

**Detailed Solution Model Test 11**  
**General Study Paper I**

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

Foreign Intelligence Service (or SVR) is Russia's primary external intelligence agency. The SVR is the successor of First Chief Directorate (FCD) of the KGB since December 1991. The former chief of the KGB First Chief Directorate, Yevgeni Primakov, was appointed head of the SVR. The headquarters of SVR are still in Yasenevo, Moscow

The Ministry of State Security (MSS) Pinyin: Guojia Anquan Bu, or Guoanbu) is the security agency of the People's Republic of China. It is also probably the Chinese government's largest and most active foreign intelligence agency, though it is also involved in domestic security matters. Because of its role in collecting domestic intelligence and in monitoring domestic political dissidents, it has sometimes been termed a secret police.

**THE SECRET INTELLIGENCE SERVICE** The Secret Intelligence Service (SIS), often known as MI6, collects Britain's foreign intelligence. The Service is based at Vauxhall Cross in London. Its Chief is Sir John Scarlett. SIS provides HMG with a global covert capability to promote and defend the national security and economic well-being of the United Kingdom.

Mossad is headquartered in Tel Aviv. The staff of Mossad was estimated during the late 1980s to number between 1,500 to 2,000 personnel, with more recent estimates placing the staff at an estimated 1,200 personnel. The identity of the director of Mossad was traditionally a state secret, or at least not widely publicized, until in March 1996 the Government announced the appointment of Major General Danny Yatom as the replacement for Mossad Director Shabtai Shavit, who resigned in early 1996. Danny Yatom (1996-1998) was succeeded by Ephraim Halevy (1998-2002). In September 2002, Meir Dagan was designated the new Mossad director.

Formerly known as the Central Institute for Coordination and the Central Institute for Intelligence and Security, Mossad was formed on 01 April 1951. Mossad was established by then Prime Minister David Ben Gurion.

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

The Bengal Renaissance refers to a socio-cultural and religious reform movement during the nineteenth and early twentieth century in undivided India's Bengal province, though the impact of it spread in the whole of India. The Bengal Renaissance is said to have begun with Raja Ram Mohan Roy (1775–1833) and continued until the death of Rabindranath Tagore in 1941. The Renaissance was a revival of the positives of India's past and appreciation of the impact of the Modern West, as it had emerged since the Fifteenth-century European Renaissance. Thus, the Bengal Renaissance blended

together the teachings of the Upanishad in order to create public opinion against Hindu superstitions including Sati, infanticide, polygamy, child marriage, caste-division, inter-caste hatred, Dowry, untouchability etc. and the efforts of the Christian Missionaries and the British Colonial Government who introduced Western education, politics and law to administer all those who indulged in superstitions and caste-based Hindu medievalism.

**3. Correct Answer is : (d) Stealth frigate**

INS Satpura, India's second Shivalik class indigenous stealth frigate with versatile control system with signature management and missile capabilities will soon be commissioned in Mumbai. Conceived and designed by Indian Naval Team, it is expected to considerably heighten Indian Navy's strike capabilities.

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

There has been no uniform measure of poverty in India. The Planning Commission of India has accepted the Tendulkar Committee report which says that 37% of people in India live below the poverty line(BPL).

The Arjun Sengupta Report (from National Commission for Enterprises in the Unorganised Sector), based on data between the period 1993-94 and 2004-05, states that 77% of Indians live on less than 20 a day (about \$0.50 per day). The N.C. Saxena Committee report states, on account of calorific intake apart from nominal income, that 50% of Indians live below the poverty line

**5. Correct Answer is : (b) 1 and 2**

The Multidimensional Poverty Index (MPI) was developed in 2010 by Oxford Poverty & Human Development Initiative and the United Nations Development Programme and uses different factors to determine poverty beyond income-based lists. It replaced the previous Human Poverty Index.

The MPI is an index of acute multidimensional poverty. It shows the number of people who are multidimensionally poor (suffering deprivations in 33.33% of weighted indicators) and the number of deprivations with which poor households typically contend. It reflects deprivations in very rudimentary services and core human functioning for people across 104 countries. Although deeply constrained by data limitations, MPI reveals a different pattern of poverty than income poverty, as it illuminates a different set of deprivations.

**6. Correct Answer is : (c) 1 and 2**

The Human Development Index (HDI) is a composite statistic of life expectancy, education, and income indices to rank countries into four tiers of human development. It was created by economist Mahbub ul Haq, followed by economist Amartya Sen in 1990, and published by the United Nations Development Programme.

The origins of the HDI are found in the annual Human Development Reports of the United Nations Development Programme (UNDP). These were devised and launched by Pakistani economist Mahbub ul Haq in 1990 and had the explicit purpose "to shift the focus of development economics from national income accounting to people centered policies". To produce the Human Development Reports, Mahbub ul Haq brought together a group of well-known development economists including: Paul Streeten, Frances Stewart, Gustav Ranis, Keith Griffin, Sudhir Anand and Meghnad Desai. But it was Nobel laureate Amartya Sen's work on capabilities and functionings that provided the underlying conceptual framework. Haq was sure that a simple composite measure of human development was needed in order to convince the public, academics, and policy-makers that they can and should evaluate development not only by economic advances but also improvements in human well-being. Sen initially opposed this idea, but he went on to help Haq develop the Index. Sen was worried that it was difficult to capture the full complexity of human capabilities in a single index but Haq persuaded him that only a single number would shift the attention of policy-makers from concentration on economic to human well-being.

**7. Correct Answer is : (b) 1, 2 and 3**

The first bank of limited liability managed by Indians was Oudh Commercial Bank founded in 1881. Subsequently, Punjab National Bank was established in 1894. Swadeshi movement, which began in 1906, encouraged the formation of a number of commercial banks. Banking crisis during 1913 -1917 and failure of 588 banks in various parts of the country during the decade ended 1949 underlined the need for regulating and controlling commercial banks. The Banking Companies Act was passed in February 1949, which was subsequently amended to read as Banking Regulation Act, 1949. This Act provided the legal framework for regulation of the banking system in India.

The largest bank - Imperial Bank of India - was nationalised in 1955 and renamed as State Bank of India, followed by formation of its 7 Associate Banks in 1959. With a view to bringing commercial banks into the mainstream of economic development with definite social obligations and objectives, the Government of India issued an ordinance on 19 July 1969 acquiring ownership and control of 14 major banks in the country. Six more commercial banks were nationalised from 15 April 1980.

**8. Correct Answer is : (b) NABARD**

Self Help Groups (SHGs)

The SHG-Bank Linkage Programme was started in the year 1992 as a flagship programme by NABARD and ably supported by RBI through policy support. The programme envisages organization of the rural poor into Self-Help Groups (SHGs) building their capacities to manage their own finances and then negotiating bank credit on commercial terms. The poor are encouraged to voluntarily come together to

save small thrift regularly and extend micro-loans among themselves. Once the group attains required maturity of handling larger resources, the bank credit follows.

**9. Correct Answer is : (b) Ministry of Human Resource Development**

**MID-DAY MEAL SCHEME**

The Mid-day Meal Scheme was launched and implemented by the Ministry of Human Resource Development with a view to enhancing enrolment, retention and attendance and simultaneously improving nutritional levels among children with effect from 15 August 1995 for the benefit of students in primary schools, initially in 2408 blocks in the country.

**10. Correct Answer is : (c) 3 months**

Preventive Detention, as the name suggests is done “before the act”. The authorities may resort to such action when they feel that someone might commit an offence and hence, by detaining the person, they seek to prevent him from committing the offence. The Constitution enables enactment of law providing for Preventive Detention on the following grounds:

- i) Security of state;
- ii) Maintenance of public order;
- iii) Maintenance of essential services, or of essential supplies;
- iv) Matters related to defence, foreign affairs or security of India. The second part of

Article 22 of the Constitution provides some protection to persons under preventive detention. Under Article 22, a person under preventive detention has following rights:

- i) The maximum period of detention can be only three months. Beyond this, detention can be continued only on report of an Advisory Board;
  - ii) The detainee must be informed of the grounds of his arrest, as soon as possible, except when it is considered that doing so would be against public interest;
  - iii) The detainee must be given an opportunity to argue against his detention at the earliest.
- Besides, the general protection available to any detainee under Article 22 is also available to detainees under preventive detention. It mainly prescribes that:
- i) The arrested person must be produced before a magistrate within twenty four hours of his arrest, excluding the time taken in travel. Beyond this time, no person can be kept in custody without the authority of a magistrate; neither shall the period of custody exceed that authorized by the magistrate; The Advisory Board to extend the period of preventive detention beyond three months is to be headed by a sitting judge of the appropriate High Court and should have at least two other members, who are either sitting or retired High Court Judges. The time period of three months can be exceeded without the report of the Advisory Board in specific cases, where the Parliament has enacted a law specifying the period of detention. For example, in 2009 the Unlawful Activities Prevention Act (UAPA) 1976 was amended to increase the maximum permissible period for preventive detention (for arrests made under the

provisions of the UAPA) from 90 days to 180 days.

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

**INTERNATIONAL GRAINS COUNCIL (IGC)**

India is a member of the International Grains Council (IGC) which was previously known as International Wheat Council up to 1995 and is an intergovernmental forum of exporting and importing countries for cooperation in wheat and coarse grain matters. It administers the Grains Trade Convention 1995. India being a member of the International Grains Council, this Department pays the annual membership contribution to International Grains Council.

**12. Correct Answer is : (a) Only 1 is correct**

Sarat Mela is an annual fair which is held in late January every year for seven days to showcase the different lifetimes of Sarat Chandra. The fair is solely dedicated to Sarat Chandra and his works. Sarat Mela was started in 1972. Complete with countless stalls of handicrafts and local products, giant wheels, merry-go-rounds, stalls of jalebi, papad, toys, utensils, etc. Cultural programs mostly held by local talents, debate and singing competition is also held. Students display their handicrafts as do amateur and professional gardeners. They also display unique like over-sized vegetables and plants, series of terracotta relief plaques depicting the various phases of Sarat Chandra's life like his childhood, his marriage, his homeopathic clinic for the poor, his last journey to Kolkata's Park Nursing Home in a palanquin and so on which catch the eye. Also such clay "illustrations" of Sarat Chandra's works like Mahesh are installed. The fair ends late at night with Chhau dance and a fireworks display.

