, is an organic molecule. It is a sterol (modified steroid), a lipid molecule and is biosynthesized by all animal cells because it is an essential structural component of animal cell membranes that is required to maintain both membrane structural integrity and fluidity. Cholesterol enables animal cells to (a) not need a cell wall (like plants & bacteria) to protect membrane integrity/cell-viability and thus be able to (b) change shape and (c) move about (unlike bacteria and plant cells which are restricted by their cell walls).

7. Correct Answer is : (a) Haemophilia

**Haemophilia** (also spelled *hemophilia* in North America, from the Greek *haima* α/μα 'blood' and *philia* φιλία 'love') is a group of hereditary genetic disorders that impair the body's ability to control blood clotting or coagulation, which is used to stop bleeding when a blood vessel is broken.

8. Correct Answer is : (d) Glass

Hydrochloric acid should never be transported in other than a plastic coated glass container, accurately labeled, and properly stored within the vehicle to prevent shifting, spillage, or breakage. Containers of hydrochloric acid carried in vehicles in warm climates should be placed in coolers to protect them from excessive heat. Although hydrochloric acid has a boiling point of 110 degrees C (230 degrees F) it should be transported at room temperature to minimize a buildup of gas pressure in the container.

9. Correct Answer is : (d) Syrinx

Nearly all birds produce sound through an organ unique to birds, the syrinx. In many songbirds, the syrinx is not much bigger than a raindrop. Extremely efficient, it uses nearly all the air that passes through it. By contrast, a human creates sound using only 2% of the air exhaled through the larynx. Birds whose syrinx is controlled by only one set of muscles have a limited vocal range. This Song Sparrow, using several pairs, can put forth a cascade of trills and notes.

10. Correct Answer is : (c) Milk

While strength of acidity is measured according to **pH**, with most wines having a pH between 2.9 and 3.9.

A pH value of 7 means a substance is neutral. A lower value indicates acidity, and a higher value is a sign of alkalinity. Lemon's pH value is 2.5, coffee is pH **5.0-6.5**, milk is about 6.2, soapy water is about 7 to 10, and beer is about **4.5**.

11. Correct Answer is : (b) recession
Boom is when the economic activity is thriving. Deflation means a fall in general price level. Depression is an acute fall in economic activity characterised by widespread losses due to lack of demand, job retrenchment, etc. Recession precedes a depression, and when the recession becomes uncontrollable, it will precipitate into a depression. The global economy has witnessed a recession as recently as the late 1990s. It has not precipitated into a depression, thankfully due to the lessons we have learnt from the Great Depression.

12. **Correct Answer is : (b) Taxes and levies**

All the wrong answers also provide some income to the governments. And in some cases, the loans may even exceed the tax revenues. But the ultimate source of income for a government is taxes.

13. **Correct Answer is : (a) labor**

Labor; The households provide the necessary workers needed by the firms. The factors for production market are part of the circular flow that also includes the markets of goods and services where the firms sell to the households.

14. **Correct Answer is : (b) final**

Final goods and services are the actual goods and services that are being sold to the consumers. Intermediate goods are those used in the making of final goods. GDP only counts final goods in order to avoid double counting intermediate goods.

15. **Correct Answer is : (b) GDP Deflator would increase, but CPI would remain the same**

GDP Deflator would increase, but CPI would remain the same

CPI measures only goods and services a typical consumer would buy; Boeing aircrafts are not on an average consumer's shopping list. GDP Deflator measures all good and services in an economy, so it would be affected by the increase in the price of Boeing aircraft.

16. **Correct Answer is : (b) it falls**

With elastic demand the Total Revenue changes in the opposite direction to the price i.e if the price increases then the Total Revenue falls.

The Total Revenue would increase only if the demand for the good is inelastic and it would remain unchanged if the product has unitary elasticity.

17. **Correct Answer is : (b) negative**
The Income Elasticity of Demand is the responsiveness of the quantity demanded of a product to the change in the consumers' income.

A Giffen good is an inferior good i.e. it does not follow the general law of demand: the lower the price of the commodity, the greater the demand for it. It is a good of low quality which forms an important element of the daily ration of poor families. This type of good is very uncommon in the developed countries. We might see this good in the extremely poor countries where families spent a great proportion of their income on one good e.g. potatoes.

The Income Elasticity of Demand for such a good will be negative because as people earn higher incomes they will spend less money on this good, switching to goods of better quality.

18. **Correct Answer is : (b) John Maynard Keynes**

**John Maynard Keynes**

In the 1936 work, Keynes theorized that to achieve "full employment" of labor and capital, government spending, even into deficit, should be made to increase the "aggregate demand" on goods and services.

19. **Correct Answer is : (a) Property tax**

The main source of income of the gram panchayat is the property tax levied on buildings and open spaces within the village. Other sources of income include professional tax, taxes on pilgrimage, animal trade, grant received from the State Government in proportion of land revenue and the grants received from the District Councils of India (Zila Parishad).

The gramsevak / gram vikas officer is the communicator in government and village panchayat and works for the sarpanch.

20. **Correct Answer is : (b) Gurjar-Pratihar dynasty**

**Mihira Bhoja I** (836–885 CE) or **Bhoja I** was a ruler of the **Gurjar Pratihara dynasty** of India. He succeeded his father **Ramabhadra**. Bhoja was a devotee of **Vishnu** and adopted the title of **Adivaraha** which is inscribed on some of his coins. One of the outstanding political figures of India in ninth century, he ranks with **Dhruva Dharavarsha** and **Dharmapala** as a great general and empire builder.

21. **Correct Answer is : (d) Juba**

**South Sudan**, officially the **Republic of South Sudan**, is a **landlocked country** in northeastern **Africa** that gained its independence from **Sudan** in 2011. Its current capital is **Juba**, which is also its largest city.

22. **Correct Answer is : (b) Bombay Presidency Association**

The **Indian National Association** was the first avowed nationalist organization founded in **British India** by **Surendranath Banerjea** and **Ananda Mohan Bose** in 1876. The objectives of this Association
were “promoting by every legitimate means the political, intellectual and material advancement of the people”. The Association attracted educated Indians and civic leaders from all parts of the country, and became an important forum for India's aspirations for independence. It later merged with the Indian National Congress.

23. Correct Answer is : (c) Dr. S. Radhakrishnan

| Sarvepalli Radhakrishnan | Manchester and All Souls | 1923–1927 (Lecturer, Manchester); 1936–1952 (Professor, All Souls) | India | First Indian to hold an Oxford Professorship. President 1962–67 |

24. Correct Answer is : (b) 4, 1, 3, 2

CONTINENTS (by the number of countries)

- #1 Africa - (53)
- #3 Europe - (46)
- #2 Asia - (44)
- #4 North America - (23)
- #5 Oceania - (14)
- #6 South America - (12)

25. Correct Answer is : (c) Mongolia

Climate: Blue Skies or "Zud"?

Mongolians sometimes call their nation Land of the Blue Sky because they enjoy over 250 sunny days a year. Yet that moniker belies an extreme climate in which temperatures range from 90°F (30°C) in the summer to minus 50°F (-45°C) in winter.

26. Correct Answer is : (b) Bantu – Sahara

**Hausa–Fulani** is a term used to refer collectively to the Hausa and Fulani people of West Africa. The two are grouped together because since the Fulani War their histories have been largely intertwined within Nigeria.

**Bantu peoples** is used as a general label for the 300–600 ethnic groups in Africa who speak Bantu languages. They inhabit a geographical area stretching east and southward from Central Africa across the African Great Lakes region down to Southern Africa.

The Maasai people of East Africa live in southern Kenya and northern Tanzania along the Great Rift Valley on semi-arid and arid lands. The Maasai occupy a total land area of 160,000 square kilometers with a population of approximately one half million people.
However, many Maasai see the national census as government meddling and often miscount their numbers to census takers.

**Nuba** is a collective term used here for the peoples who inhabit the **Nuba Mountains** of **South Kordofan state**, in **Sudan**.

27. **Correct Answer is : (d) about 0.7%**

The ocean holds **97 percent of the Earth's water**; the remaining three percent is freshwater found in glaciers and ice, below the ground, or in rivers and lakes.

Of the three percent of the water that is not in the ocean, about 69 percent is locked up in glaciers and icecaps. Ninety percent of that frozen water is in Antarctica and about nine percent covers Greenland.

Of the remaining freshwater, 30 percent of it is groundwater, captured below our feet. About 0.3 percent is found in rivers and lakes. This means that the water source we are most familiar with in our everyday lives, rivers and lakes, accounts for less than one percent of all **freshwater** that exists on Earth.

A very small percentage of water (0.1 percent of all water) is also found in the atmosphere.

