Solutions

1. Ans. (b) Caesium

When exposed to certain frequencies of radiation, such as radio waves, the subatomic particles called electrons that orbit an atom's nucleus will "jump" back and forth between energy states. Clocks based on this jumping within atoms can therefore provide an extremely precise way to count seconds. It is no surprise then that the international standard for the length of one second is based on atoms.

Since 1967, the official definition of a second is 9,192,631,770 cycles of the radiation that gets an atom of the element called caesium to vibrate between two energy states.

2. Ans. (a) Potassium

Aldosterone is a key steroid hormone critical for maintaining salt and water balance. It regulates the concentration of minerals, like sodium and potassium, in the fluid outside your cells.

When your sodium levels drop, or potassium levels rise, your body signals your adrenal glands to release aldosterone into your blood.

Aldosterone signals your kidneys to reabsorb sodium into the blood, and acts on your sweat glands to reduce sodium loss through sweat.

3. Ans. (a) Carbon dioxide

Carbon dioxide (CO2) gas dissolved in water can cause water to become acidic.

The acidity of water from dissolved CO2 can be reduced by a base such as baking soda (sodium bicarbonate).

4. Ans. (c) Magnesium

Forms taken up by plants: Mg++

Functions in plants: a part of the chlorophyll molecule - essential in photosynthesis: related to phosphorus metabolism: large quantities found in seed.

Mg deficiency symptoms: Mg is mobile, so symptoms occur first in old leaves; A whitish or yellowish striping effect on grasses.

5. Ans. (b) 1, 3, 2, 3

$Fe_2O_3 + 3CO = 2Fe + 3CO_2$

Hematite + Carbon Monoxide = Iron + Carbon Dioxide

In this reaction, the iron oxide is reduced to iron, and the carbon is oxidised to carbon dioxide.

6. Ans. (a) To increase the life of the bulb

Argon gas is used in fluorescent and incandescent light bulbs to stop the oxygen in the light bulbs from corroding the hot tungsten filament.

The use of argon in light bulbs prevents the evaporation of the tungsten filaments, which results in increased light bulb life.

Argon is also used to create an inert atmosphere for growing semiconductor crystals, arc welding and for processes that need protection from other kinds of atmospheric gases.

7. Ans. (d) T = tc + 273.15

Lord Kelvin, working in Scotland, developed the Kelvin scale in 1848. His scale uses molecular energy to define the extremes of hot and cold. Absolute zero, or 0 K, corresponds to the point at which molecular energy is at a minimum. The Kelvin scale is preferred in scientific work, although the Celsius scale is also commonly used. Temperatures measured on the Kelvin scale are reported simply as K, not °K.

T (in °C) + 273.15 = T (in K)

T (in K) − 273.15 = T (in °C)

8. Ans. (d) Wooden hollow pipe loaded in a vacuum

Sound is a kind of energy created when something vibrates.

When this vibration reaches an ear, it is translated into what we recognize as a sound.

Sound vibration must travel through matter. Therefore, it can travel through air and water but not through vacuum.

9. Ans. (a) 10-7 cm

Amount: 1 nanometer (nm) of length

Equals: 0.00000010 centimetres (cm) in length.

This is equal to 10^{-7} cm.

10. Ans. (c) 1 and 2 only

There are two conditions that must be met for an object to be in equilibrium. The first condition is that the net force on the object must be zero for the object to be in equilibrium. If net force is zero, then net force along any direction is zero.

Kinetic energy (KE) is the energy of motion, and kinetic energy is not always conserved in a collision

Energy and momentum are always conserved.

11. Ans. (c) 3 and 4 only

An electric fuse is a device which is used to limit the current in an electric circuit. The fuse safeguards the circuit and the electrical appliances from being damaged.

The fuse wire is generally an alloy of lead and tin. It has a low melting point and breaks the circuit if the current exceeds a safe value.

The thickness and length of the fuse wire depends on the maximum current allowed through the circuit.

It is connected in series in the beginning of the electric circuits.

If too many electrical appliances of high power rating (like electric iron, water heater etc) are switched on at the same time, they draw an extremely large current from the circuit. This condition is called overloading and it can cause overheating of the wiring and lead to a fire. (heating effect and magnitude of the current)

12. Ans. (b)

A sinkhole (in Karst topography) is a hole in the ground that forms when water dissolves surface rock. Often, this surface rock is limestone, which is easily eroded, or worn away, by the movement of water.

Formation of a Sinkhole: In a landscape where limestone sits underneath the soil, water from rainfall collects in cracks in the stone. These cracks are called joints. Slowly, as the limestone dissolves and is carried away, the joints widen until the ground above them becomes unstable and collapses. The collapse often happens very suddenly and without very much warning. Water collects in these collapsed sections, forming sinkholes.

Sinkholes also form when the roofs of caves collapse. Sinkholes are often funnel-shaped, with the wide end open at the surface and the narrow end at the bottom of the pool.

Sinkholes vary from shallow holes about 1 meter (3 feet) deep, to pits more than 50 meters (165 feet) deep.

13. Ans. (d)

Rejuvenation occurs when the river's base level falls (i.e. when sea level falls). This can be a consequence of either a fall in the amount of sea water or the land rising. Incised meanders are meanders which are particularly well developed and occur when a river's base level has fallen giving the river a large amount of vertical erosion power, allowing it to down cut. Hence, 2nd statement is correct.

There are two types of incised meanders, entrenched meanders and ingrown meanders.

As they are products of rejuvenation, they are not formed in mature stage of a river.

14. Ans. (a)

Glaciers cut distinctive U-shaped valleys with a flat floor and steep sides. These are an example of a glacial erosion landform.

Example: As the main glacier erodes deeper into the valley, the tributary is left higher up the steep sides of the glacier.

15. Ans. (b)

Species richness is generally lower in the Arctic than at lower latitudes, and richness also tends to decline from the low to high Arctic.

Many hypotheses have been advanced to explain the overall decline of biodiversity with increasing latitude, although there is still no consensus about a mechanistic explanation.

Abiotic factors include lower available energy and area at high latitudes, and the relatively young age of Arctic ecosystems.

Among biotic factors, latitudinal differences in rates of diversification have been suggested, but empirical evidence for this as a general principle is lacking.

16. Ans. (b)

Tides are the rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun and the rotation of Earth.

Statement 2 is also correct. But it is not the correct explanation for the 1st statement.

17. Ans. (d)

Tuberculosis (TB) is caused by a type of bacterium called Mycobacterium tuberculosis.

It's spread when a person with active TB disease in their lungs coughs or sneezes and someone else inhales the expelled droplets, which contain TB bacteria.

One would have to spend prolonged periods (several hours) in close contact with an infected person to catch the infection yourself.

For example, TB infections usually spread between family members who live in the same house. It would be highly unlikely for you to become infected by sitting next to an infected person on a bus or train. Hence, statement 1 is incorrect.

18. Ans. (b)

Bioaccumulation is defined as the increase in concentration of a substance(s) in an organism or a part of that organism.

