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T.B.C.: FTRE-U-GKS

Test Booklet Series

Serial No.

1023633

TEST BOOKLET



PAPER-I

(General Studies)

Time Allowed: Two Hours

Maximum Marks: 100

INSTRUCTIONS

- 1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET *DOES NOT* HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
- 2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.
- 3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. DO NOT write anything else on the Test Booklet.
- 4. This Test Booklet contains 120 items (questions). Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose ONLY ONE response for each item.
- 5. You have to mark all your responses ONLY on the separate Answer Sheet provided. See directions in the Answer Sheet.
- 6. All items carry equal marks.
- 7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
- 8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the Invigilator only the Answer Sheet. You are permitted to take away with you the Test Booklet.
- 9. Sheets for rough work are appended in the Test Booklet at the end.
- 10. Penalty for wrong answers:

THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.

- (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** of the marks assigned to that question will be deducted as penalty.
- (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
- (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

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- 1. The speed of particles in a matter usually increases with a rise in temperature. Which one of the following phenomena is responsible for it?
 - (a) An increase in kinetic energy
 - (b) A decrease in kinetic energy
 - (c) An increase in decomposition
 - (d) A decrease in reaction rate
- 2. Which one of the following has the least density at room temperature?
 - (a) Milk
 - (b) Acetone
 - (c) Red soil
 - (d) Iron
- **3.** Which one of the following mixtures will **not** have uniform composition?
 - (a) Oil in water
 - (b) Sulphur in carbon disulphide
 - (c) Alcohol in water
 - (d) Sugar in water
- **4.** Which one of the following is an example of physical change?
 - (a) Flowering of plants
 - (b) Clotting of blood
 - (c) Cooking of food
 - (d) Melting of ice

- 5. Which one of the following elements is not monatomic?
 - (a) Hydrogen
 - (b) Helium
 - (c) Neon
 - (d) Argon
- **6.** Which one of the following elements exhibits singular valency?
 - (a) Sulphur
 - (b) Phosphorus
 - (c) Sodium
 - (d) Copper
- 7. What is the maximum number of electrons that can be accommodated in the M shell of an atom?
 - (a) 32
 - *(b)* 18
 - (c) 8
 - (d) 2
- 8. A sealed container contains one mole of helium and three moles of nitrogen gas at 25 °C. If the total pressure is 80000 Pa, what will be the partial pressure of nitrogen gas in the container?
 - (a) 20000 Pa
 - (b) 40000 Pa
 - (c) 60000 Pa
 - (d) 80000 Pa

9.	Which	one	of	the	following	statements
	regard	ling	gold	l is	not correc	t?

- (a) 24 karat gold is very soft.
- (b) 22 karat gold is generally used to make ornaments.
- (c) 22 karat gold contains 22 parts of pure gold and 2 parts of iron to make it hard.
- (d) 18 karat gold comprises of 75% gold mixed with 25% of copper or silver to make it hard.
- 10. Match List-I with List-II and select the correct answer using the code given below the Lists:

11.	What are the major raw materials used in
	the manufacture of cement?

- (a) Limestone and clay
- (b) Al₂O₃ and limestone
- (c) Fe₃O₄ and clay
- (d) Clay and MgO

List–I (Compound)

List-II (Use)

- A. Bleaching powder
- 1. Removal of permanent hardness of water
- B. Baking soda
- 2. Making toys
- C. Washing soda
- 3. Ingredient in antacids
- D. Plaster of Paris 4. Disinfecting drinking water

Code:

- (a) A B C D 2 3 1 4
- (b) A B C D 4 1 3 2
- (c) A B C D 2 1 3 4
- (d) A B C D 4 3 1 2

- 12. Which one of the following statements about the law of chemical combination is **not** correct?
 - (a) Equal volumes of all gases at the same temperature and pressure contain equal number of molecules.
 - (b) If two elements combine to form more than one compound, the masses of one element that combine with a fixed mass of other element, are not in any proportion.
 - (c) Matter can neither be created nor destroyed.
 - (d) A given compound always contains exactly the same proportion of elements by weight.

- 13. What is the number of moles of carbon in a sample containing 72.06 g of carbon?
 - (a) 4
 - (b) 6
 - (c) 2
 - (d) 8
- **14.** Which one of the following gases is the lightest?
 - (a) Hydrogen
 - (b) Helium
 - (c) Oxygen
 - (d) Nitrogen
- 15. A species that is **not** isoelectronic with $^{35}_{17}\text{Cl}^-$ is
 - (a) $^{31}_{15}P^{3-}$
 - (b) $^{32}_{16}S^{2-}$
 - (c) $^{40}_{18}$ Ar²⁺
 - (d) 39 K+

- 16. You are located at 40° N latitude and 90° W longitude. You travel due North 40°, then due East 60°. What are your new coordinates?
 - (a) 30° N and 80° E
 - (b) 80° S and 30° E
 - (c) 80° N and 30° W
 - (d) 80° N and 30° E
- 17. Indira Gandhi National Centre for the Arts is located at
 - (a) Allahabad
 - (b) New Delhi
 - (c) Kolkata
 - (d) Bhopal
- **18.** Which of the following are called 'terrestrial planets'?
 - (a) Earth, Mars, Jupiter, Mercury
 - (b) Jupiter, Mercury, Saturn, Earth
 - (c) Earth, Mercury, Mars, Venus
 - (d) Mercury, Mars, Earth, Saturn
- 19. The process through which groundwater is brought up to the surface is called
 - (a) eluviation
 - (b) illuviation
 - (c) capillary action
 - (d) desilication