28. **Correct Answer is : (b) Gupta dynasty**

**Gupta Dynasty: 375-550AD**

Major Accomplishments: **Gupta Dynasty** re-united India; very strong mathematics accomplishments including inventing the numbers 1-9 and 0. Also important developments in medicine, astronomy and art.

29. **Correct Answer is : (b) Nalanda**

Nalanda was one of the world's first residential universities, i.e., it had dormitories for students. It is also one of the most famous universities. In its heyday, it accommodated over 10,000 students and 2,000 teachers. Chinese pilgrims estimated the students between 3,000 and 5,000. The university was considered an architectural masterpiece, and was marked by a lofty wall and one gate. Nalanda had eight separate compounds and ten temples, along with many other meditation halls and classrooms. On the grounds were lakes and parks. The library was located in a nine storied building where meticulous copies of texts were produced. The subjects taught at Nalanda University covered every field of learning, and it attracted pupils and scholars from Korea, Japan, China, Tibet, **Indonesia**, **Persia** and **Turkey**. During the period of Harsha, the monastery is reported to have owned 200 villages given as grants.

30. **Correct Answer is : (a) Catherine Mayo**

**Mother India**, published in 1927, was a polemical book by the American author Katherine Mayo. In her book, Mayo attacked society, religion and culture of the country of India. Written against the Indian demands for self-rule and independence from **British rule**, the book pointed to the treatment of India's women, the **untouchables**, animals, dirt, and the character of its nationalistic politicians. Mayo singled out the allegedly rampant and fatally weakening sexuality of its males to be at the core of all problems, leading to masturbation, rape, homosexuality, prostitution, venereal diseases, and, most importantly, premature sexual intercourse and maternity. The book created an outrage across India, and it was burned along with her effigy. It was criticised
by Mahatma Gandhi as a "report of a drain inspector sent out with the one purpose of opening and examining the drains of the country to be reported upon".

31. Correct Answer is : (c) Jainism

Shravanabelagola (Śravaṇa Beḷagola) is a city located near Channarayapatna of Hassan district in the Indian state of Karnataka and is 158 km from Bangalore. The statue of Gommateshvara Bahubali at Śravaṇa Beḷgola is one of the most important pilgrimage destinations in Jainism, one that reached a peak in architectural and sculptural activity under the patronage of Western Ganga Dynasty of Talakad. Chandragupta is said to have died here in 298 BC after he became a Jain monk and assumed an ascetic life style. Jainism in this place is 2000+ years old.

32. Correct Answer is : (b) Maharashtra

PAUNAR ASHRAM

 Asked by Gandhi to take charge of the ashram at Wardha, Vinoba went to Wardha on April 8, 1921. In 1923, he brought out `Maharashtra Dharma', a monthly in Marathi (regional language), which had his essays on the Upanishads. Later on, this monthly became a weekly and continued for three years. His articles on the Abhangas of Sant Tukaram (a saint poet) published in it became popular. A time passed Vinoba continued his search for the self which task him to spiritual heights. His involvement with Gandhi’s constructive programmes related to Khadi, village industries, new education (Nai Talim), sanitation and hygiene also kept on increasing.

In December 23, 1932, he shifted to Nalwadi (a village about two miles from Wardha town), from where he experimented his idea of supporting himself by spinning alone. Later, when he was sick in 1938, he shifted to what he called Paramdham Ashram in Paunar, which remained his headquarters.

33. Correct Answer is : (b) Webb Miller

The true meaning of the Salt March

An extract from a report by American journalist Webb Miller who witnessed the salt satyagraha at Dharasana. “Slowly and in silence the throng commenced the half-mile March to the salt depots… The salt-deposits were surrounded by ditches filled with water and guarded by four hundred native Surat police… Half a dozen British officers commanded them. The police carried lathis – five foot clubs tipped with steel.

34. Correct Answer is : (a) 1968

The first Jan Lokpal Bill was proposed by Shanti Bhushan in 1968 and passed in the 4th Lok Sabha in 1969, but did not pass through the Rajya Sabha. Subsequently, ‘lokpal bills’ were introduced in 1971, 1977, 1985, again by Ashoke Kumar Sen, while serving as Law Minister in the Rajiv Gandhi cabinet, and

35. Correct Answer is : (d) Jai Prakash Narayan

Jayaprakash Narayan (11 October 1902 – 8 October 1979), popularly referred to as JP or Lok Nayak (Hindi for "people's hero"), was an Indian independence activist, social reformer and political leader, remembered especially for leading the mid-1970s opposition against Prime Minister Indira Gandhi, for whose overthrow he called a "total revolution". His biography, Jayaprakash, was written by his nationalist friend and an eminent writer of Hindi literature, Ramavriksha Benipuri. In 1999, he was posthumously awarded the Bharat Ratna, India's highest civilian award, in recognition of his social work. Other awards include the Magsaysay award for Public Service in 1965. The Patna airport is also named after him.

36. Correct Answer is : (b) Article 324

Article 324 in The Constitution Of India 1949

324. Superintendence, direction and control of elections to be vested in an Election Commission

(1) The superintendence, direction and control of the preparation of the electoral rolls for, and the conduct of, all elections to Parliament and to the Legislature of every State and of elections to the offices of President and Vice President held under this Constitution shall be vested in a Commission (referred to in this Constitution as the Election Commission)

(2) The Election Commission shall consist of the Chief Election Commissioner and such number of other Election Commissioners, if any, as the President may from time to time fix and the appointment of the Chief Election Commissioner and other Election Commissioners shall, subject to the provisions of any law made in that behalf by Parliament, be made by the President

(3) When any other Election Commissioner is so appointed the Chief Election Commissioner shall act as the Chairman of the Election Commission

(4) Before each general election to the House of the People and to the Legislative Assembly of each State, and before the first general election and thereafter before each biennial election to the Legislative Council of each State having such Council, the President may also appoint after consultation with the Election Commission such Regional Commissioners as he may consider necessary to assist the Election Commission in the performance of the functions conferred on the Commission by clause (1)

(5) Subject to the provisions of any law made by Parliament, the conditions of service and tenure of office of the Election Commissioners and the Regional Commissioners shall be such as the President may by rule determine; Provided that the Chief Election Commissioner shall not be removed from his office except in like manner and on the like grounds as a Judge of the Supreme Court and the conditions of service of the Chief Election Commissioner shall not be varied to his disadvantage after his appointment: Provided further that any other Election Commissioner or a Regional Commissioner shall not be removed from office except on the recommendation of the Chief Election Commissioner

(6) The President, or the Governor of a State, shall, when so requested by the Election Commission, make available to the Election Commission or to a Regional Commissioner such staff as may be necessary for the discharge of the functions conferred on the Election Commission by clause (1)

37. Correct Answer is : (c) 11th Schedule
38. Correct Answer is : (a) K.C. Wheare

Some scholars hesitate to characterize the Indian Constitution as truly federal because according to them in certain circumstances the Constitution empowers the Centre to interfere in the State matters and thus places the States in a subordinate position, which violates the federal principle. They, therefore, use such expressions for it as ‘quasi-federal’, ‘unitary with federal features’ or ‘federal with unitary features.’ In the opinion of Prof. Wheare, “The Constitution establishes a system of Government which is almost quasi-federal a unitary State with subsidiary federal features rather than a federal State with subsidiary unitary features.” Jennings has characterized it as “a federation with a strong centralizing tendency.”

39. Correct Answer is : (b) Writ of Mandamus – issued to the public servant

A writ of habeas corpus, also known as the "great writ", is a summons with the force of a court order; it is addressed to the custodian (a prison official for example) and demands that a prisoner be taken before the court, and that the custodian present proof of authority, allowing the court to determine whether the custodian has lawful authority to detain the prisoner. If the custodian is acting beyond his authority, then the prisoner must be released.

**Mandamus** is a judicial remedy in the form of an order from a superior court, to any government subordinate court, corporation, or public authority—to do (or forbear from doing) some specific act which that body is obliged under law to do (or refrain from doing)—and which is in the nature of public duty, and in certain cases one of a statutory duty. It cannot be issued to compel an authority to do something against statutory provision.

**Quo warranto** (Medieval Latin for "by what warrant?") is a prerogative writ requiring the person to whom it is directed to show what authority they have for exercising some right or power (or "franchise") they claim to hold.

A writ of prohibition is a writ directing a subordinate to stop doing something the law prohibits. In practice, the Court directs the Clerk to issue the Writ, and directs the Sheriff to serve it on the subordinate, and the Clerk prepares the Writ and gives it to the Sheriff, who serves it. This writ is normally issued by a superior court to the lower court asking it not to proceed with a case which does not fall under its jurisdiction.

