

SOLUTIONS

1.

Answer: A

In 1782 Colebrooke was appointed through his father's influence to a writer-ship with the East India Company in Calcutta.

Lord Wellesley appointed him honorary professor of Hindu law and Sanskrit at the college of Fort William.

2

Answer: D

The Deccan Riots Commission was set up which presented a report to the British Parliament in 1878.

In 1879, the Agriculturists Relief Act was passed which ensured that the farmers could not be arrested and imprisoned if they were unable to pay their debts.

It was an Act for the relief of Indebted Agriculturists in certain parts of the Deccan.

3.

Answer: A

Damini-i-Koh was the land allocated to the Santhals. The Santhals could live on the land and practise plough agriculture, thus helping them to carry out settled agriculture.

4.

Answer: B

The ryots came to see the moneylender as devious and deceitful. They complained of moneylenders manipulating laws and forging accounts. In 1859 the British passed a Limitation Law that stated that the loan bonds signed between moneylenders and ryots would have validity for only three years.

This law was meant to check the accumulation of interest over time. The moneylender, however, turned the law around, forcing the ryot to sign a new bond every three years.

5.

Answer: B

Ahmadullah Shah Madrasi alias Danka Shah (1789-1858), a descendant of the Qutub Shahi family of the Deccan, was in Faizabad when the sepoy's mutinied in Meerut. He threw himself into the movement then and there. This was why he also came to be known as Ahmadullah Shah Faizabadi.

6.

Answer: B

The British land revenue policy further undermined the position and authority of the taluqdars. After annexation, the first British revenue settlement, known as the Summary Settlement of 1856, was based on the assumption that the taluqdars were interlopers with no permanent stakes in land: they had established their hold over land through force and fraud

7.

Answer: B

The Inter-State Council was set up in 1990 following the recommendations of the Sarkaria Commission.

The constitutional roots of the council are to be found in Article 263, which recommends that the President of India set up such a council to deal with federal issues.

8.

Answer: D

A writ of certiorari is issued to quash the order passed by an inferior court or tribunal in excess of jurisdiction.

A writ of prohibition is issued to prevent an inferior court or tribunal to go ahead with the trial of a case in which it has assumed excess of jurisdiction.

9.

Answer: A

The Parliament cannot amend those provisions which form the 'basic structure' of the Constitution. This was ruled by the Supreme Court in the Kesavananda Bharati Case. (1973)

Basic Structure of the Indian Constitution is not defined. But according to SC, the basic structure can be evolved but cannot be destroyed. Hence it falls within the constituent powers of the Parliament. Hence both 1 and 3 are correct.

10.

Answer: A

The right to protection in respect of conviction for offences (Article 20) and the right to life and personal liberty (Article 21) remain enforceable even during emergency.

11.

Answer: B

Article 15:

Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth

(1) The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them

(2) No citizen shall, on grounds only of religion, race, caste, sex, place of birth or any of them, be subject to any disability, liability, restriction or condition with regard to

(a) access to shops, public restaurants, hotels and palaces of public entertainment; or

(b) the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of State funds or dedicated to the use of the general public

12.

Answer: C

Scheduled Caste Federation was founded by Dr. Ambedkar in 1942 to fight for the rights of the Dalit community. SCF was the successor organization of the Independent Labour Party led by Ambedkar. SCF later evolved into the Republican Party of India.

13.

Answer: C

Paul Gardner Allen (January 21, 1953 – October 15, 2018) was an American business magnate, investor, software engineer, humanitarian, and philanthropist. Alongside Bill Gates, Allen co-founded Microsoft in 1975, which helped spark the microcomputer revolution and later became the world's largest PC software company

14.

Answer: D

The Chief Election Commissioner Shri. O.P. Rawat, along with the Election Commissioners Shri Sunil Arora and Shri Ashok Lavasa launched a mobile app, called 'Cvigil,' on July 3, 2018, for citizens to report any violation of the model code of conduct during elections.

"cVIGIL" is a user-friendly and easy to operate Android application.

15.

Answer: B

The Prahaar is a short-range, solid propellant, road-mobile ballistic missile designed for tactical strikes against close range targets. It is a surface to surface missile.

Prahaar is expected to replace the Prithvi-I short-range ballistic missile in Indian service.

TOPIC General Awareness | | General Knowledge | | Science & Defense

16.

Answer: A

Indian skipper Virat Kohli was bestowed with Rajiv Khel Ratna award by Indian President Ram Nath Kovind

Virat Kohli became the third cricketer to receive this honour after Sachin Tendulkar and Mahendra Singh Dhoni.

17.

Answer: A

Pakyong Airport is a greenfield airport near Gangtok, the state capital of Sikkim, India. The airport, spread over 400 ha (990 acres), is located at Pakyong town

The airport was inaugurated by India's Prime Minister Narendra Modi on 24th September 2018

18.

Answer: D

On October 15, the United Nations commemorates the International Day of Rural Women.

This year the theme is 'Sustainable infrastructure, services and social protection for gender equality and the empowerment of rural women and girls.'

19.

Answer: B

Gobind Behari Lal: He came to study at the University of California in Berkeley in 1912 on the Guru Govind Singh Sahib Scholarship. He later became the science editor of the San Francisco Examiner. He won the Pulitzer Prize for journalism in 1937.