The affected organism has a higher concentration of the substance than the concentration in the organism's surrounding environment.

For the second statement: Microorganisms eat pesticide infected things. Invertebrates eat hundreds of the microorganisms and plants infected with the pesticides, accumulating a pretty large amount of the toxin in them.

The invertebrates are generally then eaten by larger invertebrates or amphibians, which ingest hundreds of similar organisms, accumulating an even higher concentration of toxins in their bodies. Then the fish eat hundreds of these organisms, accumulating the highest concentration of toxins in themselves.

19. Ans. (d) Flying fish

Cuttlefish or cuttles are marine animals of the order Sepiida. They belong to the class Cephalopoda, which also includes squid, octopuses, and nautiluses. Cuttlefish have a unique internal shell, the cuttlebone. Despite their name, cuttlefish are not fish but molluscs.

Jellyfish are soft bodied, free-swimming aquatic animals with a gelatinous umbrella-shaped bell and trailing tentacles.

Lepismasacharina commonly known as silver fish is small wingless insect belongs to phylum-Arthropoda.
The Exocoetidae are a family of marine fishes in the order Beloniformes class Actinopterygii. Fish of this family are known as flying fish.

20. Ans. (a) Adipocyte

Adipocytes are the major source of leptin production, and plasma leptin concentrations directly correlate with the amount of total body fat.
Adipocytes are highly specialized cells that play a crucial role in the energy balance of most vertebrates. Adipocytes convert excess energy to tri-acylglycerol and deposit it during feeding in preparation for periods of food deprivation.
Adipocytes may become enlarged by increased fat storage.

21. Ans. (c) Nereis: Pseudopodia

Euglena move by a flagellum (plural , flagella), which is a long whip-like structure that acts like a little motor.
The paramecium uses its cilia to sweep the food along with some water into the cell mouth after it falls into the oral groove.
The underside of the starfish is covered with hundreds of tube feet, which it uses for walking around, for attaching tightly to rocks, and for holding on to prey.
Nereis possess setae and parapodia for locomotion

22. Ans. (c) Golgi bodies

- Lysosomes are spherical membranous sacs of enzymes.
- The lysosome membrane helps to keep its internal compartment acidic and separates the digestive enzymes from the rest of the cell.
- Lysosomes are formed by budding from the Golgi complex.

23. Ans. (b) 3

There are 3 double-layered membrane layers, which the protein has to pass to reach its destination.

24. Ans. (c) Expansion and compression of the air

Application of temperature changes in the atmosphere is in adiabatics, or temperature change which are caused by compressing or allowing air to expand.

25. Ans. (a) Clouds which do not extend beyond the freezing level

In colder clouds: droplets formed by Bergeron mechanism. But, in many parts of the world the air is too warm for ice crystals to form.
This being the case, rain and snow cannot develop following the Bergeron Process.
Instead, tiny droplets form as they collide into one another creating larger and larger droplet, this is known as collision- coalescence process. So, warmer clouds are associated with this keyword.

26. Ans. (b) Leh

As temperature of Leh will be lowest during winters from the given options, the highest pressure will be at Leh.

27. Ans. (a) A-2, B-4, C-1, D-3

The Chamberlin–Moulton planetesimal hypothesis was proposed in 1905 by geologist Thomas Chrowder Chamberlin and astronomer Forest Ray Moulton to describe the formation of the solar system.
Mechanism of the Thermal Contraction Theory: Jeffrey's theory is based essentially on the history of the contraction of the earth
Famous German geologist Kober has presented a detailed and systematic description of the surface features of the earth in his book 'Der Bau der Erde'.
Kober's geosynclinal theory is based on the forces of contraction produced by the cooling of the earth
Hypothesis of sliding continent was given by Daly.

28. Ans. (b) Xenon

Electronic Flash differs from the consumable bulb flash in important aspects. Instead of creating light by burning up in an atmosphere containing oxygen, a consumable material (each bulb being used therefore only once), it produces a brilliant incandescent by discharging a current for a brief instant through a rarified gas, usually **xenon**.
The gas glows every time the discharge is made through it but it is not consumed, so that many thousands of flashes are obtainable from a single tube, which helps to offset the much higher cost of the initial apparatus.

29. Ans. (b) All particles of compound are of only one type.

A mixture is made from different substances that are not chemically joined.
Compound:

- Two or more elements combine together chemically to form a new substance called compound.
- The different elements are chemically joined together.
- Compounds are homogeneous, i.e. their properties are the same throughout
- The compound has properties different from the elements it contains.
- It can only be separated into its elements using chemical reactions. (not using physical methods)
- During the formation of a compound from its elements, a certain amount of energy in the form of heat, light, electricity is either absorbed or evolved

30. Ans. (d) 1 and 2

There are two types of water hardness: temporary and permanent hardness.
Temporary hardness is due to the presence of calcium hydrogen carbonate $Ca(HCO3)2(aq)$ and magnesium hydrogen carbonate $Mg(HCO3)2(aq)$.

31. Ans. (d) Element with 18 protons and 22 neutrons

Isobar: one of two or more atoms having equal atomic weights but different atomic numbers.

	Mass number	Electrons	Neutrons
Calcium	40	20	20
Argon	40	18	22

32. Ans. (c) Principle of calorimetry

Heat lost by hot object = Heat gained by cold object

where we ignore heat gained or lost from/to the surroundings. The study of heat gained and lost in this manner is often called Calorimetry.

33. Ans. (c) 5/4 R

$$R = \frac{\rho L}{A}$$

ρ = resistivity
L = length
A = cross sectional area

So, resistance of Wire 2 is R/4 as radius is half of wire 1, so area would be 4 times of wire 1.

Now for resistance in series. R= R1 + R2.

Therefore, Final R= R + R/4 = 5R/4

34. Ans. (d) scattering of light

According to Rayleigh's law, the intensity of scattered light varies inversely as the fourth power of its wavelength.

Sunlight consists of seven colours. Of these, red has the maximum wavelength. During sunrise and sunset, the rays have to travel a larger part of the atmosphere because they are very close to the horizon.

Therefore, light other than red is mostly scattered away. Most of the red light, which is the least scattered, enters our eyes. Hence, the sun and the sky appear red.

35. Ans. (C) A-2, B-4, C-1, D-3

Cirrus clouds are formed at high altitudes (8,000 – 12,000m). They are thin and detached clouds having a feathery appearance. They are always white in colour.

Clouds with extensive vertical development are cumulus and cumulonimbus. And they cause heavy rainfall and thunderstorms.

Stratus clouds are the lowest forming and are often called fog or mists when they are earth-bound Stratus clouds are formed when a large air mass cools at the same time (e.g. – a warm air parcel drifts into or above a cooler region). They are therefore, horizontally forming.

36. Ans. (d) Navigation of ships and laying down submarine cables

In the exclusive economic zone, the coastal nation has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, including production of energy from the water, currents and winds.