40. Correct Answer is : (a) A-3, B-1, C-4, D-2

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<tr>
<td>01</td>
<td>Speaker</td>
<td>Ganesh Vasudev Mavlankar</td>
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<tr>
<td></td>
<td></td>
<td>8 May 1952</td>
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</table>

M. Fathima Beevi
Justice M. Fathima Beevi was the first female judge to be appointed to the Supreme Court of India (1989) and the first Muslim woman to be appointed to any higher judiciary.

Sir Harilal Jekisundas Kania (3 November 1890 - 6 November 1951) was the first Chief Justice of India, dying in office in 1951.

Sarojini Naidu was the first Indian woman to become the president of the Indian National Congress and the first woman to become governor of Uttar Pradesh.

41. **Correct Answer is : (d) Ministers of the Union and State Governments**

**Article 102(1) in The Constitution Of India 1949**

(1) A person shall be disqualified for being chosen as, and for being, a member of either House of Parliament
(a) if he holds any office of profit under the Government of India or the Government of any State, other than an office declared by Parliament by law not to disqualify its holder;
(b) if he is of unsound mind and stands so declared by a competent court;
(c) if he is an undischarged insolvent;
(d) if he is not a citizen of India, or has voluntarily acquired the citizenship of a foreign State, or is under any acknowledgement of allegiance or adherence to a foreign State;
(e) if he is so disqualified by or under any law made by Parliament Explanation For the purposes of this clause a person shall not be deemed to hold an office of profit under the Government of India or the Government of any State by reason only that he is a Minister either for the Union or for such State

42. **Correct Answer is : (c) Diego Garcia**

**Diego Garcia** is a tropical, footprint-shaped coral atoll located south of the equator in the central Indian Ocean. It is part of the British Indian Ocean Territory (BIOT).

The United States Navy operates Naval Support Facility (NSF) Diego Garcia, a large naval ship and submarine support base, military air base, communications and space-tracking facility, and an anchorage for pre-positioned military supplies for regional operations aboard Military Sealift Command ships in the lagoon

43. **Correct Answer is : (b) Population**
Recent discussions in the philosophy of biology have brought into question some fundamental assumptions regarding evolutionary processes, natural selection in particular. Some authors argue that natural selection is nothing but a population-level, statistical consequence of lower-level events (Matthen and Ariew [2002]; Walsh, Lewens, and Ariew [2002]). On this view, natural selection itself does not involve forces. Other authors reject this purely statistical, population-level account for an individual-level, causal account of natural selection (Bouchard and Rosenberg [2004]). I argue that each of these positions is right in one way, but wrong in another; natural selection indeed takes place at the level of populations, but it is a causal process nonetheless.

44. Correct Answer is : (b) Keratin

Keratin is a family of fibrous structural proteins. Keratin is the key structural material making up the outer layer of human skin. It is also the key structural component of hair and nails. Keratin monomers assemble into bundles to form intermediate filaments, which are tough and insoluble and form strong unmineralized tissues found in reptiles, birds, amphibians, and mammals. The only other biological matter known to approximate the toughness of keratinized tissue is chitin.

Chitin (C₈H₁₃O₅Nₙ) is a long-chain polymer of a N-acetylg glucosamine, a derivative of glucose, and is found in many places throughout the natural world. It is the main component of the cell walls of fungi,

45. Correct Answer is : (d) seed coats
**Introduction**

Is a vegetable fibre obtained from the mature capsule of the cotton plant, a shrub about 40 cm high, with leaves and flowers of a red or yellow colour. When the flower is fecundated it loses its petals and within 25 days a capsule surrounded by a leaf called bract grows. The capsule is sustained by a cup and has a drop shape rounded at the lower extremity. Inside the capsule there are from five to eight seeds on which the fibre developed. When the capsule is mature it opens into four parts showing the cotton ball. On the same plant the maturation of the capsules does not occur simultaneously, therefore more passages are required for the harvest of the cotton. The harvest is carried out a week after maturation. The first operation after harvesting is husking, which permits the removal of the fibres from the seeds. Then the cotton is carded and combed so as to eliminate all the impurities. 4000 fibers is the seed average. Staple length = 1/6” - 2.5” (0.32 - 6.35cm) - for manufacturing yarns, fabrics, 7/8” - 11/4” (2.22 - 3.18cm) is standard.

46. **Correct Answer is : (c) Indian Opinion**

The *Indian Opinion* was a newspaper established by Indian leader Mahatma Gandhi. The publication was an important tool for the political movement led by Gandhi and the Natal Indian Congress to fight racial discrimination and win civil rights for the Indian immigrant community in South Africa.

47. **Correct Answer is : (d) Vinoba Bhave**

**List of Magsaysay Award Winners from India**

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<td>Chintaman Deshmukh</td>
<td>1959</td>
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<td>Amitabha Chowdhury</td>
<td>1961</td>
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<td>Dara Khurody</td>
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<td>Welthy Fisher</td>
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<tr>
<td>Name</td>
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<td>Henning Holck-Larsen</td>
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<td>Lakshmi Chand Jain</td>
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<td>Kiran Bedi</td>
<td>1994</td>
<td>Government Services</td>
</tr>
<tr>
<td>Pandurang Athavale</td>
<td>1996</td>
<td>Community Leadership</td>
</tr>
<tr>
<td>Tirunellai Seshan</td>
<td>1996</td>
<td>Government Services</td>
</tr>
<tr>
<td>Maheshweta Devi</td>
<td>1997</td>
<td>Journalism, Literature and Creative</td>
</tr>
<tr>
<td>Jockin Arputham</td>
<td>2000</td>
<td>Peace and International Understanding</td>
</tr>
<tr>
<td>Aruna Roy</td>
<td>2000</td>
<td>Community Leadership</td>
</tr>
<tr>
<td>Rajendra Singh</td>
<td>2001</td>
<td>Community Leadership</td>
</tr>
<tr>
<td>Sandeep Pandey</td>
<td>2002</td>
<td>Emergent Leadership</td>
</tr>
<tr>
<td>James Michael Lyngdoh</td>
<td>2003</td>
<td>Government Services</td>
</tr>
<tr>
<td>Shantha Sinha</td>
<td>2003</td>
<td>Government Services</td>
</tr>
</tbody>
</table>
48. Correct Answer is: (a) Methane, Carbon di-oxide, Hydrogen and Hydrogen Sulphide

Biogas typically refers to a mixture of gases produced by the breakdown of organic matter in the absence of oxygen. Biogas can be produced from regionally available raw materials such as recycled waste. It is a renewable energy source and in many cases exerts a very small carbon footprint.

Biogas is produced by anaerobic digestion with anaerobic bacteria or fermentation of biodegradable materials such as manure, sewage, municipal waste, green waste, plant material, and crops. It is primarily methane (CH₄) and carbon dioxide (CO₂) and may have small amounts of hydrogen sulphide (H₂S), moisture and siloxanes.

49. Correct Answer is: (b) Potassium chlorate

The friction strike anywhere match has active ingredients in the match head of phosphorus sesquisulfide, P₄S₃ (which initiates combustion) and potassium chlorate as an additional oxidant. The safety match has red phosphorus (allotrope of phosphorus) on the box with abrasive and binding agents, and potassium chlorate in the head with various binders.

50. Correct Answer is: (b) Distilled water

Distillation

Distillation has the broadest removal capabilities of any single form of water purification. Water is boiled and undergoes phase changes during the distillation process, changing from liquid to vapor and back to liquid. It is the change from liquid to vapor that separates the water (in various degrees) from many dissolved impurities, such as ions, organic contaminants with low boiling points (<100°C / 212°F), bacteria, pyrogens, and particulates. Distillation can not be used on its own to remove inorganic
ions, ionized gases, organics with boiling points higher than 100°C, or dissolved non-ionized gases.

51. **Correct Answer is : (c) Agricultural Development**

In July 2000, the Centre Government of India had announced the first-ever national agriculture policy. The policy aimed at achieving a growth rate of over 4 per cent per annum by introducing ‘rainbow revolution’ in the next two decades so that the total GDP growth can be sustained at 6.5 per cent. The rainbow revolution includes the following.

![Image of different revolutions]

52. **Correct Answer is : (d) Kanyakumari**

The **Golden Quadrilateral** is a highway network connecting many of the major industrial, agricultural and cultural centres of India. A quadrilateral of sorts is formed by connecting Delhi, Mumbai, Kolkata and Chennai, and hence its name. Other cities among the top metropolises namely Pune, Ahmedabad, Jaipur, Kanpur, Agra, Surat at north and Bengaluru (mainly connects north-west and minimal parts of south-east regions), Vijayawada, Visakhapatnam & Bhubaneswar at south are also connected by the network.
53. Correct Answer is : (a) 1 only

The government consists of a number of ministries /departments, number and character varying from time to time on factors such as volume work, importance attached to certain items, changes of orientation, political expediency etc. On 15 August 1947, the number of ministries at the Centre was 18.