Sarat Chandra Chattopadhyay (15 September 1876 – 16 January 1938) was a Bengali novelist and short story writer of early 20th century.

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

The government has hiked the fair and remunerative price (FRP) of sugarcane by 4.2 per cent at Rs 145 per quintal for the 2011-12 season, starting October.

The FRP of sugarcane for 2010-11 season was Rs 139.12 per quintal. Sugar season runs from October to September.

FRP is the minimum price that sugarcane farmers are legally guaranteed. However, the sugar mills are free to offer any price above the FRP.

From the 2009-10 season, the Centre has decided to fix FRP as the price to be paid by the sugar mills instead of the Statutory Minimum Price (SMP) earlier.

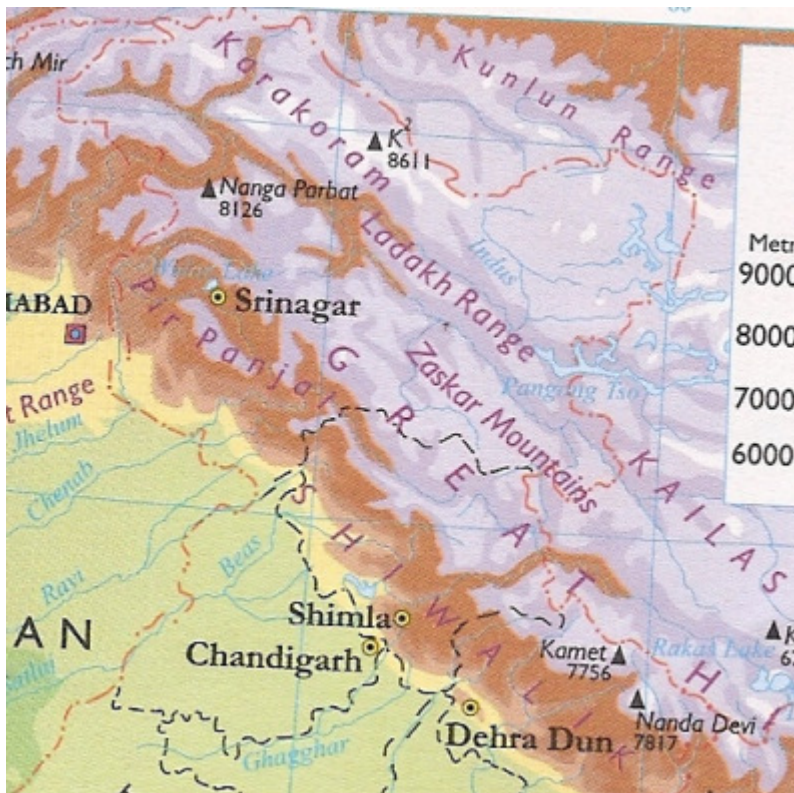
FRP is linked to a basic recovery rate of 9.5 per cent, subject to a premium of Rs 1.46 for every 0.1 percentage point increase in recovery above 9.5 per cent. Recovery rate is the sugar produced from the crushed cane.

The FRP is fixed after taking into consideration the margins for sugarcane farmers on account of risk as well as profit on the cost of production of sugarcane, including the cost of transportation.

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

Oldest microbe fossils found in Australia The fossilised remains of microbes that lived beside the sea in the earliest chapter of life on Earth have been discovered in a slab of rock in Western Australia. These fossils date to 3.4bn years ago, making them strong candidates to be the oldest microbes found.

15. **Correct Answer is : (b) 1-Kunlun Range, 2-Karakoram, 3-Ladakh Range, 4-Zaskar mountains**



16. **Correct Answer is : (a) particle accelerator**

The Large Hadron Collider (LHC) is the world's biggest and most powerful particle accelerator. It is also the world most expensive experimental set-up having cost \$10 billion and 16 years of collective effort. It is an underground research facility build by the CERN (European Organization for Nuclear Research), close to Geneva, near the Switzerland - France border. The LHC was first used on September 10, 2008. Its set-up is used to shoot very small particles into each other at high speed. When the particles hit each other, their energy is converted into many different particles, and sensitive

detectors keep track of the particles that are created. By looking carefully at the detector data, scientists can study what the particles are made of and how the particles interact.

**17. Correct Answer is : (c) GM crop**

The philosophy of sustainable agriculture is to maximize crop production through scientific methods of farming. It essentially entails growing high-yielding varieties using optimum inputs without exploiting and polluting the environment.

**18. Correct Answer is : (c) 1 and 3**

India ranks first in world buffalo population, with 56.5% i.e. 94.1 million of buffalo population and one-sixth of goat population in the world. India also ranks first in milk production with over 100 million tonnes a year. The country is also fifth in egg production with over 1.6 million tonnes, while it is ninth in the number of poultry. Though India tops in meat, milk and eggs production, exports are very low because of quality considerations.

**19. Correct Answer is : (d) Sri Aurobindo**

Sri Aurobindo (15 August 1872 – 5 December 1950), born Aurobindo Ghosh or Ghose, was an Indian nationalist, freedom fighter, philosopher, yogi, Maharishi, guru and poet. He joined the Indian movement for freedom from British rule, for a while became one of its influential leaders and then turned into a spiritual reformer, introducing his visions on human progress and spiritual evolution.

Sri Aurobindo studied for the Indian civil service at King's College, Cambridge. After returning to India he took up various civil service works under the Maharaja of Baroda and started to involve himself in politics. He was imprisoned by British India for writing articles against British rule. He was released when no evidence was provided. During his stay in the jail he reputedly had mystical and spiritual experiences, after which he moved to Pondicherry, leaving politics for spiritual work.

During his stay in Pondicherry, Sri Aurobindo evolved a new method of spiritual practice, which he called Integral Yoga. The central theme of his vision was the evolution of human life into a life divine. He believed in a spiritual realisation that not only liberated man but also transformed his nature, enabling a divine life on earth. In 1926, with the help of his spiritual collaborator, Mirra Alfassa ("The Mother"), he founded the Sri Aurobindo Ashram. He died on 5 December 1950 in Pondicherry. He was the first Indian to create a major literary corpus in English.

His main literary works are The Life Divine, which deals with theoretical aspects of Integral Yoga; Synthesis of Yoga, which deals with practical guidance to Integral Yoga; and Savitri, an epic poem which refers to a passage in the Mahabharata, where its characters actualise integral yoga in their lives. His works also include philosophy, poetry, translations and commentaries on the Vedas, Upanishads and the Gita.

20. **Correct Answer is : (c) 7.35-7.45**

Blood pH: The bloodstream is the most critically buffered system of the entire body, far more sensitive than any other. Arterial and venous blood must maintain a slightly alkaline pH: arterial blood pH = 7.41 and venous blood pH = 7.36. Because the normal pH of arterial blood is 7.41, a person is considered to have acidosis when the pH of blood falls below this value and to have alkalosis when the pH rises above 7.41.

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

Oilseeds Sector in India: Size

India is one of the world's largest edible oil economies with 15,000 oil mills, 689 solvent extraction units, 251 Vanaspati plants and over 1,000 refineries employing more than one million people. The total market size is at Rs. 600,000 Mln. and import export trade is worth Rs.130, 000 Mln.

India being deficient in oils has to import 40% of its consumption requirements. With an annual consumption of about 11 mln Tonnes, the per capita consumption is at 11.50 kgs, which is very low compared to world average of 20 kgs. China is currently at 17 kg. India is also a leading producer of oilseeds, contributing 8-10% of world oilseed production. India is estimated to account for around 6% of the world's production of edible oils. Though it has the largest cultivated area under oilseeds in the world, crop yields tantamount to only 50-60% of the world's average.

India is the fifth largest producer of oilseeds in the world, behind US, China, Brazil, and Argentina.

Three oilseeds - Groundnut, Soybean and Rapeseed/ Mustard - together account for over 80 per cent of aggregate cultivated oilseeds output. Mustard seed alone contributes Rs.120, 000 Mln. turnover out of Rs.600, 000 Mln. oilseed based Sector domestic turnover. Cottonseed, Copra and other oil-bearing material too contribute to domestic vegetable oil pool.

Currently, India accounts for 7.0% of world oilseeds output; 7.0% of world oil meal production; 6.0% of world oil meal export; 6.0% of world veg. oil production; 14% of world veg. oil import; and 10 % of the world edible oil consumption.

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

Amphibole is example of Hornblands. It contains silicate of calcium, magnisium and iron. Mical contains magnisium, iron and aluminium silicate.<br>Quartzites are generally formed from sandstones which are dominated by the silicon dioxide.

23. **Correct Answer is : (a) 1 only**



Sal, Sandalwood and Shisham are the most important trees of tropical moist deciduous forests in India.

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

During summer season there is easterly jet stream over the peninsula. Its presence is temporary which eliminates during winter. The coastal districts of Tamil Nadu receive rainfall from north-east monsoon during october to December.

25. **Correct Answer is : (d) 1, 2, 3, 4 and 5**

**Waste to Energy (WtE)**

refers to any waste treatment that creates energy in the form of electricity or heat from a waste source.

**Waste to Energy Technologies**

- Incineration
- Anaerobic Digestion
- Landfill Gas to Energy
- Refuse Derived Fuel; RDF
- Plasma Arc

26. **Correct Answer is : (b) nitrogen**

Air is the name given to atmosphere used in breathing and photosynthesis. Dry air contains roughly (by volume) 78.09% nitrogen, 20.95% oxygen, 0.93% argon, 0.039% carbon dioxide, and small amounts of other gases. Air also contains a variable amount of water vapor, on average around 1%. While air content and atmospheric pressure varies at different layers, air suitable for the survival of terrestrial plants and terrestrial animals is currently only known to be found in Earth's troposphere and artificial atmospheres.

