1 D

Ex. Ozone layer, which absorbs the ultraviolet radiation, is found in stratosphere. This layer is above height. Due to absorption of ultraviolet rays by this layer, temperature increases with height in stratosphere.

2 C

Ex. Radon is not present in the air. Helium, Neon, Argon, Krypton, Xenon and Radon are known as nobel gases or inert gases and Radon is a naturally occurring radioactive gas that can cause lung cancer from the decay of uranium and radium.

3 A

Ex. Atmosphere is a dynamic mixture of gases that constantly move and change nitrogen and oxygen make upto nearly 99% of Dry and clean atmosphere. Nitrogen accounts for 78% and oxygen accounts for 21% and argon carbon dioxide, neon, helium, krypton and hydrogen together accounts the rest 1% of gases of atmosphere.

4 B

Ex. Statement (b) is not correct regarding the primary waves of earthquakes because Primary waves can move through solid liquid and gas. P-waves velocity in earthquakes is in range of 5 to 8 km/s. These waves are like sound waves, it can move in all medium (Solid, liquid and gases).

5 B

Ex. The Epicentre is that place on the surface of the Earth where the vibrations from a particular earthquake reach first. Epicentre is the place on Earth's surface which records the seismic waves first because it is located directly above the Focus or hypocenter (Point of origin of seismic waves).

6 C

Ex. Statement (c) is correct about the structure of core of interior of the Earth.
The core of interior of the Earth is made up of nife (Ni-nickel and Fe-iron.) It is the deepest layer of the Earth. It is further divided into outer and inner core. Outer core is in liquid state and inner core is in solid state. The core is made up of very heavy material mostly constituted by nickel and iron. It is sometimes referred to as the nife layer.

7 C

Ex. In the interior of the Earth, the temperature rises with increasing depth. Temperature and pressure progressively increases with increased proximity to Earth's core i.e., as we go deeper inside the Earth both temperature and pressure increases.
Structure of Earth's interior is fundamentally divided into three layers-crust, mantle and core.
Crust is outermost solid part of the Earth generally (8-40 km) thick. Mantle is beyond the crust (about 2900 km thick) and core is innermost layer surrounding the Earth's centre.

INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE

8 B

Ex. In 1220 AD, Abbasid Caliph Al-Nasir sent his Indian-born ambassador Radi al-Din Abu'l-Fada'il al-Hasan bin Muhammad al-Saghani to Delhi. The Caliph's recognition was a mere formality, but Iltutmish celebrated it in a big way by decorating the city of Delhi and honouring his nobles, officers and slaves. The 14th century Moroccan traveler Ibn battuta describes himself as the first independent ruler of Delhi. Iltutmish was the only ruler of India to had the Caliph's recognition. After the Caliph's recognition, Iltutmish began inscribing the Caliph's name on his coins, including the new silver tanka introduced by him.

9 B

Ex. Iltutmish was the first Sultan of Delhi who introduced regular coins and declared Delhi the capital of his empire. Iltutmish organized the administration of the Sultanate, laying the foundation for its dominance over Northern India until the Mughal invasion. He introduced the silver tanka and the coppe jital - the two basic coins of the Sultanate period, with a standard weight of 175 grains.

10 D

Ex. Iltutmish was called 'a slave of a slave'. He was sold into slavery as a young boy where he spent his early life in Bukhara and Ghazni under multiple masters. In the late 1190s, the Ghurid slave-commander Qutb-ud-din Aibak purchased him in Delhi, thus making him the slave of a slave.

11 C

Ex. Atharvaveda is a collection of spells, prayers, charms and hymns.
Atharvaveda is the 4th Veda which is related to medicines and Ayurveda.The Atharvaveda is the knowledge store house of 'Atharvanas', the procedures for everyday live. It is a collection of 730 hymns and spells.