List of Ministries/Union Government

<table>
<thead>
<tr>
<th>Number</th>
<th>Ministry of</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Agriculture</td>
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<tr>
<td>2</td>
<td>Chemicals and Fertilizers</td>
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<td>3</td>
<td>Civil Aviation</td>
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<td>4</td>
<td>Coal</td>
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<td>5</td>
<td>Communications and Information Technology</td>
</tr>
<tr>
<td>6</td>
<td>Consumer Affairs, Food and Public Distribution</td>
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<td>7</td>
<td>Corporate Affairs</td>
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<tr>
<td>8</td>
<td>Culture</td>
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<tr>
<td>9</td>
<td>Defence</td>
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<tr>
<td>10</td>
<td>Development of North Eastern Region</td>
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<tr>
<td>11</td>
<td>Environment and Forests</td>
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<tr>
<td>12</td>
<td>External Affairs</td>
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<td>13</td>
<td>Finance</td>
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<td>14</td>
<td>Food Processing Industries</td>
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<tr>
<td>15</td>
<td>Health and Family Welfare</td>
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<tr>
<td>16</td>
<td>Heavy Industries and Public Enterprises</td>
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<tr>
<td>17</td>
<td>Home Affairs</td>
</tr>
<tr>
<td>18</td>
<td>Housing and Urban Poverty Alleviation</td>
</tr>
<tr>
<td>19</td>
<td>Human Resource Development</td>
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<tr>
<td>20</td>
<td>Information and Broadcasting</td>
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<tr>
<td>21</td>
<td>Labour and Employment</td>
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<tr>
<td>22</td>
<td>Law and Justice</td>
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<tr>
<td>23</td>
<td>Micro, Small and Medium Enterprises</td>
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<td>24</td>
<td>Minority Affairs</td>
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<tr>
<td>25</td>
<td>New and Renewable Energy</td>
</tr>
<tr>
<td>26</td>
<td>Overseas Indian Affairs</td>
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<tr>
<td>27</td>
<td>Panchayati Raj</td>
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<tr>
<td>28</td>
<td>Parliamentary Affairs</td>
</tr>
<tr>
<td>29</td>
<td>Personnel, Public Grievances and Pensions</td>
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<tr>
<td>30</td>
<td>Petroleum and Natural Gas</td>
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<tr>
<td>31</td>
<td>Planning</td>
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<tr>
<td>32</td>
<td>Power</td>
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<td>33</td>
<td>Railways</td>
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<tr>
<td>34</td>
<td>Road Transport and Highways</td>
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<tr>
<td>35</td>
<td>Rural Development</td>
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</tbody>
</table>
Venera 4, also designated 4V-1 No.310 was a probe in the Soviet Venera program for the exploration of Venus. It was the first successful probe to perform in-place analysis of the environment of another planet.

Mariner 4 was the fourth in a series of spacecraft intended for planetary exploration in a flyby mode. It was designed to conduct closeup scientific observations of Mars and to transmit these observations to Earth.

Voyager 1 is a 722-kilogram space probe launched by NASA on September 5, 1977, to study the outer Solar System.

MESSENGER is a robotic NASA spacecraft orbiting the planet Mercury, the first spacecraft ever to do so.

The horizontal or base line, from which the heights of points are reckoned or measured, as in the plan of a railway, etc.

A geyser is a spring characterized by intermittent discharge of water ejected turbulently and accompanied by a vapour phase (steam). Over one thousand known geysers exist worldwide. A study that was completed in 2011 found that at least 1283 geysers have erupted in Yellowstone National Park, Wyoming, United States, and an average of 465 geysers are active there in a given year.

The Pampas (from Quechua pampa, meaning "plain") are fertile South American lowlands, covering more than 750,000 km² (289,577 sq mi), that include the Argentine provinces of Buenos Aires, La Pampa, Santa Fe, Entre Ríos and Córdoba; most of Uruguay; and the southernmost Brazilian State, Rio Grande do Sul. These vast plains are a natural region only interrupted by the low Ventana and Tandil hills near Bahia.
Blanca and Tandil (Argentina), with a height of 1,300 m (4,265 ft) and 500 m (1,640 ft) respectively.

Veld, or veldt, is a type of wide open rural landscape in Southern Africa. Particularly, it is a flatter area covered in grass or low scrub, especially in the countries of South Africa, Lesotho, Swaziland, Zimbabwe, Botswana, and Namibia.

57. Correct Answer is : (d) Loktak Lake

Loktak Lake, the largest freshwater (sweet) lake in North -East India, also called the only Floating lake in the world due to the floating phumdis (heterogeneous mass of vegetation, soil, and organic matters at various stages of decomposition) on it.

58. Correct Answer is : (a) Pir Panjal Range

Existing Banihal road tunnel

A 2.5 km (1.6 mi) long tunnel through Pir Panjal mountain under the Banihal pass connects Banihal with Qazigund on the other side of the mountain. The tunnel named Jawahar tunnel after the first Prime Minister of India was constructed in early 1950s and commissioned in December 1956 to ensure snow-free passage throughout the year. It is at elevation of about 2,100 m (6,900 ft). It was designed for 150 vehicles per day but now used by more than 7,000 vehicles per day. Therefore a new wider and longer tunnel has been planned at a lower elevation.

59. Correct Answer is : (c) Germany

The Black Forest is a wooded mountain range in Baden-Württemberg, south western Germany. It is bordered by the Rhine valley to the west and south. The highest peak is the Feldberg with an elevation of 1,493 metres (4,898 ft). The region is almost rectangular with a length of 160 km (99 mi) and breadth of up to 60 km (37 mi).

60. Correct Answer is : (b) 300 km

The actual distance between the places = 15x20,00,00 cm i.e, 300 Km.

61. Correct Answer is : (d) 3, 2, 4, 1

The continents are the great land masses of the earth. There are seven continent on Earth now: Africa, Antarctica, Asia, Australia, Europe, North America, and South America.

<table>
<thead>
<tr>
<th>Continent</th>
<th>Area in Square Miles (Square Km)</th>
<th>Percent of Total Land Area on Earth</th>
</tr>
</thead>
<tbody>
<tr>
<td>The World</td>
<td>57,308,738 Sq. Miles (148,429,000 Sq. Km)</td>
<td>100%</td>
</tr>
</tbody>
</table>
Asia (including the Middle East) | 17,212,000 Sq. Miles (44,579,000 Sq. Km) | 30.0% 
---|---|---
Africa | 11,608,000 Sq. Miles (30,065,000 Sq. Km) | 20.3% 
North America | 9,365,000 Sq. Miles (24,256,000 Sq. Km) | 16.3% 
South America | 6,880,000 Sq. Miles (17,819,000 Sq. Km) | 12.0% 
Antarctica | 5,100,000 Sq. Miles (13,209,000 Sq. Km) | 8.9% 
Europe | 3,837,000 Sq. Miles (9,938,000 Sq. Km) | 6.7% 
Australia (plus Oceania) | 2,968,000 Sq. Miles (7,687,000 Sq. Km) | 5.2% 

62. Correct Answer is: (b) Patliputra

The Maurya Empire was a geographically extensive Iron Age historical power in ancient India, ruled by the Maurya dynasty from 322 – 185 BCE. Originating from the kingdom of Magadha in the Indo-Gangetic plains (modern Bihar, eastern Uttar Pradesh) in the eastern side of the Indian subcontinent, the empire had its capital city at Patliputra (modern Patna).

63. Correct Answer is: (a) All are correct

The Tons is the largest tributary of the Yamuna and flows through Garhwal region in Uttarakhand, touching Himachal Pradesh. The Tons thrust is named after this river.

Its source lies in the 20,720 ft (6,315 meters) high Bandarpunch mountain, and is one of the most major perennial Indian Himalayan rivers.

Bhilangna River is a Himalayan river in Uttarakhand, India, which is the major tributary of the Bhagirathi river, the source stream of the Ganges River of India.

The mainstem, Bhilanga, rises at the foot of the Khatling Glacier (elevation 3,717 m (12,195 ft)) approximately 50 km (31 mi) south of the ice cave at Gaumukh, traditionally considered the source of both the Bhagirathi and the Ganges and flows into the Bhagirathi at Old Tehri, the site of the Tehri dam. It meets its major tributary the Bal Ganga at Ghyansali (elevation 976 m (3,202 ft)).

The Pindar River is a river in Uttarakhand, India.

Pindar or Pindari River originates from Pindar Glacier in Bageshwar. It passes small towns and villages like Devaal, Tharali, Kulsari, Harmani, Meeng, Narain Bagar, Nalgaon, Simli inhabited in Pindar Valley and finally merges with River Alaknanda at Karanprayag and thereafter flows as Alaknanda.

River Pinder is the only free flow tributary of National River Ganga.