27. **Correct Answer is : (d) Karnataka, Maharashtra and Andhra Pradesh**

State	Production (%)
Karnataka	34.8
Maharashtra	23.9
Andhra Pradesh	22.9

28. **Correct Answer is : (d) the pressure gradient**

winds blow because of differences in atmospheric pressure. Pressure gradients may develop on a local to a global scale because of differences in the heating and cooling of the Earth's surface. Heating and cooling cycles that develop daily or annually can create several common local or regional thermal wind systems.

Pressure Gradient Force:

Force due to spatial differences in atmospheric pressure. Usually expressed in millibars or kilopascals per unit distance (meters or kilometers). This force is primarily responsible for the formation of wind.

29. **Correct Answer is : (b) 1 and 2**

Incineration is described as “thermal treatment” for reducing mass and volume of wastes effectively destroying hazardous components of the waste. High temperature (650-1,200 °C) is employed for combustion process. Incineration of waste materials converts the waste into ash, flue gas and heat. Effective controls are required to prevent the negative impacts on human health and environment.

30. **Correct Answer is : (c) Nitrogen**

**Flue gas** is the gas exiting to the atmosphere via a flue, which is a pipe or channel for conveying exhaust gases from a fireplace, oven, furnace, boiler or steam generator. Quite often, the flue gas refers to the combustion exhaust gas produced at power plants. Its composition depends on what is being burned, but it will usually consist of mostly nitrogen (typically more than two-thirds) derived from the combustion air, carbon dioxide (CO<sub>2</sub>), and water vapor as well as excess oxygen (also derived from the combustion air). It further contains a small percentage of a number of pollutants, such as particulate matter, carbon monoxide, nitrogen oxides, and sulfur oxides.

31. **Correct Answer is : (a) Tropical wet and dry climate (Monsoon Savannah)**

Most of the peninsular region has tropical Savannah (Aw) type of climate. The peninsular region is situated along the rain shadow area of Western Ghat so it lies under the Tropical Wet and Dry climate (Monsoon Savannah).

32. **Correct Answer is : (b) Sperm Cell**

Sex Chromosomes X-Y:

The male gametes or sperm cells in humans and other mammals are heterogametic and contain one of two types of sex chromosomes. They are either X or Y. The female gametes or eggs however, contain only the X sex chromosome and are homogametic. The sperm cell determines the sex of an individual in this case. If a sperm cell containing an X chromosome fertilizes an egg, the resulting zygote will be XX or female. If the sperm cell contains a Y chromosome, then the resulting zygote will be XY or male.

33. **Correct Answer is : (b) Jellyfish**

Jellyfish Family:

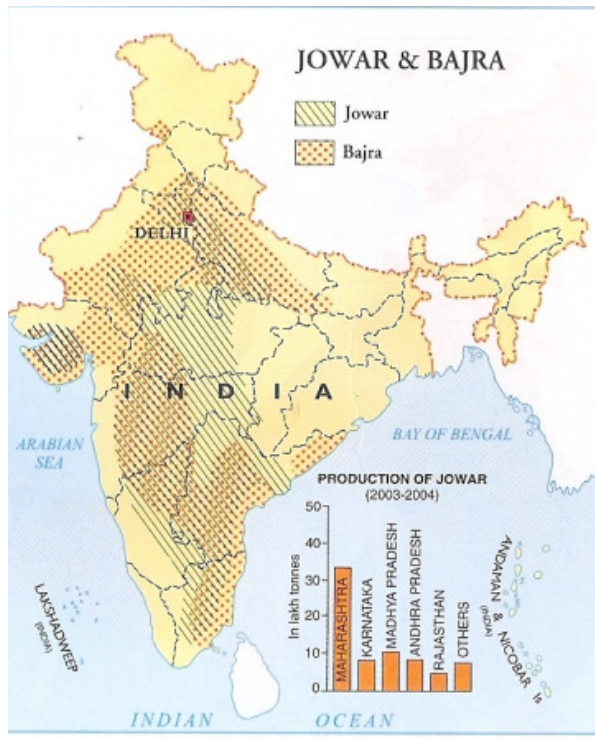
A jellyfish has no firm parts at all and reacts to every eddy and current that comes

along. In jellyfish families structure is almost non-existent; the need for it (structure) may not even be acknowledged or understood.

**34. Correct Answer is : (d) Reflex**

Reflexes are quick, involuntary actions that occur in response to a stimulus: the jerk of our knees after a painful thwack, or the way our fingers recoil when we touch something hot. What makes these movements so special is that they are deeply ingrained actions that aren't processed by our conscious mind. Normal movement is preceded by a thought and processed in the brain. Reflexes, on the other hand, bypass the brain entirely. Involuntary reflexes are a direct loop between a muscle and the spinal cord. When a doctor hits that certain spot on your kneecap, the involuntary response is a jerking of the leg, and not only can you not help but do it, you can't not do it, either. Some actions can become a so-called conditioned reflex. When people are able to quickly catch a dropped glass or kill a fly with their bare hands, we applaud their "fast reflexes," but those actions aren't truly reflexes, because they're voluntary. People who are good at performing quick actions aren't using real reflexes; they just have good reaction time. However, it is possible to be so well-practiced at an action that it eventually becomes involuntary. When you type on a keyboard, your fingers can strike the correct keys without requiring conscious thought, because your body has become conditioned to the act of typing, and can process the action in the spinal cord. Conditioned reflexes are developed and learned, and it's only through much practice that they can become involuntary.

**35. Correct Answer is : (b) Bajra**



36. **Correct Answer is : (b) methane**

Anaerobic digestion can be used as a pre-treatment to reduce the volume and stabilize material for disposal in landfills. Organic fractions in MSW is decomposed by anaerobic microorganisms. Methane is a predominant product from anaerobic digestion. In addition to energy recovery, digestate can be further used as soil conditioner.

37. **Correct Answer is : (c) 3, 1, 2, 4**

Most of the human body is made up of water, H<sub>2</sub>O, with cells consisting of 65-90% water by weight. Therefore, it isn't surprising that most of a human

body's mass is oxygen. Carbon, the basic unit for organic molecules, comes in second. 99% of the mass of the human body is made up of just six elements:

oxygen, carbon, hydrogen, nitrogen, calcium, and phosphorus. You may also wish to view the element composition of an average human body by mass.

- Oxygen (65%)
- Carbon (18%)
- Hydrogen (10%)
- Nitrogen (3%)
- Calcium (1.5%)

Phosphorus (1.0%)  
Potassium (0.35%)  
Sulfur (0.25%)  
Sodium (0.15%)  
Magnesium (0.05%)  
Copper, Zinc, Selenium, Molybdenum, Fluorine, Chlorine, Iodine, Manganese, Cobalt,  
Iron (0.70%)  
Lithium, Strontium, Aluminum, Silicon, Lead, Vanadium, Arsenic, Bromine (trace amounts)

**38. Correct Answer is : (a) South Andaman and Little Andaman**

Duncan Passage is located between south Andaman and Little Andaman. 10° channel is located Little Andaman and Car Nicobar.

**39. Correct Answer is : (c) 1 and 3**

Major contributor to each impact  
**Impact category Major contributor**  
Global warming | CH<sub>4</sub> from Landfilling | CO<sub>2</sub> from incineration  
Photo-oxidant formation | CH<sub>4</sub> from Landfilling  
Acidification | NO<sub>2</sub> from incineration  
Nutrient enrichment | NO<sub>2</sub> from incineration

**40. Correct Answer is : (c) 1 and 2**

The Chambal River is a tributary of the Yamuna River in central India. The river flows north-northeast through Madhya Pradesh, running for a time through Rajasthan, then forming the boundary between Rajasthan and Madhya Pradesh before turning southeast to join the Yamuna in Uttar Pradesh state.

**41. Correct Answer is : (c) Andaman and Nicobar islands**

Andaman and Nicobar WILDLIFE There are 96 Wildlife Sanctuaries, 9 National Parks and 1 Biosphere Reserve in these Islands. Mammals – Out of 55 terrestrial and 7 Marine mammal species reported so far, 32 species are endemic. Birds – As many as 246 species and sub species of birds are reported to inhabit these Islands, and of these, 99 species and sub species are endemic. Reptiles – There are 76 terrestrial reptiles of these 24 species are endemic. Marine Life – Islands harbour more than 1,200 species of fish, 350 species of echinoderms, 1,000 species of molluscs and many more lower forms of life. Among vertebrates dugongs, dolphins, whales, salt water crocodiles, sea turtles, sea snakes, etc., are common. Coral and Coral reefs – So far, 179 species of

corals belonging to 61 genera have been reported. Reefs are mostly fringing type on eastern coast and barrier type on the western coast.

**42. Correct Answer is : (a) Only 1**

The state has several medium industries based on its forest products. Plants to produce cement and fruit processing units have also come up in the state. There are a number of craft training centres and the states handloom industry has made good progress. The people are experts in cane and bamboo basketry work. Wood carving and black smithy are found in certain villages. Iron scrapers, spear head, and Daos required for day-to-day use are made in several villages.

Mineral resources found in the state are clay, marble, lime stone, graphite, pyrite. Arunachal Pradesh Mineral Development and Trading Corporation Limited was set up in 1991 and Namchik-Namphuk coal fields are under APMDTCL. The small scale cottage industry consist weaving, cane and bamboo work and silver smithy etc. To provide training to craftsmen there are two industrial training institutes at Roing and Daporijo.