However, In the exclusive economic zone, all nations, whether coastal or land-locked shall enjoy the freedom of navigation and overflight and of the laying of submarine cables and pipelines, and other internationally lawful uses of the sea. That means fourth right is not exclusive only for the coastal nations.

37. Ans. (c) Gujarat, Odisha and West Bengal

India Integrated Coastal Zone Management Project

- To conserve, project and manage the coastal and marine environment, the Ministry is implementing the India ICZM Project with the World Bank assistance.
- For the implementation of the project the Ministry has established a Society of Integrated Coastal Management (SICOM) as nodal body under the Society Registration Act, in Delhi.
- The ICZM Project is being implemented as pilot investments in the coastal states of Gujarat, Odisha and West Bengal.
- National activities are implemented through SICOM along with monitoring of activities carried out by three selected states.
- The project has four implementing agencies-MoEF at the national level with lead responsibilities, and the Departments of Forests and Environment (DoEF) of the three participating states.

38. Ans. (a) 1 only

National Water Academy (formerly known as Central Training Unit) was set up in Central Water Commission Opens in a new window by the Ministry of Water Resources, RD and GR, opens in a new window Govt. of India in the year 1988, to impart training to the in-service engineers of various Central/State organizations involved in the Development & Management of Water Resources.

It was established under USAID assistance and strengthened with the subsequent assistance received from the World Bank.

It is located at Pune.

39. Ans. (c) >P

Aluminum has a resistivity varying from 2.65 to 2.82 × 10−8 Ω m.

The resistivity of copper is generally given as: 1.72 x 10-8 Ω.m.

So, since resistivity of aluminium is higher than that of copper, so Power dissipated will be greater than P. this is because rest of the factors (l, A and i) are constant.

40. Ans. (a) Pascal's law

Pascal's law is a principle in fluid mechanics that states that a pressure change occurring anywhere in a confined incompressible fluid is transmitted throughout the fluid such that the same change occurs everywhere.

This principle is stated mathematically as:

P= P + rgh

41. Ans. (b) 1-4-2-3

Composition of Dry Air (Substance, % by volume)
Nitrogen, N2 78.08
Oxygen, O2 20.95
Argon, Ar 0.93
Carbon dioxide, CO2 0.033
Neon, Ne 0.0018
Helium, He 0.00052
Methane, CH4 0.0002
Krypton, Kr 0.00011
Dinitrogen oxide, N2O 0.00005
Hydrogen, H2 0.00005
Ozone, O3 0.000001

42. Ans. (a) Mizoram

Scheduled Tribes	
State with highest proportion of Scheduled Tribes	Mizoram (94.5 %)
State with lowest proportion of Scheduled Tribes	Goa (0.04 %)
UT with highest proportion of Scheduled Tribes	Lakshadweep (94.5 %)
UT with lowest proportion of Scheduled Tribes	A & N Islands (8.3 %)

43. Ans. (d) Himalayas

Volcanic mountains are very common along the destructive plate boundaries i.e. Oceanic-continental plate boundaries which are yet uncovered in the rock folded mountains formed due to continental –to continental plate collision.

The Himalayas are also a plate-to-plate collision tectonic boundary. In this case, the Indian Plate [of the Indian Subcontinent] is colliding head-on with the Eurasian Plate. Both plates are comprised of continental lithospheric crust, so there is no appreciable distinction in density.

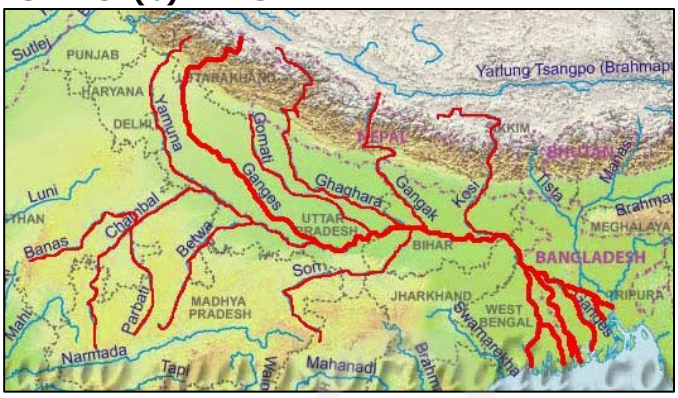
44. Ans. (d) Ling nut

Karewa sediments are treasures of many human civilizations and habitations. In fact, the agriculture of the valley dominantly survives and sustains on Karewa soils. The world famous saffron from Pampore and apples from Shopian are best examples.

The famous almond orchids are best grown in the soils of karewas.

The karewas are mainly devoted to the cultivation of saffron, almond, walnut, apple and orchards. Ling nuts (singharas) grow throughout the East of India: West Bengal, Jharkhand, and Bihar are examples of such regions.

45. Ans. (b) 2-1-3-4



46. Ans. (d) 1, 2, 3 and 4

List of Natural World Heritage Sites. Name of UNESCO World Heritage Site, location, year of notification, and total area is as follows:

Sl. No.	**Name of Natural World Heritage Site**	**State**	**Year of Notification**
1	Kaziranga National Park	Assam	1985
2	Keoladeo Ghana National Park	Rajasthan	1985
3	Manas Wildlife Sanctuary	Assam	1985
4	Nanda Devi National Park and Valley of Flowers	Uttarakhand	1982 2005
5	Sunderbans National Park	West Bengal	1984
6	Western Ghats	Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala	2012
7	Great Himalayan National Park	Himachal Pradesh	2014

47. Ans. (a) A-4, B-3, C-2, D-1

	Name of the Railway Zone	**Zonal Headquarter**
1	Central Railway	Mumbai
2	Eastern Railway	Kolkata
3	East Central Railway	Hajipur

4	East Coast Railway	Bhubaneshwar
5	Northern Railway	Baroda House, New Delhi
6	North Central Railway	Allahabad
7	North Eastern Railway	Gorakhpur
8	North Frontier Railway	Maligaon, Guwahati
9	North Western Railway	Jaipur
10	Southern Railway	Chennai
11	South Central Railway	Secunderabad
12	South Eastern Railway	Garden Reach, Kolkata
13	South East Central Railway	Bilaspur
14	South Western Railway	Hubli
15	Western Railway	Mumbai CST
16	West Central Railway	Jabalpur

48. Ans. (c) Lymph is also circulated by the blood circulating heart.

The lymphatic system is a complex system of fluid drainage and transport, and immune response and disease resistance.

Fluid that is forced out of the bloodstream during normal circulation is filtered through lymph nodes to remove bacteria, abnormal cells and other matter.

This fluid is then transported back into the bloodstream via the lymph vessels.

Lymph only moves in one direction, toward the heart.

49. Ans. (b) Amphibia and Reptilia

Mammalian and avian hearts have four chambers two atria and two ventricles.

Amphibians and reptiles, by contrast, have a three-chambered heart. The three-chambered heart consists of two atria and one ventricle.

Fish possess the simplest type of true heart a two-chambered organ composed of one atrium and one ventricle.