Mandakini is a tributary of the Alaknanda River. Mandakini originates from the Chorabari Glacier near Kedarnath in Uttarakhand, India. Mandakini is fed by Vasukiganga River at Sonprayag. Mandakini joins Alaknanda at Rudraprayag. Alaknanda then proceeds towards Devprayag where it joins
with Bhagirathi River to form the Ganges River. Mandakini river flows along NH-107 in Rudraprayag district and turns violent during monsoon, often destroying parts of highway and adjoining villages.

64. **Correct Answer is : (d) Neither 1 nor 2**

Simlipal National Park is a national park and an elephant reserve situated in the Mayurbhanj district in the Indian state of Odisha. Simlipal National Park derives its name from the abundance of Semul or red silk cotton trees that bloom abundantly in the locality.

65. **Correct Answer is : (a) Halon gas – Fire extinguisher**

Halon gas is a chemical compound that is often used in fire suppression systems. While several different types of halon have been developed since this product was first invented, many were dangerous or deadly to humans. Since the late 20th century, two safer types of halon have replaced earlier versions. These include the liquefied type 1211 and type 1301 halon. Both are known by the scientific name bromotrifluoromethane.

Fire requires oxygen, heat and a source of fuel in order to burn. Some early halon gas products would cut off the oxygen supply in a room in order to suppress a fire. While this was an effective way to extinguish a fire, it could also kill any people who were in the room at the time. Newer halon systems simply prevent oxygen from reacting with a fuel source to create a fire, making them much safer for occupants.

The primary benefit to halon gas is its ability to quickly extinguish a fire without damaging items within the room. It is non-conductive, non-volatile, and leaves no residue once the fire has been suppressed. This makes halon a popular choice for computer labs, museums and libraries. It is also an effective choice for protecting electrical equipment, and is often used in boats and airplanes. Halon gas may be used in an overhead fire suppression systems or in a chemical fire extinguisher.

**Polyethylene** (abbreviated **PE**) or polythene (IUPAC name polyethylene or poly(methylene)) is the most common plastic.

**Yeast**s are eukaryotic microorganisms classified in the kingdom Fungi, with 1,500 species currently described (estimated to be 1% of all fungal species). Yeasts are unicellular, although some species with yeast forms may become multicellular through the formation of strings of connected budding cells known as pseudohyphae, or false hyphae, as seen in most molds.

**Nylon** is a generic designation for a family of synthetic polymers known generically as aliphatic polyamides, first produced on February 28, 1935, by Wallace Carothers at DuPont's research facility at the DuPont Experimental Station. Nylon is one of the most commonly used polymers. Key representatives are nylon-6,6; nylon-6; nylon-6,9;nylon-6,10; nylon-6,12; nylon-11; nylon-12 and nylon-4,6.

66. **Correct Answer is : (d) 2, 1, 4, 3**

<table>
<thead>
<tr>
<th>№</th>
<th>Name (birth–death)</th>
<th>Portrait</th>
<th>Elected</th>
<th>Took office</th>
<th>Left office</th>
<th>Vice President</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rajendra Prasad (1884–1963)</td>
<td><img src="image" alt="Portrait" /></td>
<td>1952</td>
<td>26 January 1950</td>
<td>12 May 1962</td>
<td>Sarvepalli Radhakrishnan</td>
</tr>
</tbody>
</table>
Prasad, from Bihar, was the first President of independent India. He was also a freedom fighter during the Indian independence movement. Prasad was the only president to serve two terms in office.

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Radhakrishnan was a prominent philosopher and writer and also held the position of vice chancellor of the Andhra University and Banaras Hindu University. He was also made a Knight of the Golden Army of Angels by Pope Paul VI. He received Bharat Ratna award in 1954 before becoming the President.

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Hussain was vice chancellor of the Aligarh Muslim University and a recipient of Padma Vibhushan and Bharat Ratna. He died in office.

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Giri was appointed as Acting President of India following the death of Hussain. He resigned in a few months to take part in the presidential elections.

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Hidayatullah served as the Chief Justice of India, and was a recipient of the Order of the British Empire. He served as Acting President of India until the election of Giri as the President of India.

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</thead>
<tbody>
<tr>
<td>4</td>
<td>Varahagiri Venkata Giri</td>
<td>1969</td>
<td>24 August</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
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<tr>
<td>Giri is the only person to have served as both an acting president and president of India. He was a recipient of the Bharat Ratna, and has functioned as Indian Minister of Labour and High Commissioner to Ceylon (Sri Lanka).</td>
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<td></td>
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<tr>
<td>Fakruddin Ali Ahmed (1905–1977)</td>
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<tr>
<td>Fakruddin Ali Ahmed served as a Minister before being elected as president. He died in 1977 before his term of office ended, and was the second Indian president to die in office.</td>
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<tr>
<td>Basappa Danappa Jatti * (1912–2002)</td>
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<tr>
<td>Jatti was the vice president of India during Ahmed's term of office, and was sworn in as Acting President of India upon Ahmed's death. He earlier functioned as the Chief Minister for the State of Mysore.</td>
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</table>

67. Correct Answer is : (c) Cricket

**Left-arm unorthodox spin**, or **chinaman**, is a type of **bowling** in the sport of **cricket**.

Left-arm unorthodox spin bowlers use a **wrist hand action** to spin the ball which turns from **off** to **leg** side of the cricket pitch. The direction of turn is the same as that of a traditional right-handed **off spin** bowler; however, the ball will usually turn more sharply due to the spin being imparted predominantly by the wrist. Some left-arm unorthodox bowlers bowl a leg spinner's "**googly**" (or "wrong'un"), which turns from right to left on the cricket pitch. The ball turns away from the batsman, as if the bowler were an **orthodox left-arm spinner**.

68. Correct Answer is : (a) Study of tissues

Histology is the study of the microscopic anatomy of cells and tissues of plants and animals. It is commonly performed by examining cells and tissues by sectioning and staining, followed by examination.

69. Correct Answer is : (d) All of the above

The integrated circuits offer a number of advantages over those made by interconnecting discrete components. These are summarized as follows
Extremely small size—thousands times smaller than discrete circuit. It is because of fabrication of various circuit elements in a single chip of semi-conductor material.

Very small weight owing to miniaturized circuit

Very low cost because of simultaneous production of hundreds of similar circuits on a small semiconductor wafer. Owing to mass production an IC costs as much as an individual transistor

More reliable because of elimination of soldered joints and need for fewer inter-connections

Low power consumption because of their smaller size

Easy replacement as it is more economical to replace them than to repair them

Increased operating speeds because of absence of parasitic capacitance effect

Close matching of components and temperature coefficients because of bulk production in batches

Improved functional performance as more complex circuits can be fabricated for achieving better characteristics

Greater ability of operating at extreme temperatures

Suitable for small signal operation because of no chance of stray electrical pickup as various components of an IC are located very close to each other on a silicon wafer

No component project above the chip surface in an IC

70. **Correct Answer is : (b) CPU cycle**

An instruction cycle (sometimes called fetch-and-execute cycle, fetch-decode-execute cycle, or FDX) is the basic operation cycle of a computer. It is the process by which a computer retrieves a program instruction from its memory, determines what actions the instruction requires, and carries out those actions. This cycle is repeated continuously by the central processing unit (CPU), from bootup to when the computer is shut down.

71. **Correct Answer is : (c) Akbar**

*Shri Ramcharitmanas* (Devanāgarī: श्रीरामचरितमानस), also spelt *Shri Ramcharitamanasa*, is an epic poem in Awadhi, composed by the 16th-century Indian poet Goswami Tulsidas (c.1532–1623). *Ramcharitmanas*literally means "lake of the deeds of Rama". Tulsidas compared the seven Kāndas (literally "books", cognate with cantos) of the epic to seven steps leading into the holy waters of a Himalayan lake (Mānasa, as in Lake Manasarover) which "which purifies the body and the soul at once". The core of the work is a poetic retelling of the events of the Sanskrit epic *Ramayana*, centered on the narrative of Rama, the crown prince of Ayodhya. The poem is also called *Tulsikrit Ramayan*(literally, The Ramayan composed by Tulsi or, loosely, The Ramayan of Tulsidas).

Tulsidas (sometimes simply referred to as Tulsi) began writing the scripture in Avadhupuri, Ayodhya in Vikram Samvat 1631 (1574 CE), during the reign of Akbar (1556-1605 CE). The exact date is stated within the poem as being the ninth day of the month of Chaitra, which is the birthday
of Ram, Ram Navami. A large portion of the poem was composed at Varanasi, where the poet spent most of his later life.

It is believed that the Mughal Emperor Jahangir knew about Tulsidas and that they met at least once. Jahangir pressed Tulsidas to perform a miracle. Tulsi refused saying: 'I know no miracles, I know only the name of Ram.' Annoyed at the answer, Jahangir imprisoned him. The legend narrates that a band of monkeys wreaked havoc in the prison and the emperor, realizing his mistake, had to release Tulsi.