**43. Correct Answer is : (b) ligament**

In anatomy, the term ligament is used to denote any of three types of structures. Most commonly, it refers to fibrous tissue that connects bones to other bones and is also known as articular ligament, articular larua, fibrous ligament, or true ligament. "Ligament" most commonly refers to a band of tough, fibrous dense regular connective tissue comprising attenuated collagenous fibers. Ligaments connect bones to other bones to form a joint. They do not connect muscles to bones; that is the job of tendons. Some ligaments limit the mobility of articulations, or prevent certain movements altogether. Capsular ligaments are part of the articular capsule that surrounds synovial joints. They act as mechanical reinforcements. Extra-capsular ligaments join together and provide joint stability. Intracapsular ligaments, which are much less common, also provide stability but permit a far larger range of motion. Cruciate ligaments occur in pairs. Ligaments are viscoelastic. They gradually lengthen when under tension, and return to their original shape when the tension is removed. However, they cannot retain their original shape when stretched past a certain point or for a prolonged period of time. This is one reason why dislocated joints must be set as quickly as possible: if the ligaments lengthen too much, then the joint will be weakened, becoming prone to future dislocations. Athletes, gymnasts, dancers, and martial artists perform stretching exercises to lengthen their ligaments, making their joints more supple.

**44. Correct Answer is : (d) cornea**

The cornea is the transparent front part of the eye that covers the iris, pupil, and

anterior chamber. Together with the lens, the cornea refracts light, with the cornea accounting for approximately two-thirds of the eye's total optical power. In humans, the refractive power of the cornea is approximately 43 dioptres. While the cornea contributes most of the eye's focusing power, its focus is fixed. The curvature of the lens, on the other hand, can be adjusted to "tune" the focus depending upon the object's distance.

**45. Correct Answer is : (c) Living things are related to each other through common ancestry from earlier forms that were different from them**

Evidence of common descent of living things has been discovered by scientists working in a variety of fields over many years. This evidence has demonstrated and verified the occurrence of evolution and provided a wealth of information on the natural processes by which the variety and diversity of life on Earth developed. This evidence supports the modern evolutionary synthesis, the current scientific theory that explains how and why life changes over time. Evolutionary biologists document the fact of common descent: making testable predictions, testing hypotheses, and developing theories that illustrate and describe its causes. Comparison of the genetic sequence of organisms has revealed that organisms that are phylogenetically close have a higher degree of sequence similarity than organisms that are phylogenetically distant. Further evidence for common descent comes from genetic detritus such as pseudogenes, regions of DNA that are orthologous to a gene in a related organism, but are no longer active and appear to be undergoing a steady process of degeneration.

**46. Correct Answer is : (d) Gujarat**

The continental shelf of Gujarat is the broadest in India. The area of the continental shelf of Gujarat is estimated at 184 000 sq km and it is 34.07% of the total shelf area of India. The maximum width of the continental shelf is 191 miles due west off Umbergoan (Valsad District ) and minimum width is 58 miles between Madhavpur and Miyani (Porbandar District).

**47. Correct Answer is : (a) Five digits per limb- either complete or vestigial**

Their Own Fingers:

The problem is, there are five. That puts us firmly in the mammal "family" (layman's term). All other mammals have five digits per limb, or the vestigial remains thereof, or we can trace the gradual shrinkage and loss of digits through the fossil record (as with horses). But the principle remains: Mammals have five digits—even when there's no good reason. Why should whales have the bones of exactly five digits buried in their flippers? Why should bats have wings seeming awkwardly stretched over exactly five fingers? "Similarity of design"? Oh, come on. The "Designer" found more efficient ways of making aquatic fins and wings for other creatures. Same old song: the commonality of five digits among the mammal family makes sense only if we are all descendants of a

five-digit ancestor. Some of us mammals have good use for five digits, some have already got rid of a few, and some of us are still stuck with useless ones (like dolphins). Remember, that's what a family is: descendants of a common ancestor.

**48. Correct Answer is : (c) Klebsiella pneumoniae**

*Klebsiella pneumoniae* is a Gram-negative, non-motile, encapsulated, lactose fermenting, facultative anaerobic, rod shaped bacterium found in the normal flora of the mouth, skin, and intestines. It is clinically the most important member of the *Klebsiella* genus of Enterobacteriaceae. Seven species of the *Klebsiella* genus, with demonstrated similarities in DNA homology are known. These are (1) *Klebsiella pneumoniae*, (2) *Klebsiella ozaenae*, (3) *Klebsiella terrigena*, (4) *Klebsiella rhinoscleromatis*, (5) *Klebsiella oxytoca*, (6) *Klebsiella planticola*, and (7) *Klebsiella ornithinolytica*. Of these, *K. oxytoca* and *K. rhinoscleromatis* have also been demonstrated in human clinical specimens. In recent years, *Klebsiellae* have become important pathogens in nosocomial infections. It is closely related to *K. oxytoca* from which it is distinguished by being indole-negative and by its ability to grow on both melzitose and 3-hydroxybutyrate. It naturally occurs in the soil, and about 30% of strains can fix nitrogen in anaerobic conditions. As a free-living diazotroph, its nitrogen fixation system has been much studied.

**49. Correct Answer is : (c) Oxbow lake**

Oxbow lake formed due to impounding of water in the abandoned meander loops. When the curvature of the meander loops is so accentuated due to lateral erosion, the meander loops become almost circular and the two ends of meander loops come closer. Consequently the streams straighten their courses and meander loops are abandoned to form ox-bow lakes. The formation of ox-bow lakes owes to erosion and deposition both.

Incised meander, Knick point and River terrace are the examples of rejuvenation landform of a river.

**50. Correct Answer is : (b) Mount Egmont ----- Hawaii**

Mount Egmont is in New Zealand's North island. It is also known as Mount Taranaki.

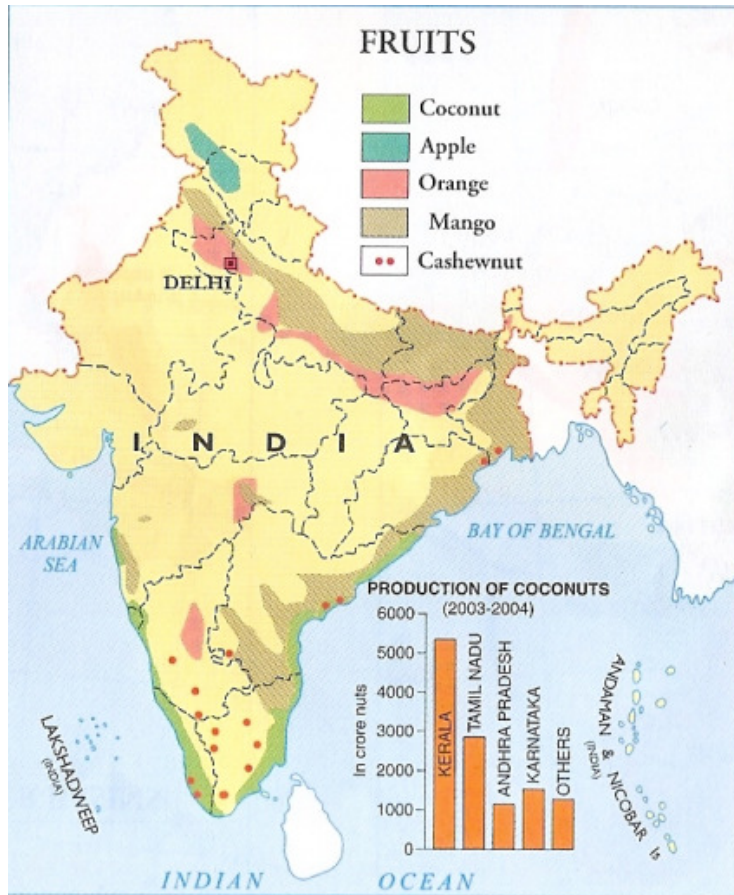
Ol Doinyo Lengai is a volcano in the Eastern Rift Valley, North Tanzania. Its name means "Mountain of God" in the language of Masai people.

The Poas volcano is in Central Costa Rica.

Mount Klyuchevskaya, one of the world's highest active volcanoes is on the Kamachatka Peninsula.

**51. Correct Answer is : (b) Cashewnuts**





52. **Correct Answer is : (b) Dates and olives**

In 2008, Israel and India finalised a three-year plan to introduce crops such as olives, dates and grapes to be introduced and cultivated in the states of

Rajasthan and Maharashtra, to create an agricultural market that meets Western demand for products like olive oil. In addition to the hope that this plan

would boost yield and stave off famine, officials presented the project as symbolic.

53. **Correct Answer is : (c) Wheat**

The productivity of pulses has been very low in India, with 45 per cent cumulative growth between FY 1951–2008, compared to the productivities of wheat

and rice, which have grown manifold, at 320 and 230 per cent, respectively, during the same period. Also, the area under pulses has grown at 25 per cent

during this period, a much lower rate than that for other food grains.