20

Answer: B

Saurabh Chaudhary is an Indian sport shooter. He comes from a family of farmers living in Yamuna & Gangetic plains of western Uttar Pradesh. He won the Gold medal at the 2018 Asian Games in 10 m Air Pistol.

21.

Answer: C

There are certain assumptions underlying the law of demand, which are as follows:

- i. Assumes that the consumer's income remains same
- ii. Assumes that the preferences of consumer remain same.
- iii. Considers that the fashion does not show any changes, because if fashion changes, then people would not purchase the products that are out of fashion.
- iv. Assumes that there would be no change in the age structure, size, and sex ratio of population. This is because if population size increases, then the number of buyers increases, which, in turn, affect the demand for a product directly.
- v. Restricts the innovation and new varieties of products in the market, which can affect the demand for the existing product.
- vi. Restricts changes in the distribution of income.

vii. Avoids any type of change fiscal policies of the government of a nation, which reduces the effect of taxation on the demand of product.

22.

Answer: D

Total utility - It is total psychological satisfaction which a consumer derives from the consumption of a commodity is known as total utility

Marginal utility - It is an addition made in total utility by consuming and additional unit of a commodity is known as marginal utility.

- When marginal utility is positive, total utility increases
- When marginal utility is zero, total utility is at maximum
- When marginal utility is negative, total utility decreases

23

Answer: B

The indifference curves cannot intersect each other.

Higher indifference curve represents a higher level of satisfaction because higher IC means a bundle consisting more of both the goods or same quantity of one good n more quantity of the other good . Hence statement 2 is correct and 3 is incorrect.

Indifference curves is convex to the point of origin because of diminishing Marginal Rate of Substitution.

24.

Answer: D

Joint stock company is a voluntary association of individuals for profit, having a capital divided into transferable shares, the ownership of which is the condition of membership.

The definition of a joint stock company highlights the following features of a company.

Separate legal entity: From the day of its incorporation, a company acquires an identity, distinct from its members. Its assets and liabilities are separate from those of its owners. The law does not recognise the business and owners to be one and the same.

The management and control of the affairs of the company is undertaken by the Board of Directors, which appoints the top management officials for running the business. The directors hold a position of immense significance as they are directly accountable to the shareholders for the working of the company. The shareholders, however, do not have the right to be involved in the day-to-day running of the business. The liability of the members is limited to the extent of the capital contributed by them in a company

The risk of losses in a company is borne by all the shareholders. This is unlike the case of sole proprietorship or partnership firm where one or few persons respectively bear the losses.

25.

Answer: D

Although demand curves are typically downward sloping to reflect that consumers' utility for a good diminishes with increased consumption, firm supply curves are generally upward sloping.

The upward sloping character reflects that firms will be willing to increase production in response to a higher market price because the higher price may make additional production profitable.

26.

Answer: A

The Bombay Secretariat was completed in 1874 and designed by Captain Henry St. Clair Wilkins in the Venetian Gothic style. With its arcaded verandahs and huge gable over the west facade, it was a monument to the civic pride of Bombay's British rulers.

27.

Answer: A

Mataji Maharani Tapaswini was one of the strongest proponents of female education in India. Her greatest contribution came in the form of the Mahakali Pathshala which she set up in Kolkata in 1893.

The school was a completely indigenous affair which did not rely on either foreign aid or assistance. The education of girls was carried out on a strictly national basis in the hopes that they would be able to revive and regenerate Hindu society.

28.

Answer: B

India was one of the main centres of world trade and industry. Peter the Great of Russia was led to exclaim:

“Bear in mind that the commerce of India is the commerce of the world and ... he who can exclusively command it is the dictator of Europe.”

29.

Answer: D

A European traveler, Abbe J.A. Dubois, commented, at the beginning of the 19th century:

"A Hindu woman can go anywhere alone, even in the most crowded places, and she need never fear the impertinent looks and jokes of idle loungers....A house inhabited solely by women is a sanctuary which the most shameless libertine would not dream of violating."

The women of the time possessed title individuality of their own. This does not mean that there were no exceptions to this rule.

30.

Answer: D

Plagues and Peoples is a book on epidemiological history by William Hardy McNeill published in New York City in 1976. It was a critical and popular success, offering a radically new interpretation of the extraordinary impact of infectious disease on cultures as a means of enemy attack. The book ranges from examining the effects of smallpox in Mexico, the bubonic plague in China, to the typhoid epidemic in Europe.

31.

Answer: A

Ashis Nandy traced the roots of colonialism's mandate to absolutize the relative differences between cultures to the cultural arrogance of Enlightenment Europe.

32.

Answer: A

The United States subprime mortgage crisis was a nationwide financial crisis, occurring between 2007 and 2010, that contributed to the U.S. recession of December 2007 – June 2009.

It was triggered by a large decline in home prices after the collapse of a housing bubble, leading to mortgage delinquencies and foreclosures and the devaluation of housing-related securities.

33.

Answer: B

Provisions of the Indian Independence Act, 1947

There were six primary provisions in the 'Indian Independence Act' 1947.