The famous pandit Madhusudana Saraswati of Varanasi was a contemporary of Tulsidas. The two devotees discussed bhakti when they met.

72. Correct Answer is : (b) Temperate region

Temperate coniferous forest is a terrestrial biome found in temperate regions of the world with warm summers and cool winters and adequate rainfall to sustain a forest. In most temperate coniferous forests, evergreen conifers predominate, while some are a mix of conifers and broadleaf evergreen trees and/or broadleaf deciduous trees.

73. Correct Answer is : (d) 1, 2 and 3

NFL manufactures and markets three types of Bio-Fertilizers, Rhizobium, Phosphate Solubilising Bacteria (PSB) and Azetobactor.

A. Nitrogen Bio-Fertilizer
1. Rhizobium (Symbiotic)

2. Azetobactor (Non-Symbiotic)

B) Phosphorous Bio-fertilizer
1. P.S.B. Phosphate solubilising Bacteria

74. Correct Answer is : (c) Ageing

According to Clinker theory, each cell accumulates poisonous substances in its cytoplasm as a result of its metabolic activities. These substances reduce the life of the cell. It is supported by the fact that large quantities of
pigments containing proteins and enzymes are accumulated in older people. It is true for nerve and muscle cells which do not undergo mitosis.

75. **Correct Answer is : (c) Mussoorie**

**Winter line — a rare phenomenon**

From mid-October till January, with the setting sun, the western horizon is replete with myriad shades of yellow, red, orange and mauve. This is known as the winter line. The phenomenon is unique to Mussoorie and a certain place in Switzerland only.

The 'Queen of Hills’ is known for its picturesque landscape, waterfalls, gardens etc, however, a majority of tourists and even localites are oblivious to the fact that Mussoorie has another aspect to her beauty - “The winter line”.

76. **Correct Answer is : (a) Hydra**

**Bloodless**

animals as a general rule are inferior in point of size to blooded animals; though, by the way, there are found in the sea some few bloodless creatures of abnormal size, as in the case of certain molluscs. And of these bloodless genera, those are the largest that dwell in milder climates, and those that inhabit the sea are larger than those living on dry land or in fresh water.

*Hydra* is a genus of small, simple, fresh-water animals that possess radial symmetry. *Hydra* are predatory animals belonging to the phylum *Cnidaria* and the class *Hydrozoa*. They can be found in most unpolluted fresh-water ponds, lakes, and streams in the temperate and tropical regions and can be found by gently sweeping a collecting net through weedy areas. They are multicellular organisms which are usually a few millimetres long and are best studied with a microscope. Biologists are especially interested in *Hydra* due to their regenerative ability; and that they appear not to age or to die of old age.

77. **Correct Answer is : (c) Lahore**

The *Tomb of Jahangir* is a mausoleum built for Jahangir, who ruled the Mughal Empire from 1605 to 1627. The mausoleum is located in *Shahdara Bagh* in *Lahore*, Punjab.

Jahangir died at Rajauri in 1627 after he returned to Lahore.

78. **Correct Answer is : (d) U-238**

*Uranium-238* (*238U or U-238*) is the most common isotope of uranium found in nature. It is not fissile, but is a fertile material: it can capture a slow neutron and after two beta decays become fissile *plutonium-239*. 
Nuclear energy production at present is based on natural uranium that contains only 0.7 per cent of the fissile isotope, U-235. The rest is U-238 that absorbs neutrons and ultimately yields Pu-239 on reprocessing. The spent fuel taken out of the reactors is then recycled to extract U-235 which does not burn as well as P-239 bred from U-238. The seventeen pressurised reactors presently operating in India and the four planned in the near future use natural uranium as fuel. Till about a decade ago, sufficient uranium to fuel reactors was available through imports and from mines in India. As a result, the use of thorium in the nuclear programme was not taken seriously, but now the country is facing a severe shortage of uranium with, only 80,000 tonnes of uranium ore having been located in India which is capable of generating only 10,000 MWe of electricity. Besides, concerns regarding nuclear proliferation posed by the Nuclear Suppliers' Group (NSG) have made it difficult to import this element.

The nuclear power programme of India, in its original form was based on the use of extensive reserves of thorium in the country. Thorium is about three times more abundant than uranium on the earth and its largest deposits in the world are located in the beach sands of Kerala, Tamil Nadu and Orissa. Estimates indicate that it is possible to extract at least 32,000 tonnes of thorium from the sands of Kerala alone, at a fraction of the cost of mining uranium.

79. Correct Answer is : (b) Rishikesh

Vashistha Cave (Vashishta Gufa):

Vashistha cave is cave (Guha) of great sage Vashistha. Vashistha was one of the Saptarishis (Seven Great Sages) in ancient India. Vashistha was manas putra of Lord Brahma & Guru of Lord Ram. This cave is located 25 kms far from Rishikesh & it is believed that Vashistha Rishi meditated here. This cave is most beautiful place of meditation.

Sage Vashistha had possession of the divine cow Nandini. Nandini was daughter of Kamdhenu. Nandini has power to produce food instantly for lots of people, Arundhuti was wife of sage Vashistha. Mitra Varuna & Urvasi was parents of Vashistha. Vashistha was one of the authors of ancient Indian scripture Rigveda. Vashistha was also Guru of Lord Ram. Vashistha was Guru (Teacher) of Lord Ram & he was also Rajpurohit (Chief priest) of Ikshwaku family (Surya Vansh).

80. Correct Answer is : (a) K. M. Panikkar
Geographical Factors in Indian History

Kavalam Madhava Panikkar, popularly known as Sardar K. M. Panikkar (June 3, 1895 – December 10, 1963), was an Indian scholar, journalist, historian, administrator and diplomat.

81. Correct Answer is : (a) Todi

{Raga Todi belongs to Todi Thaat. It is a morning Raga, and uses all seven notes in the ascent and descent. Rishabh, Gandhar and Dhaivat are komal (flat), Madhyam is Tivra while Nishad is Shuddha. The derivative ragas out of this structure are grouped under the broad head of Todi Thaat.}

82. Correct Answer is : (b) Swamy Dayanand Saraswati

The Life of Swami Dayanand Saraswati (1824–1883)

A number of books on the life and teaching of Swami Dayanand Saraswati, the founder of Arya Samaj, are available, most significant of which are Satyarth Prakash (Light of Truth)4 authored by him, and those authored by others are Autobiography of Dayanand Saraswati,5 Rishi Dayanand Saraswati6, Swami Dayanand,7 Swami Dayanand Saraswati through Non-Arya Samajist Eyes,8 and Arya Samaj and the Freedom Movement.9 Out of all these revealing publications on him, the first one Satyarth Prakash is a must for any one seriously interested in understanding the life and work of this great personality who has been called the ‘Martin Luther of Hinduism.’

Dayanand was born in 1824 at Tankara village in the then Morvi State in Gujarat-Kathiawad, a region associated with such immortal names as Lord Krishna and Mahatma Gandhi. His parents were Karsanji Lalji Tiwari and Amritben or Amboobai belonging to the Vidyalaya Brahmin caste. His childhood name was Mool Shankar. He was born in Gand-Mool Nakashatra which is considered to be an inauspicious time of birth. Later when he became a Brahmachari, his name was changed to Shuddh Chaitanya. When he turned a sanyasi he became Swami Dayanand Saraswati.
83. Correct Answer is: (c) Maithili Sharan Gupt

Bharat-Bharati is a classic Maha-Kavya (epic) written by Rashtra Kavi Methili Sharan Gupt. It traces the rise and fall of Indian civilization and gives prescription for regaining the heights that the civilization had once achieved in the past. The book has three chapters on the past, present and future of India. There are 703 verses in all.

84. Correct Answer is: (d) Telangana

The Bhooman Movement or Land Gift Movement was a voluntary land reform movement in India, started by Acharya Vinoba Bhave in 1951 at Pochampally village in Telangana which is now known as Bhooman Pochampally.

85. Correct Answer is: (b) 1 and 2

In USDA soil taxonomy, entisols are defined as soils that do not show any profile development other than an A horizon. An entisol has no diagnostic horizons, and most are basically unaltered from their parent material, which can be unconsolidated sediment or rock. Entisols are the second most abundant soil order (after inceptisols), occupying about 16% of the global ice-free land area.

In Australia, most entisols are known as rudosols or tenosols, whilst arents are known as anthroposols. In the FAO soil classification, because of the diversity of their properties, suborders of entisols form individual soil orders (e.g. fluvisols, lithosols).