**54. Correct Answer is : (d) Six months**

Article 356 in The Constitution Of India 1949

356. Provisions in case of failure of constitutional machinery in State

(1) If the President, on receipt of report from the Governor of the State or otherwise, is satisfied that a situation has arisen in which the government of the State cannot be carried on in accordance with the provisions of this Constitution, the President may by Proclamation

(a) assume to himself all or any of the functions of the Government of the State and all or any of the powers vested in or exercisable by the Governor or any body or authority in the State other than the Legislature of the State;

(b) declare that the powers of the Legislature of the State shall be exercisable by or under the authority of Parliament;

(c) make such incidental and consequential provisions as appear to the President to be necessary or desirable for giving effect to the objects of the Proclamation, including provisions for suspending in whole or in part the operation of any provisions of this Constitution relating to any body or authority in the State Provided that nothing in this clause shall authorise the President to assume to himself any of the powers vested in or exercisable by a High Court, or to suspend in whole or in part the operation of any provision of this Constitution relating to High Courts

(2) Any such Proclamation may be revoked or varied by a subsequent Proclamation

(3) Every Proclamation issued under this article except where it is a Proclamation revoking a previous Proclamation, shall cease to operate at the expiration of two months unless before the expiration of that period it has been approved by resolutions of both Houses of Parliament Provided that if any such Proclamation (not being a Proclamation revoking a previous Proclamation) is issued at a time when the House of the People is dissolved or the dissolution of the House of the People takes place during the period of two months referred to in this clause, and if a resolution approving the Proclamation has been passed by the Council of States, but no resolution with respect to such Proclamation has been passed by the House of the People before the expiration of that period, the Proclamation shall cease to operate at the expiration of thirty days from the date on which the House of the People first sits after its reconstitution unless before the expiration of the said period of thirty days a resolution approving the Proclamation has been also passed by the House of the People

(4) A Proclamation so approved shall, unless revoked, cease to operate on the expiration of a period of six months from the date of issue of the Proclamation: Provided that if and so often as a resolution approving the continuance in force of such a Proclamation is passed by both Houses of Parliament, the Proclamation shall, unless revoked, continue in force for a further period of six months from the date on which under this clause it would otherwise have ceased to operate, but no such Proclamation shall in any case remain in force for more than three years: Provided further that if the dissolution of the House of the People takes place during any such period of six months and a resolution approving the continuance in force of such Proclamation has been passed by the Council of States, but no resolution with respect to the continuance in force of such Proclamation has been passed by the House of the People during the said period, the Proclamation shall cease to operate at the expiration

of thirty days from the date on which the House of the People first sits after its reconstitution unless before the expiration of the said period of thirty days a resolution approving the continuance in force of the Proclamation has been also passed by the House of the People.

**55. Correct Answer is : (d) Dachigam - Asiatic lions**

Bhitarkanika river system is ruled by a few giant Saltwater crocodiles. This basking crocodile is one of such large crocodiles of about 20 ft. length.

The area is criss-crossed by numerous creeks and creek-lets and tidal river, and rivulets. The nesting behaviour of mother Saltwater crocodile is different from other two Indian Crocodylian species. She prepares a mound nest in a secluded place by

collecting available nesting material which includes aquatic fern species (*Acrostichum aureum*), Hental (*Phonix paludosa*), etc. The nesting female crocodile

actively guards her nests for about 75 days, until the young crocodiles hatch out for moving into the creeks.

Indian elephants are native to mainland Asia: India, Nepal, Bangladesh, Bhutan, Myanmar, Thailand, Malay Peninsular, Laos, China, Cambodia, and Vietnam. They

inhabit grasslands, dry deciduous, moist deciduous, evergreen and semi-evergreen forests. In the early 1990s, their estimated population size was

26,390–30,770 in India, where populations are restricted to four general areas: in the Northwest — at the foot of the Himalayas in Uttarakhand and Uttar Pradesh, ranging from Katarniaghat Wildlife Sanctuary to the Yamuna River.

Kaziranga National Park is situated in the north eastern part of the country in the district of Golaghat and Nagoan in Assam. The beautiful wildlife

sanctuary was created in the year 1905, and about 68 years later it was declared national park.

The park is the host for two third of world's population on one horned rhinos and also holds the highest density of Tigers among all the protected areas in

the world. This park also is a domicile for large breeding inhabitants of Elephant, wild water buffaloes and swamp deer. Declared as Important Bird Area by

Birdlife International this national park is a home for great variety of inhabitant and migrating birds. Located on the banks of river Brahmaputra, the

sanctuary enjoys tropical vegetation and is marked by elephant grass, marshy lowlands and tropical moist broadleaf forests. The beautiful flora and diverse

fauna adds to the scenic beauty of the park.

Dachigam National Park is located 22 kilometers from Srinagar, Jammu and Kashmir.

The main animal species that Dachigam is most famous for is the Hangul, or the Kashmir Stag. the other species are :-

Musk deer

Leopard

Himalayan Serow

Himalayan Grey Langur

Leopard Cat

Himalayan Black Bear

Himalayan Brown Bear

Jackal

Hill Fox

Himalayan Weasel

Yellow-throated Marten

Jungle Cat

Long-tailed Marmot

#### 56. **Correct Answer is : (a) Governor of the State**

The Advocate General of a State is a Constitutional post and authority duly appointed as per Art. 165 of the constitution of India. The authority and function of the Advocate General is also specified in the Constitution of India under Article 165 & 177. Article 165 : - The OIC attending the A.G. office must first contact the Deputy Secretary (Law) and thereafter the concerned Section Incharge, depending upon the nature of the case and the purpose of his attending the office. On obtaining the file from the relevant Section the OIC is thereafter required to appear before the concerned Law Officer for preparation of return. After the return has been prepared and is duly complete with all legible documents and authorisation the same should be submitted by the OIC to the Section Incharge for the purposes of filing alongwith the file of the case before leaving the A.G. Office. The Governor of each State shall appoint a person who is qualified to be appointed as a Judge of a High Court to be Advocate General for the State. It shall be the duty of the Advocate General to give advice to the Government of the state upon such legal matters, and to perform such other duties of a legal character, as may from time to time be referred or assigned to him by the Governor, and to discharge the functions conferred on him by or under this constitution or any other law for the time being in force. The Advocate General shall hold office during the pleasure of the Governor.

**57. Correct Answer is : (b) 1 and 2**

India, also known as Bharat, is a Union of States. It is a Sovereign Socialist Secular Democratic Republic with a parliamentary system of government. The Republic is governed in terms of the Constitution of India which was adopted by the Constituent Assembly on 26th November 1949 and came into force on 26th January 1950. The Constitution provides for a Parliamentary form of government which is federal in structure with certain unitary features. The constitutional head of the Executive of the Union is the President. As per Article 79 of the Constitution of India, the Council of the Parliament of the Union consists of the President and two Houses known as the Council of States (Rajya Sabha) and the House of the People (Lok Sabha). Article 74(1) of the Constitution provides that there shall be a Council of Ministers with the Prime Minister as its head to aid and advise the President, who shall exercise his/her functions in accordance to the advice. The real executive power is thus vested in the Council of Ministers with the Prime Minister as its head. The Council of Ministers is collectively responsible to the House of the People (Lok Sabha). Every State has a Legislative Assembly. Certain States have an upper House also called State Legislative Council. There is a Governor for each state who is appointed by the President. Governor is the Head of the State and the executive power of the State is vested in him. The Council of Ministers with the Chief Minister as its head advises the Governor in the discharge of the executive functions. The Council of the Ministers of a state is collectively responsible to the Legislative Assembly of the State. The Constitution distributes legislative powers between Parliament and State legislatures as per the lists of entries in the Seventh Schedule to the Constitution. The residuary powers vest in the Parliament. The centrally administered territories are called Union Territories.

**58. Correct Answer is : (c) Kushana**

## Early figures of Shiva

The earliest figures of Shiva which show him in purely human form come from northwestern India, the area of ancient Gandhara (see map on p. 228). From the first centuries AD the figure of the deity is recorded in sculpture. The importance of these few surviving, though rather small, images of the human Shiva is difficult to gauge. They may be no more than subsidiary figures in larger, though now broken up, Buddhist compositions. While certain features of the iconography identify the figure as Shiva – his trident and his erect phallus – others seem to point to the deity who eventually emerges as Vishnu. Yet other elements are borrowed from the contemporary, and by then well-developed, Buddhist scheme. Despite this variety, the identity of a Shiva-type is beyond doubt. In Chapter 1 the link between Shiva and the Bodhisattva Avalokiteshvara was mentioned (see p. 30), but elements such as the water-pot which Shiva carries in some of these early Gandhara images connect him also with the Bodhisattva Maitreya. In Buddhist iconography, Maitreya always carries his own water-pot – being a brahmin he could not run the risk of drinking polluted water. Shiva shown in Gandhara carrying a water-pot – as also in the Gudimallam figure – implies that he too is a brahmin. This is an interesting detail for, if some aspect of Shiva-worship has a non-Vedic origin, to deliberately show the god as a brahmin is perhaps an attempt to present Shiva as orthodox.

Also from northwestern India come coins of the second century AD issued by the kings of the Kushan dynasty. Some of them bear the image of a figure who is captioned 'Oesho', a name which philologists still argue over, but which is often equated with that of Shiva. The coins with this figure are not rare, suggesting that Oesho was well-known and popular. Further, the attributes seen on the coins such as the multiple heads, the erect phallus and the bull mount, make it clear that this deity, whether or not he is truly Shiva, contributed to the complex mix from which emerged the personality of Shiva. The ancestry of the god is undoubtedly intricate and continues to be discussed by scholars. Meanwhile, in present-day India, his mythology and his iconography still develop.

## 59. Correct Answer is : (c) 61<sup>st</sup> Amendment

Election FAQ's: Electoral Rolls

Q 1. For every constituency, there is a list of voters which is called electoral roll. What is the minimum age for enrollment in an electoral roll?

Ans. Eighteen

For every constituency, there is a voters list Article 326 of the Constitution, and Sec. 19 of R. P. Act, 1950 stipulate that the minimum age for registration of a voter is 18 years.

Q 2. Was 18 the minimum voting age in India from the beginning?

Ans. No

Earlier, the age for registration of a voter was 21 years. Through the 61st amendment Act, 1988 of the Constitution read with Act 21 of 1989 amending the R. P. Act, 1950, the minimum age of registration of a voter has been brought down to 18 years. This has been made effective from 28th March, 1989.

Q 3. Which is the relevant date for determining the age qualification of 18 years?

Suppose, you have completed 18 years of age today. Can you get yourself registered

as voter ?

Ans. According to Section 14 (b) of the R. P. Act, 1950, the qualifying date means the first day of January of the year in which the electoral roll is prepared or revised.

Q 4. When was the voting age reduced from 21 years to 18 years ?

Ans. 1989

The voting age was reduced from 21 years to 18 years during 1989.

Q 5. Can a non-citizen of India become a voter?

Ans. No

A person who is not a citizen of India cannot be registered as a voter. Article 326 of the Constitution read with Sec. 16 of R. P. Act, 1950 clarify the point.