The third provision made sure the Crown continues its authority in some form or the other; it stated that the office of the Governor-General will be established in the newly formed countries and will be the constitutional head of both dominions.

The Governor General was also empowered to adopt and amend the 'Government of India Act' 1935.

34.

Answer: C

C is incorrect.

The total number of members in the Legislative Council of a State having such a Council shall not exceed one-third of the total number of members in the Legislative Assembly of that State:

Provided that the total number of members in the Legislative Council of a State shall in no case be less than forty.

Of the total number of members of the Legislative council of a State-

(a) as nearly as may be, one-third shall be elected by electorates consisting of members of municipalities, district boards and such other local authorities in the State as Parliament may by law specify;

(b) as nearly as may be, one-twelfth shall be elected by electorates consisting of persons residing in the State who have been for at least three years graduates of any university in the territory of India or have been for at least three years in possession of qualifications prescribed by or under any law made by Parliament as equivalent to that of a graduate of any such university;

(c) as nearly as may be, one-twelfth shall be elected by electorates consisting of persons who have been for at least three years engaged in teaching in such educational institutions within the State, not lower in standard than that of a secondary school, as may be prescribed by or under any law made by Parliament;

(d) as nearly as may be, one-third shall be elected by the members of the Legislative Assembly of the State from amongst persons who are not members of the Assembly;

(e) the remainder shall be nominated by the Governor in accordance with the provisions of clause. There are only seven states which have two-tier of legislature – Uttar Pradesh, Maharashtra, Bihar, Karnataka, Andhra Pradesh, Telangana and Jammu & Kashmir.

35.

Answer: C

The act provides for a five-year term of office to the panchayat at every level. However, it can be dissolved before the completion of its term.

the state legislature shall provide for the reservation of offices of chairperson in the panchayat at the village or any other level for the SCs and STs.

The state legislature may make provisions with respect to the maintenance of accounts by the panchayats and the auditing of such accounts.

36.

Answer: C

Article 323A provides that Parliament may by law establish tribunals for adjudication of disputes concerning recruitment and conditions of service of persons appointed to public service under Central, State or any Local or other authority or a corporation owned or controlled by the Government of India.

The law made by Parliament for the purpose may specify the jurisdiction and procedure of the tribunals. Under clause 2(d), the law may exclude the jurisdiction of all courts except that of the Supreme Court under article 136 with respect to the service matters falling within the purview of the tribunals.

37.

Answer: C

Monopolistic competition is a type of imperfect competition such that many producers sell products that are differentiated from one another (e.g. by branding or quality) and hence are not perfect substitutes.

In other words, large sellers selling the products that are similar, but not identical and compete with each other on other factors besides price.

38.

Answer: C

According to the Survey, inflation in the country continued to moderate during 2017-18 with the CPI based headline inflation averaging 3.3 per cent during the period -- the lowest in the last six financial years

Retail inflation fell to a record low of 2.18% in May as prices of kitchen staples like vegetables and pulses declined sharply although there was a marginal spike in fruit rates.

39.

Answer: C

The life-cycle theory of consumption, popularly known as life-cycle hypothesis, ' was developed by Ando and Modigliani" in the early 1960s.

The life-cycle hypothesis postulates that individual consumption in any time period depends on (i) resources available to the individual, (ii) the rate of return on his capital, and (iii) the age of the individual. The resources available to an individual consist of his existing net wealth and the present value of all his current and future labour incomes. According to the life-cycle hypothesis, a rational consumer plans consumption on the basis of all his resources and allocates his income to consumption over time so that he maximizes his total utility over his life time.

40.

Answer: C

J.M Keynes' theory of employment is a demand-deficient theory. This means that Keynes visualised employment from the demand side of the model. His theory is a demand-oriented approach, as opposed to the classical supply side model.

According to him, the volume of employment in a country depends on the level of effective demand of people for goods and services. Thus, unemployment is attributed to the deficiency of effective demand.

41.

Answer: D

Adam Smith propounded the following first four canons of taxation -

(1) Canon of Equity. (2) Canon of Certainty: (3) Canon of Convenience or Ease (4) Canon of Economy.

42.

Answer: A

Muhammad ibn Mūsā al-Khwārizmī, formerly Latinized as Algorithmi, was a Persian scholar who produced works in mathematics, astronomy, and geography under the patronage of the Caliph Al-Ma'mun of the Abbasid Caliphate.

He also developed the concept of the algorithm in mathematics, which is why some have called him the "grandfather of computer science".

His name gave rise to the terms algorism and algorithm.

43.

Answer: A

The Kansas-Nebraska Act was passed by the U.S. Congress on May 30, 1854. It allowed people in the territories of Kansas and Nebraska to decide for themselves whether or not to allow slavery within their borders. The Act served to repeal the Missouri Compromise of 1820 which prohibited slavery north of latitude 36°30'.

44.

Answer: C

The deal would indirectly bring India under purview of NSG and US laws that would not allow India to conduct nuclear test in the future. The issue of nuclear test was later clarified as the moratorium on nuclear test was unilateral and voluntary and there was no pressure on India from outside. Thus, C is the correct answer.

45.

Answer: A

The doctrine of independence is not to be raised to the level of a dogma so as to enable the judiciary to function as a kind of super-legislature or super-executive. The judiciary is there to interpret the Constitution or adjudicate upon the rights..." Hence, 1 is correct.