12 A

Ex. The first reference to the term 'Varna' is found in Rigveda. Varna is a Sanskrit word which means type, order, colour or class. It was first time found in Rigveda, in its Purusha Sukta hymn. This term refers to the social classes in Brahminical books. The duties and functions of the four Varnas are elaborated on the Dharmashastra literature of the later times and the concept of untouchability was put clearly.
The four varnas or social groups are Brahmins, Kshatriyas, Vaishyas, Shudras.

13 A

Ex. The famous 'Battle of the Ten King' as described in the Rigved was fought on the bank of Parushni. 'Battle of Ten King' was the major event in the Rigveda and and hero of this war was th King Sudas of North Panchal Kingdom, the ancestor of Draupadi. The reason behind the war was the rivalry between Vishwamitra and Vasishtha.

14 C

Ex. The great Bath was found in Mohenjodaro. It is called the earliest public water tank of the ancient world. It measures approximately 12 metres by 7 metres, maximum depth of 2.4 metres. Two wide stairs one from the North and one from the South served as the entry to the structure.

15 D

Ex. Mohenjodaro and Harappa were the two cities from the Indus Valley Civilisation revealing uniform urban planning. The architecture of the cities shows that the roads were criss-crossed at right angles, the drainage system was well developed, baked bricks were used in the bu9ildings and trade centres were developed for making trade relations with other Harappan cities.

16 D

Ex. MA Jinnah had denounced the participation of Mahatma Gandhi in the Khilafat Movement. Jinnah was especially opposed to befriending radical Muslim leaders and felt it would be nothing short of a disaster for the country. He warned Gandhi that the use of religious idioms to mobilize people against British rule would lead to perpetual division between Hindus and Muslims and Jeopardise the Unity of India.

17 A

Ex. Rabindranath Tagore opposed the burning of foreign clothes during the Non-Cooperation Movement. He was against the burning of foreign clothes and called it an insensate waste. Tagore openly criticized the movement calling it as political asceticism. He argued that instead of Non-Cooperation, India should stand on cooperation of all people of the world.

18 B

Ex. During Non-Cooperation Movement, Gandhiji gave the slogan of 'Swaraj'. He launched the Non-Cooperation movement on 5th September, 1920, with the aim of self-governance and obtaining full independence. He promised the people of the country that with the launched of Non-Cooperation, India will achieve Self-rule (Swaraj).

19 B

Ex. The people gathered at Jallianwala Bagh to protest against the arrest of Kitchlew and Satyapal.
Kitchlew was arrested with Gandhiji and Dr Satyapal for leading protests in Punjab against the legislation. They were arrested and moved to a secret location. Both were proponents of the Satyagraha Movement led by Gandhiji.

20 A

Ex. Rowlatt Act also known as 'Black-Bill' because it gave enormous powers to police to search and arrest anyone without warrant. This act came into force in 1919. The unpopular legislation provided for stricter control of the press, arrests without warrants, indefinite detention without trial. These constricted were required to deposit securities upon release.

21 C

Ex. Mahatma Gandhi was called the 'Father of the Nation' first by Subhash Chandra Bose in his radio address of 6th July, 1944 on Singapore Radio. From the Azad Hind Radio, he asked for Gandhi's blessings for India's last war of Independence.

22 A

Ex. Mohan Singh suggested the idea of the Indian National Army. It was first conceived in Malay.
Mohan Singh was Indian officer of the British India Army. Indian National Army was an armed force formed by Indian nationalists in 1942 in South-East Asia during II World War. It was again strengthened under the leadership of Subhash Chandra Bose.

INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE

23 B

Ex. The correct chronological order is 4, 2, 1, 3 The Swadeshi Movement launched in the 1905 was a direct fallout of the decision of the British Government to partition Bengal Use of Swadeshi goods and boycott of foreign made goods were the two main objectives of this movement.
Jallianwala Bagh Massacre, also called Massacre of Amritsar, incident on 13th April, 1919, in which British troops fired on a large crowd of unarmed Indians in an open space known as the Jallianwala bagh in Amritsar in the Punjab, killing several hundred people and wounding many hundreds more. Dandi March was a non-violent Civil Disobedience Movement in British India led by Mahatma Gandhi. The twenty four day march lasted from 12th March, 1930 to 6th April, 1930 as a campaign of tax resistance and non-violent protest against the British salt monopoly.
Quit India Movement was launched in August, 1942. It came in response to the Cripps Proposals. The Cripps Mission came to India in March, 1942 and was headed by Sir Stafford Cripps.