Q 6. Can a non-resident Indian citizen become a voter?

Ans. According to Section 19 of the R. P. Act, 1950, only a person who is ordinarily resident in a constituency is entitled to be registered in the electoral roll of that constituency. However, such of the non-resident Indian Citizens who are employed under Govt. of India in a post outside India are eligible to be registered as voters in terms of Sec 20 (8) (d) Q 7. If I am working and living in Delhi, can I be a voter in my native village?

Ans. No

If you are working in Delhi and residing there, you are an ordinary resident of Delhi in terms of Sec 19 (b). Therefore you can be enrolled at Delhi only and not in your native village.

Q 8. Can one be enrolled at more than one place ?

Ans. No

A person cannot be enrolled as a voter in more than one place in the same constituency or in more than one constituency in view of the provisions contained under Sec. 17 and 18 of R. P. Act, 1950.

Q 9. How can I get registered/enrolled in the Electoral Roll?

Ans. You have to submit a filled in Form - 6 to the ERO of the Assembly Constituency. If you are located in Delhi, the list of EROs can be found at Electoral Rolls Page of this site. Else contact the District Election Officer at the District Magistrate's office.

Following are the various forms useful for registration as voter, corrections, change in address etc.

For inclusion of names Form- 6

For any objection on inclusion of names Form- 7

For correction of entries in the Electoral Rolls Form- 8

For transposition of entry in electoral roll Form- 8A

Q. 10. What is the procedure to make corrections in such names / other details that have been misspelt in the Electoral Roll ?

Ans. For incorporation of corrections in the Electoral Rolls, You have to submit Form - 8 to the ERO of the Assembly Constituency.

## 60. **Correct Answer is : (a) 1951**

The First Amendment of the Constitution of India, enacted in 1951, made several changes to the Fundamental Rights provisions of the constitution. It provided against abuse of freedom of speech and expression, validation of zamindari abolition laws, and clarified that the right to equality does not bar the enactment of laws which provide

"special consideration" for weaker sections of society. The formal title of the amendment is the Constitution (First Amendment) Act, 1951. It was moved by the then Prime Minister of India, Jawaharlal Nehru, on 10 May, 1951 and enacted by Parliament on 18 June.

**61. Correct Answer is : (c) Need of Guru or Pir to attain God**

The Sufi saints led a simple or rather ascetic life and believed in the renunciation of all worldly possessions and pleasures. They did not believe in image worship of any form. They regarded God as kind and benevolent and therefore they did not fear him but loved him. They regarded Desire as the primary enemy of human and therefore emphasised on giving it up. Music inspired them to remember God and therefore they engaged themselves in music and dance with ecstasy while remembering god. The Sufis believed in Guru (Master) whom they called Pir and thought that no one can approach near God without the assistance of a Guru. The Sufis were divided into different sects, most important of them being the Suravardi sect and the Chisti sect. The influence of Suravardi sect remained limited only to Sindh, Punjab and Multan but the Chisti sect became well accepted all over India including Punjab, Rajasthan, Madhya Pradesh, Bihar, Bengal, Orissa and south India. Many Sufi saints became quite popular during the period of the Delhi Sultanate. The most important of them were Shaikh Muinud-

din Chisti, Baba Farid-ud-din, Nasir- ud- din Mahmud, Nizam- ud- din Auliya, Khwaja Shaikh Taki- ud- din and Malik Muhammad Jaysi.

The Bhakti movement in Hinduism was a remarkable feature during the period of Delhi Sultanate. Hindu saints emphasised on Bhakti as a means to attain salvation and that resulted in the Bhakti movement. Hinduism had to face the challenge of Islam in the medieval period which gave birth to the Bhakti movement. The saints of the Bhakti movement believed in god who could be called by different names such as Lord Rama, Lord Krishna, Lord Shiva or Allah. They were against the caste system or image worship and laid stress on Bhakti as the only means to attain salvation. The Bhakti saints believed that a devotee needed a Guru who could help and guide him to attain salvation, though that could be achieved only by the grace of God while the grace of god itself could be achieved only by one's own effort. The saints propagated these ideas among the people by means of their teachings in simple languages, poems and prayers. But the most effective way of preaching their thoughts was their personal dedicated lives to God. The saints preached their ideas not in Sanskrit but in other Indian regional languages of the people. The pioneers of the Bhakti movements were Ramanuja, Nimbakara and Madhavacharya. Bhakti movement rose to popularity through Ramananda who flourished in the fourteenth century. Other Bhakti saints like Kabir, Guru Nanak and Chaitanya contributed a lot in the expansion and popularity of Bhakti movement.

**62. Correct Answer is : (b) A-4, B-2, C-1, D-3**



What is a carboxylic acid?

Carboxylic acid is a form of organic acid. You can identify these acids by their structure. They all contain one carbon atom, one oxygen atom and one

hydroxyl group. The combination of one carbon, one oxygen and hydroxyl group (COOH) is called a carboxyl group. It is because of this that acids derived from

them are called carboxylic acids.

The combination of one carbon, one oxygen and hydroxyl group (COOH) is called a carboxyl group.

Where do you find carboxylic acids?

Carboxylic acids are widely found in nature. You can find them as free acids like citric acid, tannic acid and malic acid. Esters ? the products of acids and

alcohols also contain carboxylic acids. These include fats and oils, flavours of fruits and odours of flowers. Some bacteria can also cause natural reactions

in which these acids are formed. Some examples include acetic acid from wine or cider, lactic acid found in sour milk and the butyric acid in rancid butter.

Types of carboxylic acids

Acetic Acid: This acid is found in vinegar and is responsible for giving it the sour taste. Vinegar means sour wine. It was discovered when bacteria reacted

with wine and turned it sour. It is one of the simplest of carboxylic acids.

Tannic Acid: You may have heard of this acid, it has been used for tanning. You will find it in the bark of a number of trees. Tannic acid can be found as a

yellow or light brown powder, which is highly soluble in water. It is used for the staining of wood and is also used when dyeing cotton.

Salicylic Acid: This acid is derived from the bark of the willow tree. Salicylic acid is used in acne creams to help reduce acne. It derives its name from

the word Salix, which is Latin for Willow. Today this acid is used as a food preservative. Citric Acid: This acid is found in most citrus fruits. It gives the tangy taste to lemons, limes, grape fruits and oranges. Citric acid is a natural

preservative and used in both foods and soft drinks. It is also used in some bathroom and kitchen cleaning solutions.

Malic Acid: This acid is found in many unripe fruits like green apples. Malic acid includes green apples, plums, currants (seedless raisins) and a variety of

other fruits.

Oxalic Acid: This acid was originally derived from the wood sorrel plant Oxalis. It is now made artificially and is used in bleaching and cleansing solutions.

63. **Correct Answer is : (c) Sweden**

Each Swede produces just over 500 kg or half a ton of household waste every year. Thanks to the efficient waste management in Sweden, the vast majority of this household waste can be recovered or reused. Only four per cent is land filled. Just over two million tons of household waste is treated by waste to energy in Swedish plants every year. These plants incinerate a similar quantity of waste from industries as well. Waste incineration provides heat corresponding to the needs of 810,000 homes, around 20 per cent of all the district-heating produced. It also provides electricity corresponding to the needs of almost 250,000 homes. International comparisons show that Sweden is the global leader in recovering the energy in waste. Waste to energy is a well-established source of energy in Sweden. The first incineration plant started operation in 1929. During the later part of the 1940s, the district-heating network was expanded in connection with the extensive construction of new buildings following the Second World War. During the 1970s, the major expansion of waste incineration plants started. Sweden has had strict standards limiting emissions from waste incineration since the mid-1980s. Most emissions have fallen by between 90 and 99 per cent since then thanks to ongoing technical development and better waste sorting.

64. **Correct Answer is : (a) Brahmani, Mahanadi, Indravati, Godavari**



65. **Correct Answer is : (b) Hawaiian**

Hawaiian type of volcanoes erupt quietly due to less viscous lavas and non-violent nature of gases. Strombolian volcano of Lipari island in the Mediterranean sea erupt with moderate intensity

Vulcano of Lipari island erupt with great force and intensity  
pelean vocano of Martinique island in the Caribbean Sea is most violent and explosive  
type of volcanoes.

**66. Correct Answer is : (a) ASEAN**

The 21st ASEAN Summit, with the theme of “ASEAN: One Community, One Destiny” held in Phnom Penh, on 18th November 2012, was chaired by Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia, as Chair of ASEAN, in 2012.

**67. Correct Answer is : (c) Article 335**

On December 17, 2012, the Rajya Sabha passed with two-thirds majority the Constitution (117th Amendment) Bill to provide for reservation in promotions to the Scheduled Castes (SCs) and the Scheduled Tribes (STs). The historic legislation was adopted after a two-day debate with 194 members voting for it and 10 voting against it. Since the Bill sought to amend the Constitution, it needed to be passed with a two-thirds majority. However, in the end, it was a no contest, since the main Opposition party—the BJP—agreed to support the Bill with some amendments.

The Bill de-links the term “efficiency of administration” from the claims of SCs/STs for jobs and promotions, mentioned in Article 335. It seeks to amend at least four articles of the Constitution to enable the government to provide quotas in promotions to SCs and STs, who constitute about 25 per cent of the country’s population.

Article 335 of the Constitution states that the claims of SCs and STs must be balanced with maintaining efficiency in the administration. The Bill states the amendment will override the provision of Article 335.

**68. Correct Answer is : (b) Permitting banks to enter into commodity futures trading**

On December 18, 2012, the Lok Sabha passed the Banking (Amendment) Bill, aimed at attracting more foreign investment into the banking industry in yet another move by Prime Minister Manmohan Singh to open up Asia’s third-largest economy. The Bill was passed after the government agreed to drop the contentious Forwards Markets Contract Clause, which proposed permitting banks to enter commodity futures trading. The Opposition had claimed that allowing banks to trade in commodity futures would lead to high-risk speculative trading, adding that the futures trading watchdog—Forward Markets Commission (FMC)—lacks teeth to take action on a potential substantial loss for investors.