It is the great tribunal which has to draw the line between liberty and social control. Hence statement 2 is also correct.

46.

Answer: D

Peacekeeping is flexible and over the past two decades has been deployed in many configurations. There are currently 14 UN peacekeeping operations deployed on four continents.

Today's multidimensional peacekeeping operations are called upon not only to maintain peace and security, but also to facilitate the political process, protect civilians, assist in the disarmament, demobilization and reintegration of former combatants; support the organization of elections, protect and promote human rights and assist in restoring the rule of law.

UN Peacekeeping operations assist in moving state out of conflict towards peace but doesn't assist a losing state in war.

47.

Answer: C

The South China Sea disputes involve both island and maritime claims among several sovereign states within the region, namely Brunei, the People's Republic of China (PRC), Republic of China (Taiwan), Malaysia, the Philippines, and Vietnam.

Although Indonesia is not part of claims in the South China Sea dispute, after Joko Widodo became President of the country in 2014, he instituted a policy in 2015 that, if any foreign fishermen were caught illegally fishing in Indonesian waters, their vessels would be destroyed.

48.

Answer: B

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets.

Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

49.

Answer: B

The Beijing Declaration was a resolution adopted by the UN at the end of the Fourth World Conference on Women on 15 September 1995. The resolution adopted to promulgate a set of principles concerning the equality of men and women.

50.

Answer: A

Gujral Doctrine is considered as a milestone in India's foreign policy. It was rendered by Mr. Inder Kumar Gujral, the Minister of External Affairs in H. D. Deve Gowda Government in 1996. This theory says that "India" as a bigger country of South Asia should give one-sided concession to her small neighbours and have cordial relations with them.

51.

Answer: B

CH ₃ F	Tetrahedral
HCHO	Trigonal planar
HCN	Linear
NH ₃	Trigonal pyramidal

HCHO: The carbon and the oxygen are bonded through a double bond which counts as "one electron pair". Hence the molecule has three electron pairs and is trigonal planar.

52.

Answer: C

Sometimes the solid particles in a liquid are very small and can pass through a filter paper. For such particles, the filtration technique cannot be used for separation. Such mixtures are separated by centrifugation.

53.

Answer: D

The sodium fusion test, or Lassaigne's test, is used in elemental analysis for the qualitative determination of the presence of foreign elements, namely halogens, nitrogen, and sulphur, in an organic compound. It was developed by J. L. Lassaigne.

Silver fluoride is soluble in water and does not precipitate and thus this method cannot be used for detection of fluorine.

54.

Answer: C

The haloalkanes (also known as halogenoalkanes or alkyl halides) are a group of chemical compounds derived from alkanes containing one or more halogens.

Halogens can't form more than one bond in the context of common organic compounds and can't form multiple bonds to carbon.

55

Answer: C

Fischer projections were originally proposed for the depiction of carbohydrates and used by chemists, particularly in organic chemistry and biochemistry.

A Fischer projection always uses an eclipsed conformation. A Newman diagram can represent either an eclipsed conformation or a staggered conformation or a skew conformation.

Just as with Newman projections, you can draw sawhorse projections in eclipsed and staggered conformations.

Since staggered conformation is more stable than eclipsed one, Fischer projection being in eclipsed projection represents least stable conformation.

56.

Answer: A

Nylon is made when the appropriate monomers (the chemical building blocks which make up polymers) are combined to form a long chain via a condensation polymerisation reaction. The monomers for nylon 6-6 are adipic acid and hexamethylene diamine

57.

Answer: D

Proxima Centauri is the nearest star, and on August 24, 2016 astronomers announced it likely has a planet. This star is the nearest of a triple star system, which we on Earth see with the eye alone as the single star Alpha Centauri, visible from Earth's Southern Hemisphere

58.

Answer: D

Planets (in order of least massive to most massive)	Mass (in kilograms)	Each planet's mass relative to Earth
Mercury	3.30×10^{23}	0.0553
Mars	6.42×10^{23}	0.107
Venus	4.87×10^{24}	0.815
Earth	5.97×10^{24}	1
Uranus	8.68×10^{25}	14.5
Neptune	1.02×10^{26}	17.1
Saturn	5.68×10^{26}	95.2
Jupiter	1.90×10^{27}	318

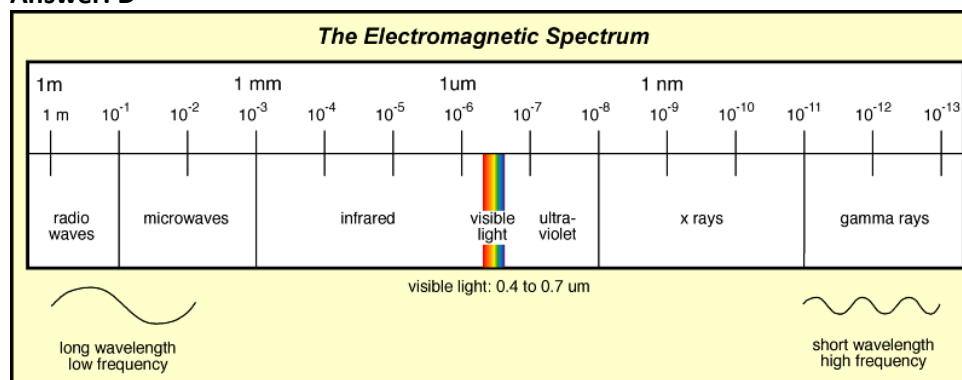
59.