50. Ans. (a) Lactic acid

Muscle cramping is a common problem encountered by athletes and nonathletes alike. Defined as painful involuntary skeletal muscle contractions, cramps may be categorized as either nonexercise related or exercise related.

Traditionally, such cramping was believed to arise from dehydration, electrolyte imbalances (including magnesium, potassium and sodium), accumulation of lactic acid, or low cellular energy levels.

51. Ans. (c) It typically has lower daily liquidity and higher fees than mutual fund shares.

- An ETF, or exchange-traded fund, is a marketable security that tracks an index, a commodity, bonds, or a basket of assets like an index fund.
- Unlike mutual funds, an ETF trades like a common stock on a stock exchange.
- ETFs experience price changes throughout the day as they are bought and sold.
- ETFs typically have higher daily liquidity and lower fees than mutual fund shares, making them an attractive alternative for individual investors.

52. Ans. (c) 65 years

http://pib.nic.in/newsite/PrintRelease.aspx?relid=173147

In continuance of the several initiatives under taken by Pension Fund Regulatory and Development Authority (PFRDA) during the last few years to increase the pension coverage in the country, PFRDA has now increased the maximum age of joining under NPS-Private Sector (i.e. All Citizen and Corporate Model) from the existing 60 years to 65 years of age.

Now, any Indian Citizen, resident or non-resident, between the age of 60- 65 years, can also join NPS and continue up to the age of 70 years in NPS. With this increase of joining age, the subscribers who are willing to join NPS at the later stage of life will be able to avail the benefits of NPS.

53. Ans. (d) Y. M. Deosthalee

The Reserve Bank of India has constituted a 10-member 'High Level Task Force on Public Credit Registry (PCR) for India', which will, among other things, suggest a roadmap for developing a transparent, comprehensive and near-real-time PCR for India.

Headed by YM Deosthalee, ex-CMD, L&T Finance Holdings, the task force includes Sekar Karnam, DMD & Chief Credit Officer, SBI; Vishaka Mulye, ED, ICICI Bank; Rashesh Shah, Chairman and CEO, Edelweiss Group; and Sriram Kalyanaraman, MD and CEO, National Housing Bank.

https://www.thehindubusinessline.com/money-and-banking/rbi-sets-up-task-force-on-public-credit-registry/article9920197.ece

54. Ans. (a) Iran

October 2017: A press release from the Ministry of External Affairs (MEA) noted that the consignment would be the first to use the new route via **Chabahar (Iran**) to access Afghanistan, even as India plans similar transfers in the coming months.

The shipment of wheat is a landmark moment as it will pave the way for operationalisation of the Chabahar port as an alternative, reliable and robust connectivity for Afghanistan.

It will open up new opportunities for trade and transit from and to Afghanistan and enhance trade and commerce between the three countries (India, Iran and Afghanistan) and the wider region.

http://www.thehindu.com/news/national/india-ships-wheat-to-afghanistan-via-chabahar/article19945498.ece

55. Ans. (a) 1 only

With simple, diverse and growth-oriented offerings, IPPB aims to give every Indian access to efficient banking services.

Incorporated as a **Public-Sector Bank** under the Department of Posts with **100% GOI equity**, IPPB has launched on January 30th, 2017 in **Ranchi and Raipur** with the objective of being present in all corners of India by the end of the year.

56. Ans. (d) 1, 2, 3 and 4

The Commission performs the following functions, namely:

Inquire, Suo motu or on a petition presented to it by a victim or any person on his behalf, into complaint of

a) violation of human rights – this is extremely obvious

b) negligence in the prevention of such violation, by a public servant.

c) intervene in any proceeding involving any allegation of violation of human rights pending before a court with the approval of such court.
d) visit, under intimation to the State Government, any jail or any other institution under the control of the State Government, where persons are detained or lodged for purposes of treatment, reformation or protection to study the living conditions of the inmates and make recommendations.

e) review the safeguards provided by or under the Constitution or any law for the time being in force for the protection of human rights and recommend measures for their effective implementation.
f) review the factors, including acts of terrorism that inhibit the enjoyment of human rights and recommend appropriate remedial measures.

g) study treaties and other international instruments on human rights and make recommendations for their effective implementation.

h) undertake and promote research in the field of human rights.
i) spread human rights literacy among various sections of society and promote awareness of the safeguards available for the protection of these rights through publications, the media, seminars and other available means.

j) encourage the efforts of non-governmental organisations and institutions working in the field of human rights.

57. Ans. (b) 1, 2, 3 and 4

Disqualification of MP's and MLA's on the ground of holding office of profit is a controversial topic of nation-wide debate. It began with the disqualification of Samajwadi Party MP Jaya Bachchan from Rajya Sabha on March 17, 2006 with retrospective effect from July 14, 2004.

There are separate provisions of disqualification for the Members of Parliament and MLAs. Our constitution clearly mentions that the Parliament has the power to make a law in respect to the issue of qualification and disqualification of the membership in case:
(i) He holds any office of profit under the Government of India or of any state, other than an office declared by a law of Parliament not to disqualify its holder.
(ii) He is of unsound mind and stand so declared by a competent court.
(iii) He is an undischarged insolvent.
(iv) He is not a citizen of India or has voluntarily acquired the citizenship of a foreign state, or is under any acknowledgement or allegiance or adherence to a foreign state, and
(v) It is he so disqualified by or under any law of Parliament. It applies to the case of 'defection' as prescribed in tenth schedule.

58. Ans. (c) At least four States

Trinamool Congress became the 7th political party to be recognized as a National Party in September 2016.

Conditions for Recognition as a National Party	
1	Secure at least 6% of the valid vote in an Assembly or a Lok Sabha General Election in any four or more states and won at least 4 seats in a Lok Sabha General Election from any State or States
2	Win at least 2% of the total Lok Sabha seats in a Lok Sabha General Election and these seats have to be won from at least 3 states
3	The party is recognized as a State Party in at **least four states**

59. Ans. (b) It is under the administrative control of the Department of Space.

Antrix Corporation Limited (ACL), Bengaluru is a wholly owned Government of India Company under the administrative control of the Department of Space.
Antrix Corporation Limited was incorporated as a private limited company owned by Government of India in September 1992 as a Marketing arm of ISRO for promotion and commercial exploitation of space products, technical consultancy services and transfer of technologies developed by ISRO.
As the commercial and marketing arm of ISRO, Antrix is engaged in providing Space products and services to international customers worldwide.

60. Ans. (b) 1, 2 and 3

Verses ascribed to Kabir have been compiled in three distinct but overlapping traditions. The Kabir Bijak is preserved by the Kabirpanth (the path or sect of Kabir) in Varanasi and elsewhere in Uttar Pradesh, the Kabir Granthavali is associated with

the Dadupanth in Rajasthan, and many of his compositions are found in the Adi Granth Sahib.

Bijak is the best known of the compilations of the Kabir, and as such is the holy scripture for followers of the Kabirpanthi religion. The Bijak, an anthology of Kabir's verses compiled in Eastern Uttar Pradesh and/or Bihar, is one of Kabir's most influential works.