The passage of the Bill was critical to the government as it paves the way for the Reserve Bank of India (RBI) to issue new banking licenses to the private sector. The Competition Commission clause in the Banking Bill has also been modified. This allows the RBI to remain the banking regulator, while the Competition Commission of

India (CCI) will regulate mergers and acquisitions. CCI will have the power to investigate and clear mergers and acquisitions in the banking sector, the Finance Minister said.

The Bill also gives the RBI the power to supersede bank boards as well as to inspect the books of associates of banking company. It also provides for voting rights to investors in private sector banks commensurate with their shareholding. The cap on voting rights for investors in private sector lenders, such as HDFC Bank and ICICI Bank, will now rise to 26 per cent from 10 per cent, and to 10 per cent for government banks, such as State Bank of India, from just 1 per cent.

**69. Correct Answer is : (b) Permitting banks to enter into commodity futures trading**

The two-day India-ASEAN summit was held on December 20-21, 2012 at New Delhi. The "ASEAN-India Vision Statement 2020", which commits both sides to great security cooperation, was adopted.

Southeast Asian nations and India vowed to step up cooperation on maritime security, a move that comes amid tension with China in the potentially oil- and gas-rich South China Sea.

In the vision statement, India and the 10-member Association of Southeast Asian Nations (ASEAN) set their sights on a new "strategic partnership" that would bring closer political, security and economic cooperation.

**70. Correct Answer is : (a) sulphur**

Ethyl mercaptan

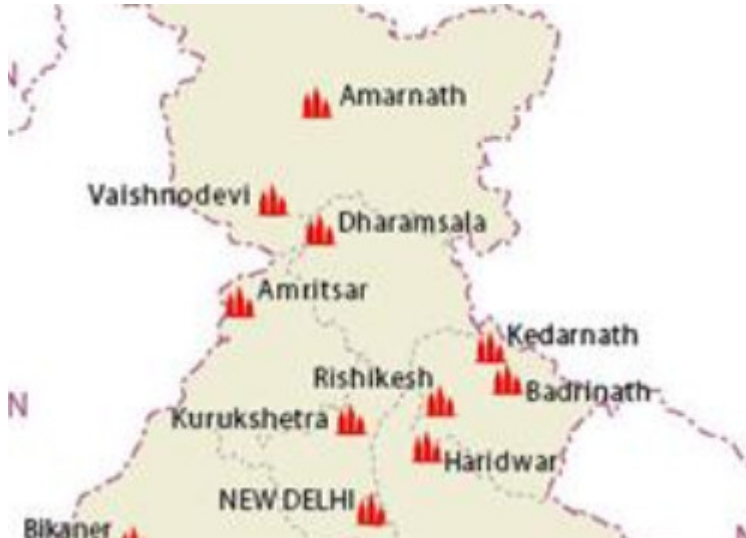
A colorless organic liquid that has a very strong odor. It is added to odorless fuel, such as natural gas, and fuel systems as a warning agent in the event

of leakage or spills. Also called ethanethiol. Chemical formula: C<sub>2</sub>H<sub>6</sub>S.

**71. Correct Answer is : (b) Reserve Bank of India**

Under the Reserve Bank of India Act (section 22), the Bank has the 'sole right' to issue currency notes in India. Bank notes in circulation and those held by the Banking Department constitute the liabilities of the Issue Department of the Reserve Bank, and are backed by assets specified in section 33 of the Bank Act. These include gold coin and bullion, foreign securities, rupee coins which constitute the liability of the Government of India, the latter's rupee securities, and other eligible bills of exchange and promissory notes payable in India.

**72. Correct Answer is : (a) Amarnath, Vaishnodevi, Dharamsala, Kedarnath**



**73. Correct Answer is : (b) Reserve Bank of India**

Department of External Investments and Operations of RBI

Functions:

The main function of this department is management and investment of foreign exchange reserves of the Reserve Bank of India:

Management and investment of the foreign currency and gold assets of the Reserve Bank of India.

Handling external transactions on behalf of Government of India (GOI) including transactions relating to IMF.

All matters incidental to India's membership of the Asian Clearing Union. Other matters relating to gold policy, membership of the Bank for International Settlements (BIS) and matters incidental to international cooperation/arrangements.

**74. Correct Answer is : (b) Divergence**

The boundary zone between the North American plate and the Eurasian plate is constructive plate margin. It is also called divergence boundary zone. Convergence zone is destructive plate margin whereas sliding zone is conservative plate margin.

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

Nebka are small sand-dune formed in the lee of shrub.

Crescentic Lunette is formed to the lee of a small desert depression (playa)

Seifs are longitudinal dunes.

Draa is star like sand dune.

**76. Correct Answer is : (c) Picketing of toddy shops**

But, perhaps; the most successful item of the programme was the boycott of foreign cloth. Volunteers would go from house to house collecting clothes made of foreign cloth, and the entire community would collect to light a bonfire of the goods. The value of imports of foreign cloth fell from Rs. 102 crore in 1920-

21 to Rs. 57 crore in 1921-22. Another feature of the movement which acquired great popularity in many parts of the country, even though it was not part of the original plan, was the picketing of toddy shops. Charkhas were popularized on a wide scale and khadi became the uniform of the national movement.

**77. Correct Answer is : (c) International Developmental Association**

The International Development Association (IDA), is the part of the World Bank that helps the world's poorest countries. It complements the World Bank's other lending arm — the International Bank for Reconstruction and Development (IBRD) — which serves middle-income countries with capital investment and advisory services. IDA was created on September 24, 1960 and is responsible for providing long-term, interest-free loans to the world's 78 poorest countries, 39 of which are in Africa. IDA provides grants and credits (subject to general conditions), with repayment periods of 35 to 40 years. Since its inception, IDA credits and grants have totaled \$161 billion, averaging \$7–\$9 billion a year in recent years and directing the largest share, about 50%, to Africa. While the IBRD raises most of its funds on the world's financial markets, IDA is funded largely by contributions from the governments of the richer member countries. Additional funds come from IBRD income and repayment of IDA credits. IDA loans address primary education, basic health services, clean water supply and sanitation, environmental safeguards, business-climate improvements, infrastructure and institutional reforms. These projects are intended to pave the way toward economic growth, job creation, higher incomes and better living conditions.

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

Harz mountains, Vosges mountains and Eastern highlands of Madagascar are examples of block mountains.

**79. Correct Answer is : (a) Adam Smith**

Adam Smith was a Scottish social philosopher and a pioneer of political economy. One of the key figures of the Scottish Enlightenment, Smith is the author of *The Theory of Moral Sentiments* and *An Inquiry into the Nature and Causes of the Wealth of Nations*. The latter, usually abbreviated as *The Wealth of Nations*, is considered his magnum opus and the first modern work of economics. It earned him an enormous reputation and would become one of the most influential works on economics ever published. Smith is widely cited as the father of modern economics and capitalism. In 2009, Smith was named among the 'Greatest Scots' of all time, in a vote run by Scottish television channel STV.

**80. Correct Answer is : (d) Pagladiya**

The Barak River is one of the major rivers of South Assam and is a part of the Surma-Meghna River System. It rises in the hill country of Manipur State,

where it is the biggest and the most important of the hill country rivers. After Manipur it flows through Mizoram State and into Assam, ending just after it

enters Bangladesh where the Surma and Kushiya rivers begin.

The principal tributaries of the Barak are all in India and are the Jiri, the Dhaleshwari (Tlawng), the Singla, the Longai, the Madhura, the Sonai (Tuirial),

the Rukni and the Katakhal.

**81. Correct Answer is : (d) Gujarat**

**Buland Darwaza**, meaning 'high' or 'great' gate in [Urdu](#). It is located in [Fatehpur Sikri](#). It is located 43 km away from [Agra, India](#). It is also known as the "Gate of Magnificence." Buland Darwaza or the loft gateway was built by the great Mughal emperor, Akbar in 1601 A.D. at Fatehpur Sikri. Akbar built the Buland Darwaza to commemorate his victory over Gujarat

**82. Correct Answer is : (a) INS Karuva**

India recently commissioned a Water Jet Fast Attack Craft (WJFAC) INS Karuva at Visakhapatnam. It will help in coastal patrolling, anti-pirate, anti-smuggling, search and rescue operations by the Navy. It is the last of the 10 such vessels built by the Garden Reach Shipbuilders and Engineers (GRSE) of Kolkata with 90 per cent indigenous content.

**83. Correct Answer is : (c) 1 and 3**

Vast majority of sedimentary rocks are clastic. Examples of clastic sedimentary are sandstones, conglomerates, clay rocks, shales, loess etc. Shale is the finest grained clastic sedimentary rock.

**84. Correct Answer is : (b) Bird-foot delta**

Bird-foot delta, resembling the foot of a bird, are formed due to the deposition of finer materials which are kept in suspension in the river water which is lighter than sea water.

**85. Correct Answer is : (c) Slightly more than 1.2 crore**

and 86. **Correct Answer is : (c) 940 females per 1000 males**

## Population

India's population, as on 1 March 2011 stood at 1,210,193,422 (623.7 million males and 586.4 million females).

## Population Growth Rate

The average annual exponential growth rate stands at 1.64 per cent during 2001-2011.

## Birth Rate

The Crude Birth rate was 18.3 in 2009.

## Death Rate

The Crude Death rate was 7.3 in 2009.

## Life Expectancy Rate

65.8 years (Males); 68.1 years (Females) in the period 2006-2011.