Answer: B

As it is said that density of gold is greater than that of density of silver, so silver occupies a greater volume than gold. So it has more upthrust from the water, although they both show the same weight under water, there is more silver present. Hence silver piece will weigh more.

60.

Answer: D



Infrared radiation, what we experience as heat when we hold our hand near a warm object, is somewhat longer wavelengths than visible light. Visible light is simply electromagnetic radiation in a range of wavelengths that our eyes are sensitive to. Visible wavelengths range from 0.0007 millimeters for red light, through orange, yellow, green, and blue, to 0.0004 millimeters for violet light. Ultraviolet is shorter wavelengths than violet. Longer the wavelength, lower the energy.

61.

Answer: A

Both when accelerated through a potential difference of 100KV, they will have the same energy. The mass of the electron is less than the mass of a proton, hence it will move faster (momentum).

62.

Answer: A

$$|A| + |B| = \sqrt{A^2} + \sqrt{B^2} = A + B$$

$$|A + B| = \sqrt{A^2 + B^2 + AB \cos\phi} = A + B$$

Hence option A is correct

63.

Answer: C

Smooth Endoplasmic Reticulum does not contain ribosomes on its surface for which it is regarded as smooth. So, proteins cannot be synthesised by SER provided protein synthesis is the primary task of ribosomes.

64.

Answer: C

Lysosome is found in nearly all types of eukaryotic cells (cells with a clearly defined nucleus) and is responsible for the digestion of macromolecules, old cell parts, and microorganisms. Each lysosome is surrounded by a membrane that maintains an acidic environment within the interior via a proton pump. Lysosomes contain a wide variety of hydrolytic enzymes (acid hydrolases) that break down macromolecules such as nucleic acids, proteins, and polysaccharides. So, they are known as storehouse of digestive enzymes.

65.

Answer: D

In vascular plants, the lateral meristem is one of two meristems in which growth occurs in order to increase stem girth. A meristem is the region of plant tissue found on the tips of roots and shoots. It is where cell division occurs to produce new growth.

66.

Answer: A

Saprophytic fungi feed on dead plant and animal remains. Many are extremely beneficial, breaking down this organic material into humus, minerals and nutrients that can be utilised by plants. Agaricus is one among them.

67.

Answer: A

Asterias has bilateral symmetry only at larval stage but fivefold symmetry (pentamerism, a special type of radial symmetry) as adults.

Nereis do not possess any symmetry elements in their body organisation.

68.

Answer: D

Warm-blooded creatures, like mammals and birds, try to keep the inside of their bodies at a constant temperature. They do this by generating their own heat when they are in a cooler environment, and by cooling themselves when they are in a hotter environment. To generate heat, warm-blooded animals convert the food that they eat into energy. Peacock and camel are warm blooded animals.

69.

Answer: D

Presently, there are 226 flood forecasting stations consisting of 166 level forecasting stations for villages and towns and 60 inflow forecasting stations for reservoirs/dams/barrages in the country. Existing flood forecasting network covers 22 States / Union Territories and 19 major river basins / sub-basins in the country.

70.

Answer: A

Cartagena is a port city on Colombia's Caribbean coast. By the sea is the walled Old Town, founded in the 16th century, with squares, cobblestone streets and colorful colonial buildings.

71.

Answer: C

Goa	1,458,545
Mizoram	1,097,206
Meghalaya	2,966,889
Sikkim	610,577

72.

Answer: B

The South American countries that lie within the Tropic of Capricorn are Argentina, Brazil, Chile and Paraguay. Brazil is the only country in the world that crosses both the Equator and either tropic.

73.

Answer: A

The calm centre of the anticyclonic gyre in the North Atlantic, comprising a large eddy of surface water, the boundaries of which are demarcated by major current systems such as the Gulf Stream, Canaries Current, and North Atlantic Drift. The Sargasso Sea is a large, warm (18°C), saline, which is characterized by an abundance of floating brown seaweed (Sargassum).

74.

Answer: D

Detroit	Motorcar
Antwerp	Diamond cutting
Tokyo	Shipbuilding
Harbin	Steel

75.

Answer: A

Satna is not situated on Varanasi-Kanyakumari National Highway.

76.

Answer: C

In urban areas, rain water available from roof tops of buildings, paved and unpaved areas goes waste. This water can be recharged to aquifer and can be utilized gainfully at the time of need. In areas where the surface soil is impervious and large quantities of roof water or surface runoff is available within a very short period of heavy rainfall, the use of trench/ pits is made to store the water in a filter media and subsequently recharge to ground water through specially constructed recharge wells.

Gully plugs are built using local stones, clay and bushes across small gullies and streams running down the hill slopes carrying drainage to tiny catchments during rainy season. It is applicable only in rural areas.