In the case of the Guru Granth Sahib, Kabir's poems were collected to be sung and are organized in ragas.

61. Ans. (d) 1, 2 and 3

Sufi silsilas began to crystallise in different parts of the Islamic world around the twelfth century.

The word silsila literally means a chain, signifying a **continuous link between master and disciple**, stretching as an unbroken spiritual genealogy to the Prophet Muhammad.

It was through this channel that spiritual power and blessings were transmitted to devotees.

Special rituals of initiation were developed in which initiates took an oath of allegiance, wore a patched garment, and shaved their hair. **Thus, all statements are correct**.

62. Ans. (b) Purusha Sukta

- surya sukta-- a hymn in the praise of the sun god
- dana stuti-- these are hymns in the praise of those who donate
- urna sutra-- is the dot/mark on the forehead that is put before performing rituals.
- purusha sukta--- contains hymns about marriage ceremonies

63. Ans. (d) 2 only

Non-Brahmin lower caste movement took place in Madras and Maharashtra

Karnataka was not affected by the NCM. There was labour unrest in Assam, Bengal and Madras

Statement 4 is incorrect as after the Chauri-Chaura incident the movement was completely stopped.

64. Ans. (d) Italy

World food India is shaping up to be one of the premier food exhibitions for the food processing industry in India.

An initiative of the Indian government, this year's edition is set to feature 400+ exhibitors both local and international.

Italy due to its excellence in all aspects of the food processing chain will be a focus country.

65. Ans. (c) Goa

The Department of Biotechnology (DBT) of the Ministry of Science and Technology, Government of India, has collaborated with Nobel Media AB, Sweden to hold the Nobel Prize Series in India for five years.

The second edition of the Nobel Prize Series - India 2018 will be **held at Panjim, Goa** in partnership with Government of Goa on February 1-2, 2018. It will start on February 1, 2018 with the formal inauguration of the Nobel Prize Series - India 2018, Science Exhibition by the Hon'ble Chief Minister Mr. Manohar Parrikar.

66. Ans. (b) philately

Minister of Communications Shri Manoj Sinha today launched a Pan India scholarship program for school children called Deen Dayal SPARSH Yojana to **increase the reach of Philately**.

Under the scheme of SPARSH (Scholarship for Promotion of Aptitude & Research in Stamps as a Hobby), it is proposed to award annual scholarships to children of Standard VI to IX having good academic record and also **pursuing Philately** as a hobby through a competitive selection process in **all postal circles**.

The Minister said that to avail this scholarship, a child must be a student of a recognized school within India and the concerned school should have a Philately Club and the candidate should be a member of the Club.

http://pib.nic.in/newsite/PrintRelease.aspx?relid=173212

67. Ans. (b) Sri Ranganathaswami Temple, Srirangam

http://www.thehindu.com/news/national/tamil-nadu/srirangam-temple-wins-unesco-award/article19976575.ece

The massive renovation and restoration effort at the Sri Ranganathaswamy Temple in Srirangam has won the UNESCO Asia Pacific Award of Merit 2017 for cultural heritage conservation.

68. Ans. (b) China

- The 2017 Women's Hockey Asia Cup was the ninth Hockey Asia Cup for women.
- It was held from 28 October to 5 November 2017 in Kakamigahara, Gifu, Japan.
- The winner of this tournament qualified for the 2018 World Cup in England.
- India won their second title, **after beating China** in the final

69. Ans. (d) In the Maritime Agenda, 2010-2020, a target or 300 MT Port capacity has been set for the year 2020.

Statement 1 and 3 are factual and are correct.

The Maritime Agenda projects a total traffic of 2494.95 million tonnes for all major and non-major ports taken together and a capacity of 3280.04 million tonnes. Hence, statement 4 is incorrect.

70. Ans. (d) The Commonwealth Heads of Government Meeting (CHOGM) was held in 2016 at Malta.

The Commonwealth Heads of Government Meeting is held every 2 years. It is the association's ultimate policy and decision-making forum.

The November 2015 Meeting, to be held in Malta, had the theme of 'Commonwealth – Adding Global Value'.

71. Ans. (a) 91st Amendment

On July 7, the 91st Amendment to the Constitution, limiting the size of the Council of Ministers at the Centre and the States to no more than 15 per cent of the numbers in the Lok Sabha or the State Legislature, came into effect.

72. Ans. (b) 1, 2 and 3

After the Mumbai attacks in 2008, there has been a paradigm shift in the maritime security apparatus that increased emphasis on surveillance, intelligence gathering and information sharing amongst the various stakeholders to ensure an effective response to any emerging situation.

In Feb 2009, the Indian Coast Guard (ICG) was additionally designated as the authority responsible for **coastal security in territorial waters**, including areas to be patrolled by the Coastal Police.

The Coast Guard is also responsible for **overall coordination** between Central and State agencies in matters relating to Coastal Security.

In order to achieve **near gap-free surveillance** of the entire coastline, 38 additional Radar Stations and 08 Mobile Surveillance Systems are being installed.

73. Ans. (c) Nirbhay

Nirbhay missile is India's first indigenously designed and developed long range sub-sonic cruise missile.

It is designed and made by DRDO (Defence Research & Development Organisation).

The Nirbhay missile can be deployed from multiple platforms.

74. Ans. (d) Shri P. D. Siwal

Power Ministry constitutes a Committee to investigate into the causes of the NTPC, Unchahar Thermal Power Plant accident

The composition of the committee would be as follows:

S. No	Name	Position
1	Shri P.D. Siwal, Member (Thermal), CEA	Chairman
2	Shri Subir Chakraborty, Director (Projects), UPRVUNL	Member
3	Shri Dhawal Prakash Antapurkar, Director of Steam Boilers, Maharashtra	Member
4	Dr. L.D. Papney, Chief Engoneer, (TE&TD), CEA	Member & Convenor

75. Ans. (b) Dheeraj Jindal

http://www.tribuneindia.com/news/nation/indian-short-film-the-school-bag-wins-award-in-montreal/493389.html

Indian short film 'The School Bag', which tells a story based in Pakistan, has won the Best Short Film Award at the South Asian Film Festival of Montreal (SAFFM).

It is directed by Dheeraj Jindal.

76. Ans. (a) 48 kg

Indian sporting legend M.C. Mary Kom (48kg) clinched an unprecedented fifth gold medal but Sonia Lather (57kg) settled for silver at the ASBC Asian Confederation women's boxing championships.

This was Mary Kom's first international gold medal since the 2014 Asian Games.

77. Ans. (b) Caring for the Planet starts from the Ground

World Soil Day 2017 is celebrated on 5 December under the theme "Caring for the Planet starts from the Ground," with activities aiming to communicate messages on the importance of soil quality for food security, healthy ecosystems and human well-being.

Soils not only produce 95% of the food we consume, they also have a huge potential for taking carbon from the atmosphere and offsetting the greenhouse gas emissions.

Keeping the soil healthy can bring a multitude of gains, from food security to sustainable livelihoods and climate benefits.