24 B

Ex. In Salt Satyagraha Movement, women's participation is considered to be maximum. Salt Movement of 1930 led to an unprecedented movement of middle class women out of their homes in the cause of the nation's struggle. It was chosen as an opportunity for women to be part of the movement in a visible and prominent manner. Once the Salt Satyagraha began, women started pouring out on to the streets.

25 A

Ex. The 'Quit India Resolution' was moved in the Bombay session of the Congress in the year 1942 by Jawaharlal Nehru. On 8th August, 1942, Mahatma Gandhi gave a clarion call to end the British rule and launched the Quit India Movement at the session of the All-India Congress Committee in Bombay.

26 B

Ex. An important aspect of the Cripps Mission of 1942 was the creation of an Indian Union with Dominion status after the World War II.
The Mission was opposed by almost all the parties.

27 C

Ex. Pandit Nehru and Maulana Azad were the official Congress negotiators with Cripps Mission. The Crippe Mission ws an attempt in late March, 1942 by the British Government to secure Indian cooperation and support for their efforts in Worl War II.
The Mission was headed by Sir Stafford Cripps.

28 A

Ex. Swami Dayanand Saraswat is known as 'Martin Luther of India' because for the first time he raised the demand for Self-governnance through his writings.
The founder of Arya Samaj, Swami Dayanand Saraswati used to believe in Vedic culture. He gave the slogan of 'Go back to the Vedas'.

29 B

Ex. Mirat-ul-Akbbar was a Persian language journal founded and edited by Raja Ram Mohan Roy. The newspaper was first published on 12th April, 1822. It was published on weekly basis on Friday.

30 B
Ex. Raja Ram Mohan Roy founded the Brahmo Samaj. Brahmo Samaj was started in Calcutta on 20th August, 1828 by Taja Ram Mohan Roy and Dwarkanath Tagore.

31 C
Ex.

32 A
Ex.

33 D
Ex.

34 C
Ex.

35 D
Ex.

36 C
Ex.

37 A
Ex.

38 C
Ex.

39 A
Ex. • The Geological Survey of India has for the first-time established Lithium 'inferred' resources(G3) of 5.9 million tonnes in Salal-Haimana area of the UT of Jammu & Kashmir.
• The "inferred" mineral resource is a resource for which quantity, grade and mineral content are estimated only with a low level of confidence.
• It is based on information gathered from locations such as outcrops, trenches, pits, workings and drill holes that may be of limited or uncertain quality, and also of lower reliability from geological evidence.
• It is based on the classification from United Nations International Framework Classification for Reserves/Resources - Solid Fuels and Mineral Commodities of 1997 (UNFC-1997).

40 D
Ex.

41 C
Ex. Sixth annual Global Report on Food Crises (GRFC 2022) is released by Global Network Against Food Crises (GNAFC).

ABOUT GNAFC:
GNAFC was founded by the European Union, FAO and World Food Programme (WFP) at 2016 World Humanitarian Summit to prevent, prepare for, and respond to food crises and support Sustainable Development Goal to End Hunger (SDG 2).

42 D
Ex.

43 B
Ex. The black hole (SAGITTARIUS A) at the centre of Milky Way was photographed for the first time.

The first photograph of Sagittarius A*, a supermassive black hole about 26,000 light years from Earth and situated at the centre of the Milky Way, was revealed by astronomers of the Event Horizon Telescope (EHT).
(an international collaboration (of observatories) capturing images of black holes using a virtual Earth-sized telescope)

44 B
Ex.

45 C
Ex. World Meteorological Organization (WMO) released State of the Global Climate Report 2021.

WHAT IS THE REPORT ALL ABOUT?
The report provides details of climate indicators such as temperatures, ocean heat, ocean acidification, sea level rise, sea ice glaciers and extreme weather.
WMO State of the Global Climate report 2021 complements the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment report.
IPCC prepares comprehensive Assessment Reports about knowledge on climate change, its causes, potential impacts, and response options.