## Sex Ratio

940 females per 1000 males according to 2011 census

### 87. **Correct Answer is : (c) 2 and 3**

Probiotic food is food that contains live bacteria, which is considered beneficial and not harmful to humans. The first example of probiotic food was the introduction of acidophilus to milk, which in some cases helped people who had difficulty digesting milk to be able to tolerate milk better. Generally probiotics help to maintain a healthy digestive system by maintaining a balance between the harmful and beneficial bacteria in the gut. They are of benefit especially when taken during and after antibiotic treatment or when travelling abroad where the body encounters different types of bacteria.

### 88. **Correct Answer is : (d) Unorganised workers**

The Government on Thursday approved the constitution and operation of the National Social Security Fund for unorganised sector workers with an initial allocation of Rs 1,000 crore. Finance Minister Pranab Mukharjee had announced setting up of the fund in his 2010-11 Budget speech. The constitution of the fund, which was cleared by the Union Cabinet on Thursday, will support social security schemes for various segments of unorganised workers like weavers, toddy tappers, rickshaw pullers, beedi workers etc.

### 89. **Correct Answer is : (a) Pollution Control Vessel**

Panama flagged vessel MV RAK CARRIER sinks off Mumbai coast A Panama flagged vessel MV RAK CARRIER sunk 20 nautical miles off the Mumbai Coast Following the distress signal, Navy and Coast Guard promptly swung into action and saved the lives of all the 30 crew members Samudra Prahari , Indian Coast Guard's oil pollution response vessel has been asked to remain in the area and monitor any likely oil spill.



90. **Correct Answer is : (b) Only 2 is correct**

Centre plans Economic Census

Centre planning to conduct the 6th Economic Census will be in collaboration with the States and Union Territories in 2012. Cover all enterprises engaged in various economic activities in both organised and unorganised sectors of the economy. The information collected, would provide a framework for follow up action for planning and development, especially for the unorganized sector of the economy.

PERIODICITY

- Envisaged to be quinquennial
- First Economic Census in 1977 covering only non-agricultural enterprises employing at least one hired worker
- Second and third economic censuses conducted in 1980 and 1990 along with House listing operations of 1981 and 1991 Population censuses respectively. These covered all agricultural and nonagricultural enterprises excepting those engaged in crop production and plantation.
- Fourth Economic Census carried out in 1998 with same coverage.
- The current the 5th in the series, is being conducted in 2005 with the same coverage.

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

Normally, a rift valley is long, narrow but very deep. The Dead Sea and the Red Sea are examples of the rift valley. The central plain of Scotland, Spencer Bay of South Australia etc. are also examples of rift valley.

92. **Correct Answer is : (c) Waterfalls-River terraces-Meander bars-Oxbow lakes**

Waterfalls are made in river in young stage. It is not a permanent landform. Actually the rivers try to grade themselves through vertical erosion in relation to base level of erosion.

River terraces are the narrow flat surfaces on either side of the valley floor. Sometimes, the river valleys are frequented by several terraces on either side wherein they are arranged in step like forms.

Meander bars generally form in youthful stage of river.

Oxbow lakes are a landform made after meander bars.

93. **Correct Answer is : (c) Both 1 and 2 are correct**

Decontrolling of urea prices approved by National NeGoM. A group of ministers on fertilizers approved decontrol of urea prices. The Meeting also allowed the companies to

raise rates of the fertilizer up to 10% this fiscal Objective: The move will aid government reduce its subsidy bill Government spends around Rs. 75,000 Crore on fertilizer subsidy at present Urea is the only fertilizer which is till now under government control The government had partially freed other fertilizers from its control in the last financial year Urea is the cheapest and the most used fertiliser in the country.

**94. Correct Answer is : (a) 1 only**

When volcanoes erupt, lava, gas and solid materials are ejected into the air. The material that erupts depends on how sticky or fluid a volcano's magma is.

Lava is the name for magma that is ejected onto the earth's surface. There are two kinds of lava: the acid lava and basic lava.

The gas that is emitted during eruptions is hot. It includes steam, carbon dioxide, sulphur dioxide, and nitrogen. When these gases rush down the volcano, it is called a nuée ardente.

The solid materials spewed out of the volcano include ash, dust, cinders and volcanic bombs. They are called pyroclasts. The dust, which can be carried great distances by winds, affect the world's climate by reducing the amount of sunlight reaching the earth. The ash, which may combine with water in a stream, forms a boiling mudflow known as lahars. These lahars may reach high speeds or 100km per hour and flow down the volcanoes. They are extremely dangerous and can bury towns such as Armero and remove trees and houses, which lie in their way. Volcanic bombs are large fragments of rocks and are generally called cinders.

Acid lava is produced when there is subduction at destructive plate boundaries. This lava is silica-rich and has temperatures of about 800°C. It is viscous and moves slowly. It also cools and solidifies quickly and produces steep sided volcanoes. As it solidifies quickly, it may solidify in the central pipe, blocking the passageway and causing a buildup of pressure, which produces violent eruptions. The solidified lava forms sheets of rough, jagged rocks called Flows of boulders and rubble called block rubble and mounds of lava called domes are also formed.

Basic lava is produced at constructive plate boundaries. This lava is rich in iron and magnesium and is rather fluid. It has a temperature of about 1200°C. It flows for a distance before solidifying and forms gently sloping volcanoes. The lava solidifies into smooth, folded sheets of rock called pahoehoe.

In the course of studying igneous rocks, it was found that acidic rocks melt at lower temperature compared to basic and ultrabasic rocks. Because melting is the reverse of crystallization, understanding how a rock melts will help us understand the process of magma formation, as well as the process of formation of igneous rocks from a magma.

**95. Correct Answer is : (c) 1 and 3**

Yardang landform is made by wind

Sandbank is an accumulation of sand in an estuary or in a coastal environment

Striation is a tiny groove on the surface of an ice abraded rock produced by the scouring action of rocks and frozen into the base of a glacier

outwash, deposit of sand and gravel carried by running water from the melting ice of a glacier and laid down in stratified deposits. An outwash may attain a thickness of 100 m (328 feet) at the edge of a glacier, although the thickness is usually much less; it may also extend many kilometres in length. For example, outwash deposits from the Wisconsin Glaciation can be traced to the mouth of the Mississippi River, 1,120 km (700 miles) from the nearest glacial terminus.

**96. Correct Answer is : (c) Food Wastage**

Food Ministry seeks inclusion of food wastage as school subject:

Food Ministry has written to the HRD Ministry and the State Education Ministers to include the "Food Wastage" as a subject at School level

Objective: To create awareness amongst the youth. Inclusion of a chapter on this topic will be instrumental in making children conscious about the important issue from the very growing age.

**97. Correct Answer is : (a) Ministry of Labour & Employment**

Union Minister of Labour & Employment Shri Mallikarjun Kharge conferred the V.V.Giri Memorial Award 2010 to Dr. Panchmal Dinanath Shenoy as recognition of outstanding contributions towards the understanding of the emerging labour issues. The V.V. Giri Memorial Award was instituted in 2008 by V.V.Giri National Labour Institute, Ministry of Labour & Employment to commemorate the birth anniversary (10th August) of former President of India late Shri V.V.Giri for outstanding research contributions in the area of labour studies. The award carries an amount of Rs.1 lakh and a citation.

**98. Correct Answer is : (c) Pochampalli in Telengana region of Andhra Pradesh**

On 18 April, 1951, Vinoba got 100 acres of land as donation in Pochampalli village of Andhra Pradesh. Thus, triggered the phenomenal Bhoodan-Gramdan and people's movement. Now 60 years have gone by and it is now time to attempt having an overview of the movement.

In reality, the movement was only part of an overarching movement called Sarvodaya. Therefore, when we attempt to overview Bhoodan, the context would be the entire Sarvodaya movement.

'Sarvodaya', the word, was coined 100 years ago. In ancient literature, this word might have been used in some context, but its use as a definitive philosophy is only 100 years old.

This word took shape in Gandhi's mind in 1904 when he read Ruskin's book 'Unto This Last', but the word took concrete shape in 1908 when Gandhi translated the gist of this book in Gujarati. The translation is an example of Gandhi's literary acumen. The title of Ruskin's book was taken from a Biblical story 'Unto This Last', which means that even the last person should get an equal share. In those days, the concept of 'Greatest good of greatest number' was in vogue. But Gandhi said that Sarvodaya meant the rise of all, and it was not merely the greatest good of the greatest number or of the last person standing in the queue. From then on, the ideology of Sarvodaya got firmly established in social discourses. The detailed explanation of the meaning of Sarvodaya can be found in 'Hind Swaraj' that was written by Gandhi in 1909. The overview that we are attempting here would be against this background.

**99. Correct Answer is : (c) Bihar, Orissa and West Bengal**

Austric is a large hypothetical grouping of languages primarily spoken in Southeast Asia, the Pacific, and the eastern Indian subcontinent. It includes the Austronesian language family of Taiwan, the Malay Archipelago, Pacific Islands, and Madagascar, as well as the Austroasiatic language family of mainland Southeast Asia, Eastern India, and Bangladesh.

The Austric languages of India belong to the Austro-Asiatic sub-family, which are represented by languages of the Munda or Kol Group, spoken in the central, eastern and north-eastern India and languages of the Mon-Khmer group like Khasi and Nicobarese. These are very ancient languages which have been in existence much before the advent of Aryans and were referred in ancient Sanskrit literature as Nisadas. The most important language of the Austric group is Santhali, which is spoken by over 5 million Santhals and is the largest spoken among the Adivasi languages. Mundari, spoken by about a million Mundas, is another important language of this group.

**100. Correct Answer is : (b) 1 and 4 only**

**FORMER VICE PRESIDENTS OF INDIA**

Dr. S. Radhakrishnan

Dr. Zakir Hussain

Sh. V. V. Giri

Sh. Gopal Swarup Pathak

Sh. B. D. Jatti

Sh. M. Hidayatullah

Sh. R. Venkataraman

Dr. Shanker Dayal Sharma  
Sh. K.R. Narayanan  
Sh. Krishan Kant  
Sh. Bhairon Singh Shekhawat  
Shri M. Hamid Ansari