78. Ans. (b) H. S. Prannoy

H S Prannoy has won the men's singles title at the 82nd Senior National Championship Senior National Badminton Championships in Nagpur, Maharashtra on November 8, 2017. He defeated higher ranked Kidambi Srikanth in the final by 21-15, 16-21, 21-7.

79. Ans. (c) Both 1 and 2

The ancient Greek word "bárbaros," from which it derives, meant "babbler,".

In the Greek ear, speakers of a foreign tongue made unintelligible sounds ("bar bar bar").

Similar words exist in other Indo-European languages, including the Sanskrit "barbara," which means "stammering."

The word "barbarian" originated in ancient Greece and was initially used to describe all non-Greek-speaking peoples, including Persians, Egyptians, Medes and Phoenicians.

80. Ans. (d) Hujwiri's conversation with the Yogis shows that he was impressed with their theory of the division of the human body

According to al-Biruni, the sufi theories of the soul were similar to those in Patanjali's Yoga Sutra. Like the Yoga Sutra, sufi works also stated that 'the bodies are the snares of the souls for the purpose of acquiring recompense'.
Al-Biruni also identifies the sufi doctrine of divine love as self-annihilation with parallel passages from the Bhagavad Gita.
There was also much exchange of ideas between the Sufis and Indian yogis. In fact the hatha-yoga treatise Amrita Kunda was translated into Arabic and Persian, So C is right.
Hujwiri was known as Datta Ganj Baksh. Hujwiri comments that before he settled in Lahore some sufis believed in theories that he calls brahmanical. According to Hujwiri they wrongly believed that 'annihilation (fand') signifies loss of essence and destruction of the personality, and that subsistence (baqa) indicates the subsistence of God in man.

81. Ans. (a) Francisco Pelsaert

But while the average Mughal farmer produced more than in later times, he most probably produced less than in earlier times.
On the whole, the Mughal period was marked by agricultural stagnation, if not slump. The per capita yield was declining, and the average man in Mughal India probably had less to eat than before.
'The surplus income left to the peasant was tending to decrease, where it had not already vanished,' says Moreland.
'The provinces,' says Pelsaert, 'are so impoverished that a jagir which is reckoned to be worth 50,000 rupees, may sometimes not yield even 25,000, although so much is wrung from the peasants, that even dry bread is scarcely left to fill their stomachs.'

82. Ans. (a) Ginan

Ginans are devotional hymns or poems recited by Shia Ismaili Muslims.
Although ginans can be recited, studied, and listened to by non-Nizari Ismailis, ginans hold a special role in the cultural practice and rituals of Nizari Ismailis, specifically the community of Khojas, a caste of south asians of whom the majority now identify as Nizari Ismaili.

83. Ans. (a) Alvars

The Nalayira Divya Prabandham is a collection of 4,000 Tamil verses composed by the 12 Alvars and was compiled in its present form by Nathamunigal during the 9th - 10th centuries.
These were sung by the Alwars in **devotional** estacy in varrious shirineas of Vishnu, made famous as Magalashasana sthalas.

84. Ans. (c) Flying Officer, Flight Lieutenant, Squadron Leader, Group Captain, Wing Commander, Air Commodore, Air Vice Marshal, Air Marshal, Air Chief Marshal

Army	Air Force	Navy
*Field Marshal	*Marshal of the Air Force	*Admiral of the fleet
General	Air Chief Marshal	Admiral
Lt. General	Air Marshal	Vice Admiral
Major General	Air Vice Marshal	Rear Admiral
Brigadier	Air Commodore	Commodore
Colonel	Group Captain	Captain
Lt. Colonel	Wing Commander	Commander
Major	Squadron Leader	Lt. Commander
Captain	Flight Lieutenant	Lieutenant
Lieutenant	Flying Officer	Sub Lieutenant

85. Ans. (a) 1, 2 and 3

The Attorney General is responsible for giving advice to the Government of India upon such legal matters and to perform such other duties of legal character as may be referred or assigned to him by the President.
The Attorney General has the right of audience in all Courts in India as well as the right to participate in the proceedings of the Parliament, though not to vote.
The Attorney General appears on behalf of Government of India in all cases (including suits, appeals and other proceedings) in the Supreme Court in which Government of India is concerned.
He also represents the Government of India in any reference made by the President to the Supreme Court under Article 143 of the Constitution.
The Attorney General for India is appointed by the President of India under Article 76(1) of the Constitution of India and holds office during the pleasure of the President. He must be a person qualified to be **appointed as a Judge of the Supreme Court. So, statement 4 is incorrect**.

86. Ans. (b) 36th

The 35th constitutional Amendment Act (1975): Terms and Conditions for the Incorporation of Sikkim into the Union of India.
The 37th constitutional Amendment Act (1975): Formation of Arunachal Pradesh legislative assembly.
The 38th constitutional Amendment Act (1975): Enhances the powers of President and Governors to pass ordinances.
The 36th constitutional Amendment Act (1975): Formation of Sikkim as a State within the Indian Union.

87. Ans. (b) Hong Kong

Originally designed for Taiwan, Beijing applied the "One Country, Two Systems" principle to Hong Kong on July 1, 1997 when sovereignty of the territory was passed from Britain to China.
But "One Country, Two Systems," which guarantees a degree of autonomy under Chinese supervision, isn't applicable to Taiwan. The island has evolved into a self-ruled, hyper-democracy that enjoys de facto operational independence

88. Ans. (d) The maximum number of members in the Council of Ministers of Delhi can be 15 percent of the total number of members in the Legislative Assembly.

There shall be a Council of Ministers consisting of **not more than ten per cent (a special provision for Delhi as against the 15 percent clause under 91st Amendment Act)** of the total number of members in the Legislative Assembly, with the Chief Minister at the head to aid and advise the Lieutenant Governor in the exercise of his functions in relation to matters with respect to which the Legislative Assembly has power to make laws.

89. Ans. (b) 1 and 2 only

India unveiled the third National Wildlife Action Plan for 2017-2031. The plan was unveiled by environment minister Dr Harsh Vardhan on the inaugural day of the Global Wildlife Programme (GWP) conference

The third National Wildlife Action Plan is unique as this is the first time India has recognised the concerns relating to climate change impact on wildlife and stressed on integrating actions that need to be taken for its mitigation and adaptation into wildlife management planning processes.

The plan adopts a "landscape approach"in conservation of all wildlife.

The government has also underlined an increased role of private sector in wildlife conservation.

The plan has 5 components, 17 themes, 103 conservation actions and 250 projects.

90. Ans. (a) Natural gas

http://pib.nic.in/newsite/printrelease.aspx?relid=148122

Coal

Coal production (weight: 4.38 %) **increased** by 12.0 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 increased by 5.4 % over corresponding period of previous year.

Natural Gas

The Natural Gas production (weight: 1.71 %) **decreased** by 4.5 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 declined by 6.1 % over the corresponding period of previous year.