46 D
Ex.

47 C
Ex. State of the World's Forests 2022 (SOFO 2022) was released by the United Nations Food and Agriculture Organization (FAO) during World Forestry Congress.

ABOUT FAO:
FAO is a Specialised agency under UN with a goal to achieve Food Security for all. Headquartered in Rome, it has 195 members. (India is a member)
Every year, the FAO publishes a number of major 'State of the World' reports related to food, agriculture, forestry, fisheries and natural resources.

48 C
Ex.

49 C
Ex. Nordic countries represent:
• Denmark,
• Norway,
• Sweden,
• Finland and
• Iceland.

50 B
Ex.

51 A
Ex.

52 C
Ex.

INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE

53 C

Ex. The first National Women Legislators' Conference in Kerala concluded with the adoption of Thiruvananthapuram Declaration.

MAIN THEME OF THIRUVANANTHAPURAM DECLARATION
The Thiruvananthapuram Declaration laments the long-pending Women's Reservation Bill (since 1996) for 33% reservation for women in the Lok Sabha and State Legislatures.
The low representation of women in Parliament, i.e. lack of political empowerment is the main reason for India's poor performance on Global Gender Gap Index published by World Economic Forum. (India was ranked at 140 out of 156 countries in 2021)

54 C

Ex. The Supreme Court of India will have all sanctioned seats filled i.e. 34 Judges.
At present, SC has strength of 29 judges as against a sanctioned strength of 34 judges.

IS THE STRENGTH OF JUDGES FIXED BY THE CONSTITUTION?
NO
As per Article 124(1) of the Constitution of India, Parliament by law prescribes the strength of the SC.

55 B

Ex.

56 B

Ex.
• In organisms that perform cellular respiration, glycolysis is the first stage of this process.
• Glycolysis is a series of reactions that extract energy from glucose by splitting it into molecules called pyruvates.
• The net products of this process are two molecules of ATP and two molecules of NADH.
• Lactic acid is produced in anaerobic respiration

57 C

Ex.

58 B

Ex.
• Meristematic tissues, or simply meristems, are tissues in which the cells remain forever young and divide actively throughout the life of the plant.
• Parenchyma tissue, Collenchyma tissue and Sclerenchyma tissues are s simple permanent tissue which have lost their ability to divide

59 B

Ex.
• Vitamins are essential for normal body functions.
• Human body does not produce vitamins, so need to be taken from diet.
• Vitamins are needed in relatively small quantities but their deficiency causes disorders and diseases
• Vitamin K deficiency causes Internal haemorrhage
• Biotin deficiency causes nerve disorders.
• Anemia is causes by deficiency of folic acid or Vitamin B9
• Calciferol or Vitamin-D deficiency causes fragile bones
• Pellegra is caused by deficiency of niacin or Vitamin B3

INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE

60 C

Ex.
• Stem cell is a cell that does not yet have a specific job in the body
• They are unspecialized cell which renew themselves for longer periods through cell division
• They can be induced to become cells with specific functions and thus has the capacity to transform into any type of cells in the body
• This has become the focus of research of several serious diseases in the present day biotechnology.
• Stem cell could be regarded as one of the basic building blocks of the human body

61 B

Ex.
• Big neck disease , also known as goiteris the overall enlargement of the thyroid, or it may be the result of irregular cell growth that forms one or more lumps (nodules) in the thyroid.
• The most common cause of goiters worldwide is a lack of iodine in the diet.