77

Answer: B

The Tank irrigation is more in the rocky plateau area of the county, where the rainfall is uneven and highly seasonal. The Eastern Madhya Pradesh, Chhattisgarh, Orissa, Interiors of Tamil Nadu and some parts of Andhra Pradesh have more land under tank irrigation.

Well Irrigation is common in alluvial plains of the country except the deserts of Rajasthan. Plains of UP, Bihar, Gujarat, Karnataka & Tamil Nadu are the states which are more prominently under the well irrigation. These areas have huge groundwater reserves.

Well irrigation is much older than tank irrigation in India.

78.

Answer: D

Thermoset, or thermosetting, plastics are synthetic materials that strengthen during being heated, but cannot be successfully remoulded or reheated after their initial heat-forming. This contrasts with thermoplastics, which soften when heated and harden and strengthen after cooling. Thermoplastics can be heated, shaped and cooled as often as necessary without causing a chemical change, while thermosetting plastics will burn when heated after the initial moulding.

79.

Answer: A

Q and w are path functions while q+w i.e.H, enthalpy is state function. Similarly, H-TS i.e. G, Gibbs free energy is state function.

80.

Answer: C

$DG_q = -45 \text{ KJ/mol}$

$DH_q = -90 \text{ KJ/mol}$

$$T = 273 \text{ }^\circ\text{K}$$

Using the formula,

$$DGq = DHq - TDS$$

$$-45 = -90 - 273 DS$$

$$DS = 0.164$$

Now since DHq and DSq are independent,

$$T_2 = DH/DS = 45/0.164 = 273^\circ\text{K}$$

$$\text{Required Temp} = 273 + 273 = 546^\circ\text{K}$$

81.

Answer: D

The P atom needs five orbitals to form the five P-Cl bonds. It has a 3s and three 3p orbitals, so it must use one of its 3d orbitals to form the fifth bond. These orbitals are hybridized to form five sp³d orbitals that just happen to point in the right directions to form a trigonal bipyramid.

82.

Answer: A

The Cartesian Coordinates can be retrieved from spherical coordinates (l,q,a) by:

$$X = r \cdot \sin q \cdot \cos a$$

$$Y = r \cdot \sin q \cdot \sin a$$

$$Z = r \cdot \cos q$$

Using the same we get for P,

$$Y = P \cdot \sin q \cdot \sin a$$

83.

Answer: A

In an ideal gas, at any particular time, different particles in the gas have different speeds and hence different kinetic energies. This assumption is reasonable because as the particles collide, we expect their speed to change. Even if initial speed of all the particles was same, the molecular collisions will disrupt this uniformity. Hence statement 1 is incorrect and 2 is correct.

84.

Answer: B

A constellation is a group of stars that forms an imaginary outline or pattern on the celestial sphere, typically representing an animal, mythological person or creature, a god, or an inanimate object. Stars may or may not be equidistant from the earth.

85.

Answer: A

Hooke's law states that within the elastic limit, stress developed is directly proportional to the strain produced in a body.

Hooke's law is valid only in the linear part of stress-strain curve. Hence, statement 1 is correct.

86.

Answer: B

Histones are highly alkaline proteins found in eukaryotic cell nucleus that package and order the DNA into structural units called nucleosomes. They are the chief protein components of chromatin, acting as spools around which DNA winds, and play role in gene regulation.

87.

Answer: B

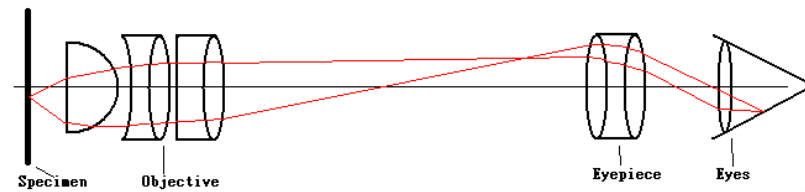
During respiration, about 97% of oxygen is transported by Red Blood Cells in blood and the remaining 3% gets dissolved in the plasma.

Around 20-25% of carbon dioxide is carried by haemoglobin as carbamino-haemoglobin.

Oxygen enters the blood from the lungs and carbon dioxide is expelled out of the blood into the lungs. The blood serves to transport both gases. Oxygen is carried to the cells. Carbon dioxide is carried away from the cells.

88.

Answer: C



89.

Answer: A

Urea is produced in the liver and is a metabolite (breakdown product) of amino acids. Ammonium ions are formed in the breakdown of amino acids. Some are used in the biosynthesis of nitrogen compounds. Excess ammonium ions are converted to urea.

90.

Answer: B

The Chambal's lower course is lined by belt of badland gullies resulting from accelerated soil erosion and is the site of a major project in soil conservation.

Chambal Project is a joint project from both Madhya Pradesh and Rajasthan government, which aims at harvesting the Chambal River for irrigation, power prevention and control of soil erosion in the valley.

91.

Answer: A

Temperate Cyclones are cyclones of mid-latitudes and hence are primarily under influence of permanent winds of mid-latitudes i.e. westerlies. Their movement is therefore eastwards of their origin with average velocity of 32km per hour in summers and 48km per hour in winters.