Refinery Products (93% of Crude Throughput)

Petroleum Refinery production (weight: 5.94%) **increased** by 3.5 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 increased by 7.1 % over the corresponding period of previous year**.**

Fertilizers

Fertilizer production (weight: 1.25%) **increased** by 9.8 % in June 2016 over June 2015. Its cumulative index during April to June 2016-17 increased by 11.0 % over the corresponding period of previous year**.**

91. Ans. (b) Infosys Technologies Limited

eBiz – India's Government-to-Business (G2B) portal was conceptualized with support from National Institute of Smart Government (NISG) as the consulting partner and developed by M/s. Infosys Ltd., Bangalore in a Public Private Partnership (PPP) Model for a period of 10 years.

Through eBiz portal, a business user can fill the e-Forms online/offline, upload the attachments, make payment online and submit the forms for processing of the department.

92. Ans. B, 1 and 2 only

The Olive ridley turtles are the smallest and most abundant of all sea turtles found in the world, inhabiting warm waters of the Pacific, Atlantic and Indian oceans.

These turtles, along with their cousin the Kemps ridley turtle, are best known for their unique mass nesting called Arribada, where thousands of females come together on the same beach to lay eggs.

Though found in abundance, their numbers have been declining over the past few years, and the species is recognized as Vulnerable by the IUCN Red list.

The coast of Orissa in India is the largest mass nesting site for the Olive-ridley, followed by the coasts of Mexico and Costa Rica.

93. Ans. C, Mahatma Gandhi

According to Gandhiji,

A sound body means one which bends itself to the spirit and is always a ready instrument at its service. Such bodies are not made, in my opinion, on the football field. They are made on cornfields and farms.

94. Ans. (a) Mahatma Gandhi

The Phoenix Settlement, established by Gandhiji near Durban in 1904, was formally reopened on February 27, 2000, at a ceremony attended by the President of South Africa, the Zulu King Goodwill Zwelithini and many other leaders.

The settlement - the first Ashram of Gandhiji - had been damaged in 1985 riots when some African squatters occupied much of the settlement and named it Bambayi.

Though the Indian community was deeply distressed, it refrained from seeking the forcible eviction of the squatters.

The Phoenix Settlement Trust, with financial assistance from the Government of India, recently restored Gandhiji's house and established a clinic, an HIV/Aids Centre and other facilities to serve all the people in the area, African and Indian

95. Ans. A, Mahanavami Dibba
Dasara Dibba or the Mahanavami Dibba is a beautiful stone platform located within the Royal Enclosure of Hampi.
It was built during the Vijayanagara period by King Krishnadevaraya to commemorate his victory over Udaygiri.
It was here where the King of Vijayanagar used to celebrate the festival of Dasara (Dussehra).
96. Ans. A, Shihabuddin Suhrawadi
Abul Fazl placed Mughal kingship as the highest station in the hierarchy of objects receiving light emanating from God (farr-i izadi).
Abul Fazl was inspired by a famous Iranian Sufi, Shihabuddin Suhrawardi who first developed this idea.
According to this idea, there was a hierarchy in which the Divine Light was transmitted to the king who then became the source of spiritual guidance for his subjects.
97. Ans. D, Mahavamsa
The contents of the Mahavamsa can be broadly divided into four categories:
The Buddha's Visits to Ceylon: This material recounts three legendary visits by the Buddha to the island of Ceylon.
Chronicles of Kings of Ceylon: This material consists of genealogies and lineages of kings of Ceylon, sometimes with stories about their succession or notable incidents in their reigns
History of the Buddhist Sangha: This section of the Mahavamsa deals with the mission sent by Emperor Ashoka to Ceylon, the transplantation of the bodhi tree, and the founding of the Mahavihara. It includes the names of prominent monks and nuns in the early Sri Lankan sangha. It also includes accounts of the early Buddhist councils and the first recording of the Pali canon in writing.
Chronicles of Ceylon: This material begins with the immigration of King Vijaya from India with his retinue and continues until the reign of King Mahasena, recounting wars, succession disputes, building of stupas and reliquaries, and other notable incidents.
98. Ans. c) They were located in rural areas.
A stupa is a mound-like or hemispherical structure containing relics that is used as a place of meditation.
Buddhist sources claim that during the 3rd century BCE, the Mauryan Emperor Ashoka the Great ordered these eight stupas to be opened, further distributed the relics of the Buddha into 84,000 portions, and had stupas built over them all over the expanding Buddhist world.
They were located on trade routes in order to propagate Buddhism.
However, there were no evidence of them being located in rural areas.

99. Ans. (a) West Bengal
West Bengal: 295
Bihar: 243
Madhya Pradesh: 231
Tamil Nadu: 235
100. Ans. d) Neither 1 nor 2
The State Executive has temporary law-making power in emergent situations under the Constitution of India. And the Governor is the head of the State Executive. So, the ordinance making power confers on him by the Constitution itself. But this is not a discretionary power.
The ordinance making power of the Governor is co-extensive with the legislative power of the State Legislature to make laws. He can promulgate ordinances only on the subjects on which the State Legislature has power to make laws under the Constitution.
101. Ans. a) Inauguration of the SWIFT system of electronic interbank fund transfer worldwide-1985
- SWIFT was founded in the 1970s, based on the ambitious and innovative vision of creating a global financial messaging service, and a common language for international financial messaging.
- The Uruguay Round was the 8th round of multilateral trade negotiations (MTN) conducted within the framework of the General Agreement on Tariffs and Trade (GATT), spanning from 1986 to 1994 and embracing 123 countries as "contracting parties".
- The World Trade Organization (WTO) is an intergovernmental organization that regulates international trade. The WTO officially commenced on 1 January 1995 under the Marrakesh Agreement.
- Founded by the National Association of Securities Dealers, the NASDAQ began trading on February 8, 1971, as the world's first electronic stock market.

102. Ans. d) 1, 2 and 3 only
At present, the ITBP has 62 (including 4 service battalions) operational battalions which has close to 62,000 personnel and officers in them. So 4th statement is incorrect.
The Indo-Tibetan Border Police (ITBP) is one of the five Central Armed Police Forces of India, raised on 24 October 1962, under the CRPF Act, in the wake of the Sino-Indian War of 1962.
103. Ans. a) International Covenant on Civil and Political Rights
The International Bill of Human Rights has been further supplemented by various other international treaties, conventions and declarations. They are usually regarded as "human rights instruments". The important among them are as follows….

- Convention on the Elimination of All Forms of Discrimination Against Women (1979)
- Declaration on the Right to Development (1986)
- Convention on the Rights of Persons with Disabilities (2006).

104. Ans. (c) Voter Verifiable Paper Audit Trail

Voter Verifiable Paper Audit Trail (VVPAT) machines are used during election process to verify that the vote polled by a voter goes to the correct candidate. VVPATs are a second line of verification particularly and are particularly useful in the time when allegations around Electronic Voting Machines' tampering crop up.