62 C

Ex.
• Enzootic ataxia, Vitiligo disease and Wilson disease are the diseases caused by deficiency of copper
• Adison disease caused by deficiency of Sodium

63 D

Ex.
• Chikungunya is caused by the bite of mosquito Aedes aegypti Symptoms are Severe joint pain, muscle pain, headache, nausea, fatigue and rashes.
• Zika is caused by zika virus transmitted by the bite of mosquito Aedes aegypti. Symptoms are None to fever, rash, conjunctivitis, muscle and joint pain, malaise or headache.
• Dengue is caused by virus belonging to genus flavivirus transmitted by the bite of mosquito Aedes aegypti. Symptoms are sudden high fever, severe headaches, pain behind the eyes, severe bone, joint, and muscle pain

64 B

Ex.
• Taxonomy is the branch of biology that classifies all living things.
• It deals with naming, describing and classification of all livin organisms
• It was developed by the Swedish botanist Carolus Linnaeus
• Linnaeus invented binomial nomenclature, the system of giving each type of organism a genus and species name.
• He also developed a classification system called the taxonomic hierarchy.

65 C

Ex.
• Hay fever, also known as Allergic rhinitis is a form of allergic reaction that may occur upon inhaling tiny airborne particles called allergens through the nose or mouth.
• Patients with allergic rhinitis have symptoms including nasal congestion, sneezing, ear blockage and breathing difficulties, itchy eyes and nose, and sore throat; it is relatively common and can affect all age groups.
• It may be caused by exposure to certain allergens frequently present in our immediate internal and external settings - dust mites, plants, mold, insects.

66 D
Ex. • Cells divide and reproduce in two ways, mitosis and meiosis.
• Mitosis results in two identical daughter cells which are diploid.
• Meiosis-1 results in 2 sex cells which are haploid
• There 2 haploid cells undergo meiosis-2 which results in 4 haploid sex cells.

67 A
Ex. • Phylum Platyhelminthes has flame cells as excretory organs
• Phylum Arthropoda has Malphigian tubules as excretory organs
• Phylum Annelida has Nephridia as excretory organs which is the correct pair matching.

68 B
Ex. • Lysosomes are organelles that digest macromolecules, repair cell membranes, and respond to foreign substances entering the cell.
• A lysosome has three main functions: the breakdown/digestion of macromolecules (carbohydrates, lipids, proteins, and nucleic acids), cell membrane repairs, and responses against foreign substances such as bacteria, viruses and other antigens.
• When lysosomes burst, the digestive enzymes released start digesting its own cells.
• That is why they are known as suicidal bags.

69 A
Ex. • The plant cell wall is composed of cellulose.
• Cellulose is a structural carbohydrate and is considered a complex sugar because it is used in both protection and structure.
• The plant cell wall consists of three layers. Each layer has its own unique structure and function.

70 B
Ex.

71 C
Ex. Only Statement [A] is correct. First Amendment is not related with 1935 Act. it is related with amendment of Articles 15, 19, 85, 87 etc.

72 A
Ex.

73 D
Ex. All options are correct

74 B
Ex.

75 D
Ex. All explanations are related to the Constitution of China.

76 A
Ex. All options are part of the Gujral Doctrine which covers 5-points.

77 D
Ex. All points are related to the initiatives of new Govt. in foreign policy.

78 A
Ex. Both are correct explanations.

79 C
Ex. All option the objectives of NITI Aayog.

INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE VAJIRAO INSTITUTE

80 D
Ex. Activities can be divided into 4 major heads that is why all are true.

81 A
Ex.

82 C
Ex. This speech was given by Dr. B. R. Ambedkar in the 25-11-1949 Constituent Assembly.

83 D
Ex.

84 D
Ex. All options are the features of Indian Federalism

85 B
Ex. Statement is related with constitutionalism definition. Reason is related with the definition of Constitution.

86 C
Ex.

87 A
Ex.

88 B
Ex.

89 A
Ex.

90 D
Ex.

91 B
Ex.

92 C
Ex.

93 B
Ex.

94 D
Ex.

95 D
Ex.

96 A
Ex.

97 C
Ex.

98 A
Ex.

99 D
Ex.

100 B
Ex.