Movement of Tropical Cyclones

Normally, they move from east to west under the influence of trade winds because trade winds are permanent winds of tropical latitudes. The general direction is therefore westwards from their origin. They advance with varying velocities. Weak cyclones move at the speed of about 32km per hour while hurricanes attain the velocity of 180km per hour or more.

92.

Answer: B

The International Tropical Timber Organization (ITTO) is an intergovernmental organization that promotes conservation of tropical forest resources and their sustainable management, use and trade.

Headquarters: Yokohama, Japan

93.

Answer: D

"Humidity" refers to the presence of water vapor in the atmosphere. It is measured in either relative terms (relative humidity) or absolute terms (dewpoint temperature). Humidity indicates the likelihood for precipitation, dew, or fog to be present.

94.

Answer: D

The Shompen or Shom Pen are the indigenous people of the interior of Great Nicobar Island, part of the Indian union territory of Andaman and Nicobar Islands.

95.

Answer: B

Silvassa is in Dadra and Nagar Haveli.

Kavarati is capital of Lakshadweep.

Itanagar is capital of Arunachal Pradesh

These three were originally included in smart city list.

Assam government has sent a proposal for Jorhat to be included in smart city list. But it has not yet been included.

96.

Answer: B

Among the Million Plus UAs/Cities, there are three very large UAs with more than 10 million persons in the country, known as Mega Cities. These are Greater Mumbai UA (18.4 million), Delhi UA (16.3 million) and Kolkata UA (14.1 million). The largest UA in the country is Greater Mumbai UA followed by Delhi UA.

97.

Answer: A

Lonar Lake, also known as Lonar crater, is a notified National Geo-heritage Monument saline soda lake located at Lonar in Buldhana district, Maharashtra.

The oxbow lake of Purbasthali sprawls over an area 3.50 km². Hence fluvial nature.

The Gangbal Lake also called Gangbal Lake, is a lake situated at the foothills of Mount Haramukh in Ganderbal district, north of Srinagar city in the state of Jammu and Kashmir. It is an alpine high altitude oligotrophic lake, home to many species of fish, including the brown trout

98.

Answer: B

The Ten Degree Channel is a channel that separates the Andaman Islands and Nicobar Islands from each other in the Bay of Bengal

99.

Answer: B

The Daman Ganga also called Dawan River is a river in western India. The river's headwaters are on the western slope of the Western Ghats range, and it flows west into the Arabian Sea

There is an existing major irrigation project on the river called the Damanganga Reservoir Project, which is located near Madhuban village in Dharampur taluka of Valsad district of Gujarat. It is an inter-state multipurpose project of the Govt. of Gujarat and Union Territories of Dadra & Nagar Haveli (D&NH) and Daman. The storage of this project is shared by the riparian states of Gujarat, Union Territories of Dadra & Nagar Haveli and Daman & Diu as beneficiary States.

100.

Answer: B

Headquarters Kolkata, West Bengal, India

Coal India Limited (CIL) is an Indian state-controlled coal mining company headquartered in Kolkata, West Bengal, India and the largest coal-producing company in the world and a Maharatna company.

101.

Answer: C

The tone for that 1955 conference on Afro-Asian solidarity was actually set by then Indian Prime Minister Jawaharlal Nehru almost a decade earlier.

The first large-scale Asian–African or Afro–Asian Conference—also known as the Bandung Conference was a meeting of Asian and African states, most of which were newly independent, which took place on 18-24 April 1955 in Bandung, Indonesia.

102.

Answer: A

PMNRF operates from the Prime Minister's Office, South Block, New Delhi-110011 and does not pay any license fee. PMNRF is exempt under Income Tax Act, 1961 under Section 10 and 139 for return purposes. Contributions towards PMNRF are notified for 100% deduction from taxable income under section 80(G) of the Income Tax Act, 1961.

103.

Answer: C

On 29 September 2016, India announced that it conducted "surgical strikes" against militant launch pads across the Line of Control in Pakistani-administered Kashmir and inflicted "significant casualties".

The Indian Army conducted surgical strikes against suspected militants in Pakistani-administered Kashmir.

However, the operation was not given any name.

104.

Answer: D

The legislative Act of Parliament defines the National Green Tribunal Act, 2010 as follows, "An Act to provide for the establishment of a National Green Tribunal for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto".

The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.

105.

Answer: C

Part IV (dealing with Directive Principles of State Policy) and Part IVA (dealing with Fundamental Duties) are not applicable to the state.

Articles 19(1)(f) and 31(2) of the Constitution are still applicable to Jammu and Kashmir.

An amendment made to the Constitution of India does not apply to the state unless it is extended by a presidential order.

Article 35A of the Indian Constitution is an article that empowers the Jammu and Kashmir state's legislature to define "permanent residents" of the state and provide special rights and privileges to those permanent residents

106.

Answer: D

On 22nd September 1921, Gandhi made a momentous decision to change his attire. From the elaborate Gujarati attire, he decided on a simple dhoti and shawl. This epoch-making decision was taken by Gandhiji in Madurai after he decided that he has to work for and with the with the poor people of India and how can he identify with them if he wears different clothes from them.

107.

Answer: C

History of Shimla goes back to the period of Anglo – Gurkha war in the year 1808-09. The British connection with the area developed only after this battle between the Sikh rulers of these hills and the Gurkhas from Nepal.