86. Correct Answer is: (b) All the Members of the Security Council

CHAPTER VII: ACTION WITH RESPECT TO THREATS TO THE PEACE, BREACHES OF THE PEACE, AND ACTS OF AGGRESSION

Article 39

The Security Council shall determine the existence of any threat to the peace, breach of the peace, or act of aggression and shall make recommendations, or decide what measures shall be taken in accordance with Articles 41 and 42, to maintain or restore international peace and security.

Article 40

In order to prevent an aggravation of the situation, the Security Council may, before making the recommendations or deciding upon the measures provided for in Article 39, call upon the parties concerned to comply with such provisional measures as it deems necessary or desirable. Such provisional measures shall be without prejudice to the rights, claims, or position of the parties concerned. The Security Council shall duly take account of failure to comply with such provisional measures.

87. Correct Answer is: (d) 1, 2 and 3

Plants are propagated by two methods: 1. Sexual propagation or seed propagation. 2. Asexual or vegetative propagation by vegetative plant parts like root, stem, leaf etc.

Advantages of Sexual Propagation:

1) This is very simple and easy method of propagation. 2) Some species of trees, ornamental annuals and vegetables which cannot be propagated by asexual means
should be propagated by this method. E.g. Papaya, Marigold, Tomato etc. 3) Hybrid seeds can be developed by this method. 4) New variety of crops are developed only by sexual method of propagation. 5) Root stocks for budding and grafting can be raised by this method. 6) The plants propagated by this method are long lived and are resistant to water stress. 7) Transmission of viruses can be prevented by sexual method. 8) Seed can be transported and stored for longer time for propagation.

**Disadvantages of sexual propagation:**
- 1) Characteristics of seedling propagated by this method are not genetically true to type to that of their mother plant. 2) Plants propagated by sexual method requires long period for fruiting. 3) Plants grow very high, so they are difficult for intercultural practices like spraying, harvesting etc. 4) The plants which have no seeds cannot be propagated by this method. E.g. Banana, fig, Jasmine, Rose etc.

**Asexual propagation**

It is also called as vegetative propagation as it involves only vegetative parts without any sexual plant parts. The plant parts like leaf, stem, root and other root producing plant organs are used. The new individual propagated through this method is true to type. The commercially important fruit crops are propagated by vegetative method.

88. Correct Answer is: (c) Both 1 and 2

The postal and telecom sectors had a slow and uneasy start in India. In 1850, the first experimental electric telegraph line was started between Kolkata and Diamond Harbor. In 1851, it was opened for the British East India Company.

India was one of the first in Asia to recognize the effectiveness of the Export Processing Zone (EPZ) model in promoting exports, with Asia’s first EPZ set up in Kandla in 1965. With a view to overcome the shortcomings experienced on account of the multiplicity of controls and clearances; absence of world-class infrastructure, and an unstable fiscal regime and with a view to attract larger foreign investments in India, the Special Economic Zones (SEZs) Policy was announced in April 2000.

89. Correct Answer is: (d) Article 145

The Constitution of India under [Constitution of India/Part V#Article 145 (Rules of Court, etc.)/Article 145] empowers the Supreme Court to frame its own rules for regulating the practice and procedure of the Court as and when required (with the approval of the President). Accordingly, “Supreme Court Rules, 1950” were framed. They were replaced by the Supreme Court Rules, 1966. In 2013, the 1966 rules were replaced by the presently effective Supreme Court of India Rules, 2013.

90. Correct Answer is: (d) Kerala – Ernakulam
91. **Correct Answer is : (b) Only 1**

**Information Exclusions**

The following is exempt from disclosure under section 8 of the Act:-

- Information, disclosure of which would prejudicially affect the sovereignty and integrity of India, the security, "strategic, scientific or economic" interests of the State, relation with foreign State or lead to incitement of an offense;
- Information which has been expressly forbidden to be published by any court of law or tribunal or the disclosure of which may constitute contempt of court;
- Information, the disclosure of which would cause a breach of privilege of Parliament or the State Legislature;
- Information including commercial confidence, trade secrets or intellectual property, the disclosure of which would harm the competitive position of a third party, unless the competent authority is satisfied that larger public interest warrants the disclosure of such information;
- Information available to a person in his fiduciary relationship, unless the competent authority is satisfied that the larger public interest warrants the disclosure of such information;
- Information received in confidence from foreign Government;
- Information, the disclosure of which would endanger the life or physical safety of any person or identify the source of information or assistance given in confidence for law enforcement or security purposes;
- Information which would impede the process of investigation or apprehension or prosecution of offenders;
- Cabinet papers including records of deliberations of the Council of Ministers, Secretaries and other officers;
- Information which relates to personal information the disclosure of which has no relationship to any public activity or interest, or which would cause unwarranted invasion of the privacy of the individual (but it is also provided that the information which cannot be denied to the Parliament or a State Legislature shall not be denied by this exemption);
- Notwithstanding any of the exemptions listed above, a public authority may allow access to information, if public interest in disclosure outweighs the harm to the protected interests. However, this does not apply to disclosure of "trade or commercial secrets protected by law ".

92. **Correct Answer is : (c) The Advocates Act, 1961**

The **Bar Council of India** is a statutory body established under the Advocates Act 1961 that regulates the legal practice and legal education in India. Its members are elected from amongst the lawyers in India.
and as such represents the Indian bar. It prescribes standards of professional conduct, etiquettes and exercises disciplinary jurisdiction over the bar. It also sets standards for legal education and grants recognition to Universities whose degree in law will serve as a qualification for students to enroll themselves as advocates upon graduation.

93. Correct Answer is : (c) The S. Sunder Committee

Union Road Transport and Highways Minister C.P. Joshi may reverse yet another decision of his predecessor. This time he is training his guns on the S. Sundar Committee recommendations on revamping the Motor Vehicles Act, 1988, following a protest by officers. Dr. Joshi's predecessor, Kamal Nath, extended the scope of the committee and set himself on course to incorporate most of its suggestions in a proposed new law. But voices of resentment are being heard within the Ministry against the recommendation on overhauling the Act. Minister’s assurance Dr. Joshi has assured officers.

94. Correct Answer is : (b) exploit the advantage of specialization

Why do countries trade? Shouldn't a strong country such as the United States produce all of the computers, television sets, automobiles, cameras, and VCRs it wants rather than import such products from Japan? Why do the Japanese and other countries buy wheat, corn, chemical products, aircraft, manufactured goods, and informational services from the United States?

Because countries have different natural, human, and capital resources and different ways of combining these resources, they are not equally efficient at producing the goods and services that their residents demand. The decision to produce any good or service has an opportunity cost, which is the amount of another good or service that might otherwise have been produced. Given a choice of producing one good or another, it is more efficient to produce the good with the lower opportunity cost, using the increased production of that good to trade for the good with the higher opportunity cost.

95. Correct Answer is : (b) discourage imports to country A

Currency depreciation is the loss of value of a country's currency with respect to one or more foreign reference currencies, typically in a floating exchange rate system. It is most often used for the unofficial increase of the exchange rate due to market forces, though sometimes it appears interchangeably with devaluation. Its opposite, an increase of value of a currency, is currency appreciation.

The depreciation of a country's currency refers to a decrease in the value of that country's currency. For instance, if the Canadian dollar depreciates relative to the euro, the exchange rate (the Canadian dollar price of euros) rises: it takes more Canadian dollars to purchase 1 euro (1 EUR=1.5 CAD → 1 EUR=1.7 CAD).

When the Canadian dollar depreciates relative to the euro, the Canadian dollar becomes more competitive because the price of Canadian goods when exchanged to euro will be cheaper leading to a larger Canadian export. On the other hand, European countries that denominates its goods and services in euros will have lost competitiveness to the Canadian dollar. The price of European products denominated in euros will thus become more expensive in Canada.

The appreciation of a country's currency refers to an increase in the value of that country's currency. Continuing with the CAD/EUR example, if the Canadian dollar appreciates relative to the euro, the exchange rate falls: it takes fewer Canadian dollars to purchase 1 euro (1 EUR=1.5 CAD → 1 EUR=1.4 CAD). When the Canadian dollar appreciates relative to the Euro, the Canadian dollar becomes less
competitive. This will lead to larger imports of European goods and services, and lower exports of Canadian goods and services.