105. Ans. (d)

The major objective of the PMKSY is to achieve

- convergence of investments in irrigation at the field level,
- expand cultivable area under assured irrigation (Har Khet ko pani),
- improve on-farm water use efficiency to reduce wastage of water,
- enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop),
- enhance recharge of aquifers and introduce sustainable water conservation practices by exploring the feasibility of reusing treated municipal based water for peri-urban agriculture and attract greater private investment in precision irrigation system.

106. Ans. (a) It is a scheme for mentoring first generation entrepreneurs.

The objective of the Niryat Bandhu Scheme is to reach out to the new and potential exporters and mentor them through orientation programmes, counselling sessions, individual facilitation, etc., for being able to get into international trade and boost exports from India.

107. Ans. (a) It is a placement-linked skill training programme exclusively for rural girls.

The Ministry of Rural Development (MoRD) announced the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) Antyodaya Diwas, on 25th September 2014.

DDU-GKY is a part of the National Rural Livelihood Mission (NRLM), tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth.

DDU-GKY is uniquely focused on rural youth between the ages of 15 and 35 years from poor families.

Over 180 million or 69% of the country's youth population between the ages of 18 and 34 years, live in its rural areas. Of these, the bottom of the pyramid youth from poor families with no or marginal employment number about 55 million.

108. Ans. (b) Sri Lanka

The Hambantota Port (also known as the Port of Hambantota) is a maritime port in Hambantota, Sri Lanka.

http://www.thehindu.com/news/international/sri-lanka-formally-hands-over-hambantota-port-on-99-year-lease-to-china/article21380382.ece

109. Ans. A

http://pib.nic.in/newsite/PrintRelease.aspx?relid=177177

The Union Ministry of Shipping has extended period of Coastal Berth scheme of flagship Sagarmala Programme for three years upto March, 2020. Besides, its scope was also expanded to cover capital dredging at Major Ports and preparation of detailed project report (DPR) for coastal berth project.

The projects under Coastal Berth Scheme are distributed over eight states with highest number of projects in Maharashtra (12 projects), Andhra Pradesh and Goa (10 projects), Karnataka (6 projects), Kerala and Tamil Nadu (3 projects), Gujarat (2 projects) and West Bengal (1 project).

110. Ans. (c) The Indian Council of Agricultural Research is the national implementing entity for the fund.

Government has established the National Adaptation Fund on Climate Change (NAFCC) with a budget provision of Rs.350 crores for the year 2015-16 and 2016-17, with an estimated requirement of Rs.181.5 crores for financial year 2017-18.

The objective of the fund is to assist State and Union Territories that are particularly vulnerable to the adverse effects of climate change in meeting the cost of adaptation.

The National Bank for Agriculture and Rural Development (NABARD) has been appointed as National Implementing Entity (NIE) responsible for implementation of adaptation projects under the (NAFCC).

111. Ans. (b) Bangladesh

Closing ceremony for the seventh Indo-Bangladesh joint exercise SAMPRITI was held at Counter Insurgency and Jungle Warfare School, Vairengte in Mizoram.

Exercise SAMPRITI is an important bilateral defence cooperation endeavour between India and Bangladesh.

The exercise is aimed at strengthening and broadening the aspects of interoperability and cooperation between the Indian and Bangladesh Armies while working together in a counter-insurgency and counter-terrorism environment under the UN mandate.

112. Ans. (a) sexual harassment in the work-place

Vishakha and others v State of Rajasthan was a 1997 Indian Supreme Court case where Vishakha and other women groups filed Public Interest Litigation (PIL) against State of Rajasthan and Union of India to enforce the fundamental rights of working women under Articles 14, 19 and 21 of the Constitution of India.

The court decided that the consideration of "International Conventions and norms are significant for the purpose of interpretation of the guarantee of gender equality, right to work with human dignity in Articles 14, 15, 19(1)(g) and 21 of the Constitution and the safeguards against sexual harassment implicit therein.

113. Ans. B

The Summit at Sanya will mark the admission of South Africa to the group, which will extend the geographic representation of the mechanism in a moment when the financial system reform is sought worldwide, as well as a greater democratization of global governance in general.

On 14 April 2011, 3rd BRICS (Brazil, Russia, China and South Africa) Summit is to be held in the Chinese city of Sanya, alongside the President of China, Hu Jintao, the President of Russia, Dmitri Medvedev, the Prime Minister of India, Manmohan Singh, and the President of South Africa, Jacob Zuma.

The previous Summits were held in Yekaterinburg (June 2009) and Brasília (April 2010).

114. Ans. (d) James Prinsep

The inscriptions of Asoka were first deciphered by James Princep in 1837. They are written in Pali language and in some places Prakrit was used. The Brahmi script was employed for writing.

In the northwestern India Asokan inscriptions were found in Karoshti script.

115. Ans. (c) 1 and 2

The first 2 statements are true with respect to the Brahmadeya Grants during 600-1200 AD.

116. Ans. (b) Sathanar

One of the finest jewels of Tamil poetry, the epic poem Manimekalai was written by Sathanar in 2nd century A.D.

It is unique for the deep spirituality and mysticism it unfolds against the historical and geographical background of South India and of adjacent Jaffna.

117. Ans. B

The Elephanta Caves are located in Western India on Elephanta Island (otherwise known as the Island of Gharapuri), which features two hillocks separated by a narrow valley.

The name Ardhanarishvara (famous statue of Elephanta) means the Lord Who is half woman, Ardhanarishvara is also known by other names. The Gupta-era writer Pushpadanta in his Mahimnastava refers to form as dehardhaghatana. Utpala, commenting on the Brihat Samhita, calls this form Ardha-gaurishvara, the Vishnudharmottara Purana simply calls this form Gaurishvara.

Buddhist caves in Elephants and the caves built by the followers of Pashupata cult (a Shaivite Hindu school).

The island and its resident caves received the name 'Elephanta' from Portuguese invaders after the discovery of a black stone sculpture of an elephant on the island.

118. Ans. (d) 1 and 4

Statements 1 & 4 are true with respect to Sir Syed Ahmad Khan.

119. Ans. (c) Both 1 and 2

Only if either demand or supply was either completely elastic or inelastic will the tax burden fall entirely on either the buyer or the seller.

Between these 2 extremes, tax incidence varies continuously from a perfectly inelastic supply or perfectly elastic demand, where the sellers assumes the entire burden of the tax to the perfectly elastic supply or perfectly inelastic demand where the buyers bear the entire burden.

To better see how the elasticity of supply and demand affects tax incidence, consider a 20% tax on a can of soda. Suppose the government decides that the buyer should pay the 20% tax. Does this mean that the buyers will be paying 20% more, or will sellers have to share some of the tax burden? Since higher prices decrease demand, regardless of the reason for the higher prices, sellers will share some of the burden. How much of the burden will be determined by the elasticity of supply and demand for the product?

120. Ans. (b) diminish

Economists use the concept of marginal utility to measure happiness and pleasure and how that affects consumer decision making. They have also identified the law of diminishing marginal utility, which means that the first unit of consumption of a good or service has more utility than the next units of consumption.

Hence, the marginal utility of the good diminishes as the amount of good consumed increases.

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