108.

Answer: B

“Pakistan would mean a massacre,” the Premier of Punjab Sir Sikandar Hyat Khan predicted to the distinguished civilian Penderel Moon as early as in October 1938 (Divide and Quit, page 20). That was well before the Muslim League adopted the Pakistan resolution on March 23, 1940, in Lahore, radically altering Sir Sikandar's draft just 24 hours before it was passed. He repudiated it because it dropped the organic link between the two parts of India, which he had provided. He told the Punjab Legislative Assembly, on March 11, 1941, “We do not ask for freedom that there may be Muslim Raj here and Hindu Raj elsewhere. If that is what Pakistan means I will have nothing to do with it.”

109.

Answer: A

Sekhar Bandyopadhyay	From Plassey to Partition: A History of Modern India
Sarvepalli Gopal	Jawaharlal Nehru: A Biography, Vol-I, 1889-1947
David Hardiman	Gandhi in His Time and Ours
Gyanendra Pandey	The Ascendancy of the Congress in Uttar Pradesh, 1926 - 1934

110.

Answer: D

Saubhagya – ‘Pradhan Mantri Sahaj Bijli Har Ghar Yojana’ was launched in September 2017 with the aim to provide access to electricity to all remaining households in the country.

Eight States which have already achieved more than 99 percent household electrification prior to launch of Saubhagya scheme are ineligible for participation under the award scheme. These eight states are Andhra Pradesh, Gujarat, Goa, Haryana, Himachal Pradesh, Kerala, Punjab and Tamil Nadu.

111.

Answer: C

In January India will join China and Nepal, besides Pakistan, which were elected to the 47-member Council in previous years to serve three-year terms.

India received 188 votes, the highest polled by any of the 18 countries elected in the voting.

This is the fifth time India is elected to the Geneva-based Council, the main body of the UN charged with promoting and monitoring human rights.

112.

Answer: C

Bureau of Pharma PSUs of India (BPPI) is the implementing agency of Pradhan Mantri Janaushadhi Pariyojana (PMBJP). BPPI was established in December 2008 under the Department of

Pharmaceuticals, Government of India. The Bureau has been registered as an independent society under the Societies Registration Act, 1860 as a separate independent legal entity in April, 2010. BPPI follows the provisions of GFR, 2017 as amended from time to time, the CVC guidelines, and instructions from the Department of Pharmaceuticals.

113.

Answer:

Pradhan Mantri Vaya Vandana Yojana (PMVVY) is a Pension Scheme announced by the Government of India exclusively for the senior citizens aged 60 years and above which is available from 4th May, 2017 to 31st March, 2020.

This is a simplified version of the VPBY and will be implemented by the Life Insurance Corporation (LIC) of India.

114.

Answer: C

Having won three silver medals, India won its first-ever gold in the history of Youth Olympics when weightlifter Jeremy Lalrinnunga claimed the top honours in the men's 62 kg category in Buenos Aires.

115.

Answer: D

In order to encourage work of excellence in taxonomy and also to encourage young students and scholars to work in this field of science, this award, named after the late Prof. E.K. Janaki Ammal was instituted in the year 1999. Late Prof. Janaki Ammal did taxonomic work of outstanding merit and excellence, particularly in the area of cytotaxonomy and has been a source of inspiration to many young scientists.

The award is presented by Ministry of Environment, Forest and Climate Change.

116.

Answer: C

The Army Air Defence College, (abbreviated as AADC), is the training academy for the Army Air Defence Corps of Indian Army. The college is located in the Gopalpur Military Station in Gopalpur, Odisha.

117.

Answer: A

canine distemper may have been responsible for the death of four lions even as two more deaths were reported in Gir, taking the death toll to 23 since September 12.

Canine distemper is a viral disease that impacts a large number of wild animals including cats and dogs.

118.

Answer: B

Five countries and three states in United States legalized cannabis in some form. Canada set the tone when it legalized recreational marijuana, becoming the first G-7 country to do it. United State - not the country- but some states have legalised the use of cannabis.

119.

Answer: B

BENEFITS UNDER THE SCHEME:

- Ayushman Bharat- Pradhan Mantri Jan ArogyaYojana (PMJAY) will provide a cover of up to Rs. 5 lakhs per family per year, for secondary and tertiary care hospitalization.
- Over 10.74 crore vulnerable entitled families (approximately 50 crore beneficiaries) will be eligible for these benefits.
- PMJAY will provide cashless and paperless access to services for the beneficiary at the point of service.
- PMJAY will help reduce catastrophic expenditure for hospitalizations, which impoverishes people and will help mitigate the financial risk arising out of catastrophic health episodes.
- Entitled families will be able to use the quality health services they need without facing financial hardships.
- When fully implemented, PMJAY will become the world's largest fully government-financed health protection scheme. It is a visionary step towards advancing the agenda of Universal Health Coverage (UHC).

120.

Answer: C

The 2019 BRICS summit is the eleventh annual BRICS summit, an international relations conference attended by the heads of state or heads of government of the five-member states Brazil, Russia, India, China and South Africa. The summit will be held in Rio de Janeiro, Brazil, the third time Brazil has hosted the summit after the 2014 summit.