96. Correct Answer is: (c) the percentage of a nation's imports and exports to its GDP

Rising Importance of International Trade to the United States

After remaining at between 4 and 5 percent during most of the 1960s, merchandise imports and exports as percentages of gross domestic product (GDP) rose sharply in the United States during the 1970s. Figure 1.3 shows that imports as a percentage of U.S. GDP increased from about 5 percent during the late 1960s to a high of 17 percent in 2007. Exports increased from about 5 percent in the late 1960s to a high of 11.9 percent in 2007. Thus international trade has become more important to the United States (i.e., the United States has become more interdependent with the world economy) during the past four decades. Figure 1.3 also shows that the share of imports in GDP exceeded the share of exports since 1976, and the excess widened sharply during the first half of the 1980s and then again from 1996. This led to huge U.S. trade deficits and persistent demands for protection of domestic markets and jobs against foreign competition by American industry and labor.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPORTS</td>
<td>15.0</td>
<td>13.8</td>
<td>13.7</td>
<td>14.1</td>
<td>15.4</td>
<td>16.3</td>
<td>16.9</td>
<td>17.0</td>
</tr>
<tr>
<td>EXPORTS</td>
<td>11.2</td>
<td>10.2</td>
<td>9.6</td>
<td>9.5</td>
<td>10.1</td>
<td>10.5</td>
<td>11.1</td>
<td>11.9</td>
</tr>
</tbody>
</table>

Is international trade becoming more important to the United States?

The share of merchandise imports and exports in U.S. GDP increased sharply since the early 1970s. Thus, international trade has become increasingly important to the United States. During the first half of the 1980s, and again from 1996, U.S. imports greatly exceeded U.S. exports and resulted in huge trade deficits.


97. Correct Answer is: (a) 1, 2 and 3
OBJECTIVES/NEEDS/ADVANTAGES OF TRADE BARRIERS:

(1) To Protect Home Industries From Foreign Competition:

Trade barriers are imposed in order to give protection to home industries by avoiding competition from other countries. Such competition is harmful and may bring home industries in difficulties.

Government has to give support and protection to home industries and for such protection, imports must be discouraged or stopped. This is possible through the creation of different trade barriers and restricting imports.

(2) To Promote New Industries And R & D Activities:

The quality of production is also likely to improve through research and development (R&D) activities. Such R & D activities can be undertaken at the company's level, at the industry level and even at the national level. It is a type of industrial research activity conducted in the research laboratories.

R & D is a costly and time-consuming activity and also requires the services of scientists/exports. Quality improvement, cost reduction, introduction of new product, modification in the existing products and making existing products more useful and agreeable to consumers are some benefits of R & D activities.

(3) To Conserve Foreign Exchange Reserves:

A country has to pay for imports through its foreign exchange reserves. Large scale imports mean heavy pressure on available reserve of foreign currencies. Such policies will ultimately lead to foreign exchange crisis. On the other hand, foreign exchange will be saved through import substitution and import restriction.

(4) To Maintain Favourable Balance Of Trade & Payments Position:

Large scale imports lead to deficit in the balance of trade and balance of payments. Such deficit is undesirable and puts heavy strain on the available foreign exchange. For removing such deficit, imports should be restricted and exports should be promoted. Trade barriers are useful for reducing imports. They are advocated for reducing deficit in the balance of trade and payment position.

The term Balance Of Trade suggests the difference between exports and imports which may be positive/negative. It is positive when exports made are more than the imports. It is treated as negative when exports are less as compared to
imports within a specific period normally one year. Poor and developing countries normally have to face the problems of negative balance of trade.

(5) To Protect National Economy From Dumping:

Foreign countries may try to capture domestic market by offering their goods at very low prices. The purpose is to sell surplus production. Such techniques of dumping is profitable to reach countries but harms poor countries. to avoid such situation (anti-dumping duties) are imposed. As a result, foreign goods become costly and the adverse effects on home markets is avoided.

(6) To Curb Conspicuous Consumption:

Domestic consumers may like to purchase costly imported goods for prestige purpose. This tenancy is a socially undesirable and can be checked by restricting the imports of luxury items by making them too costly and there by restricting their sale within the country.

(7) To mobilise Additional Revenue through Heavy Duties on Imports:

Trade barriers in the form of revenue tariffs are introduced. Such policy restricts imports and in addition gives substantial revenue to the government for various purposes. Here, trade barriers is created for collecting revenue from foreign suppliers. It is used as tool for collecting revenue.

(8) To make the country strong and self sufficient:

Trade barriers are useful for making the country strong & the self sufficient. Import restriction lead to production of new commodities within the country through import substitution. Dependence on other countries is reduced considerably. A domestic industry is made competitive in the long run.

(9) To counteract trade barriers imposed by other countries:

Sometime, trade barriers are introduced against the countries which have already imposed such restrictions. For example, country A may ban imports from country B. country B will adopt similar policy as a protest to the policy adopted by country A.
(10) To encourage the use of domestic production:

Trade barriers are introduced in order to encourage people to use goods manufactured within the country. People will have no choice but to purchase domestic goods when imports are stopped or restricted considerably. Thus, trade barriers widen the scope of marketing to home industries and give them an opportunity to grow.

98. Correct Answer is: (d) 1, 2 and 3

Among the various functions of the WTO, these are regarded by analysts as the most important:

- It oversees the implementation, administration and operation of the covered agreements.
- It provides a forum for negotiations and for settling disputes.

Additionally, it is the WTO's duty to review and propagate the national trade policies, and to ensure the coherence and transparency of trade policies through surveillance in global economic policymaking. Another priority of the WTO is the assistance of developing, least-developed and low-income countries in transition to adjust to WTO rules and disciplines through technical cooperation and training.

(i) The WTO shall facilitate the implementation, administration and operation and further the objectives of this Agreement and of the Multilateral Trade Agreements, and shall also provide the framework for the implementation, administration and operation of the multilateral Trade Agreements.

(ii) The WTO shall provide the forum for negotiations among its members concerning their multilateral trade relations in matters dealt with under the Agreement in the Annexes to this Agreement.

(iii) The WTO shall administer the Understanding on Rules and Procedures Governing the Settlement of Disputes.


(v) With a view to achieving greater coherence in global economic policy making, the WTO shall cooperate, as appropriate, with the international Monetary Fund (IMF) and with the International Bank for Reconstruction and Development (IBRD) and its affiliated agencies.

99. Correct Answer is: (c) Ministry of Environment, Forests and Climate Change

The Cartagena Protocol (CP) was negotiated under the Convention of Biodiversity (CBD). The CBD was adopted in 1992 at the United Nations Conference for Environment and Development. The item of biodiversity is with the Ministry of Environment and Forests.

100. Correct Answer is: (c) Fiscal deficit

The fiscal deficit is the difference between the government’s total expenditure and its total receipts (excluding borrowing). The elements of the fiscal deficit are (a) the revenue deficit, which is the difference between the government’s current (or revenue) expenditure and total current receipts (that is, excluding borrowing) and (b) capital expenditure. The fiscal deficit can be financed by borrowing from the Reserve Bank of India (which is also called deficit financing or money creation) and market borrowing (from the money market, that is mainly from banks).

Budget deficit: A financial situation that occurs when an entity has more money going out than coming in. The term
"budget deficit" is most commonly used to refer to government spending rather than business or individual spending. When it refers to federal government spending, a budget deficit is also known as the "national debt." The opposite of a budget deficit is a budget surplus, and when inflows are equal to outflows, the budget is said to be balanced.

What is Budget Deficit and Fiscal Deficit?

Budget deficit = Total Receipt - Total Expenditure.

Fiscal Deficit:

a) the difference between total expenditure and total revenue receipts and capital receipts but excluding borrowings and other liabilities, or

b) it is the Sum of Budget deficit plus Borrowings and other Liabilities.

Budget deficit is the difference between total receipts and total expenditure. If borrowings and other liabilities are added to budget deficit, we get Fiscal deficits. Since budget does not show the true pictures of government liabilities and hence a true picture of the financial health of the economy, the practice of showing budget deficit is not in use, Budgets now show fiscal deficits to show the overall shortfalls in the public revenues, Over the years fiscal deficits have grown rapidly and have become the cause of concern. To meet the challenge, many reforms have been carried out but still the problem of high fiscal deficit remains.

Example showing Calculation of Budget Deficit and Fiscal Deficit.

In Crores.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Revenue Receipts</td>
<td>3,50,200</td>
</tr>
<tr>
<td>2. Capital Receipts of which</td>
<td></td>
</tr>
<tr>
<td>a) Loan recoveries + other receipts</td>
<td>12,000</td>
</tr>
<tr>
<td>b) Borrowings &amp; Other liabilities</td>
<td>1,51,144</td>
</tr>
<tr>
<td>3. Total Receipts (1 +2)</td>
<td>5,14,344</td>
</tr>
<tr>
<td>4. Revenue Expenditure</td>
<td>1,14,982</td>
</tr>
<tr>
<td>5. Capital Expenditure</td>
<td>67,832</td>
</tr>
<tr>
<td>6. Total Expenditure (4+5)</td>
<td>5,14,344</td>
</tr>
<tr>
<td>7. Budgetary Deficit (3-6)</td>
<td>NIL</td>
</tr>
<tr>
<td>8. Fiscal Deficit [1+2(a) - 6 = 7 + 2 (b)]</td>
<td>1,50,144</td>
</tr>
</tbody>
</table>