- 20. Which one of the following deserts is **not** located around 20°-30° latitude North or South of the Equator?
 - (a) Atacama
 - (b) Kalahari
 - (c) Great Victoria
 - (d) Gobi
- 21. Which one of the following is correct?
 - (a) In humid tropical region, humus content is high in soil
 - (b) Glacial till exhibits deep horizon
 - (c) Humus accumulates in cold climate
 - (d) In equatorial climates, humus content is high in soil
- 22. Which of the following are called 'benthos'?
 - (a) Microscopic plants which float on the ocean water
 - (b) Animals which swim in the water
 - (c) Plants and animals which live on the ocean floor
 - (d) Plants and animals which float on the ocean water

- 23. Natural population change is calculated by
 - (a) adding the death rate and the birthrate
 - (b) subtracting the death rate from the birthrate
 - (c) multiplying the death rate with the birthrate
 - (d) dividing the death rate by the birthrate
- 24. Volga River drains into which one of the following seas?
 - (a) Adriatic Sea
 - (b) Black Sea
 - (c) North Sea
 - (d) Caspian Sea
- **25.** Chabahar Port is located in which one of the following countries?
 - (a) Iraq
 - (b) Uzbekistan
 - (c) Iran
 - (d) Qatar
- **26.** Which one of the following is **not** inhibited by corals?
 - (a) Gulf of Kutch
 - (b) Lakshadweep
 - (c) Sundarbans
 - (d) Andaman and Nicobar Islands

27.	Which	one	of	the	following	is	а
landlocked country?				,			

- (a) Mali
- (b) Libya
- (c) Angola
- (d) Gabon

28. Which of the following plants is located near Bababudan Hills?

- (a) Bhilai Steel Plant
- (b) Visvesvaraya Iron and Steel Plant
- (c) Rourkela Steel Plant
- (d) Durgapur Steel Plant

29. Namchik-Namphuk areas are known for the production of which one of the following resources?

- (a) Petroleum
- (b) Coal
- (c) Iron ore
- (d) Limestone
- **30.** Which one of the following cities is situated to the East of Great Dividing Range?
 - (a) Adelaide
 - (b) Sydney
 - (c) Forrest
 - (d) Broken Hill

- 31. Which one of the following electromagnetic radiations in the sunlight is considered to be the main cause of skin cancer?
 - (a) X-ray
 - (b) Ultraviolet ray
 - (c) Visible light
 - (d) Infrared radiation
- 32. As per the safe drinking water guidelines issued by the Bureau of Indian Standards, Government of India, what is the acceptable pH value of drinking water?
 - (a) Between 7.5 and 9.5
 - (b) Between 6.5 and 8.5
 - (c) Between 5.5 and 7.5
 - (d) Between 4.5 and 6.5
- **33.** Which one of the following statements is correct about a virus?
 - (a) It is a free-living organism.
 - (b) It contains nucleic acid and protein.
 - (c) It can synthesize proteins.
 - (d) It can generate its own energy.

- 34. Which one of the following sets of elements is essential for the production of red blood cells in human body?
 - (a) Arsenic and zinc only
 - (b) Iron and zinc only
 - (c) Arsenic and iron only
 - (d) Arsenic, iron, lead and zinc
- 35. Foods like margarine, fried foods, cookies, chips, snack foods are considered as unhealthy foods for humans. Which one of the following varieties of fats found in all of these foods is most harmful?
 - (a) Trans fat
 - (b) Monounsaturated fat
 - (c) Polyunsaturated fat
 - (d) Saturated fat
- **36.** Which one of the following foods is **not** naturally rich in protein?
 - (a) Green leafy vegetable
 - (b) Lentil
 - (c) Yoghurt
 - (d) Egg
- 37. Which of the following are the parts of the Government of India's AYUSH initiative?
 - (a) Allopathy, Unani and Yoga only
 - (b) Homeopathy, Unani and Yoga only
 - (c) Allopathy and Homeopathy only
 - (d) Allopathy, Homeopathy, Unani and Yoga

- 38. Which of the following major parameters are considered while deriving the Air Ouality Index (AQI) of an area in India?
 - (a) Nitrogen oxide and particulate matter only
 - (b) Carbon dioxide and nitrogen oxide only
 - (c) Particulate matter and sulphur dioxide only
 - (d) Carbon dioxide, nitrogen oxide, particulate matter and sulphur dioxide
- **39.** Covaxin, a COVID-19 vaccine manufactured in India, is
 - (a) a live attenuated virus vaccine
 - (b) an inactivated whole virus vaccine
 - (c) a messenger RNA vaccine
 - (d) a protein subunit vaccine
- **40.** Which of the following diagnostic tests carry the health risks associated with ionizing radiations?
 - (a) CT scans and X-rays only
 - (b) MRI scans and X-rays only
 - (c) CT scans, MRI scans and Ultrasonography only
 - (d) CT scans, MRI scans, Ultrasonography and X-rays

- **41.** A Bunch of Old Letters, originally published in 1958, is a collection of letters written to and by
 - (a) Acharya Narendra Dev
 - (b) N. G. Ranga
 - (c) Jawaharlal Nehru
 - (d) Sarojini Naidu
- **42.** Local bodies, first formed in British India between 1864–1868, were presided by
 - (a) the elected presiding officers
 - (b) the eldest member of the local body
 - (c) the District Magistrates
 - (d) the nominee of the Vicerov
- 43. Raja Gulab Singh acquired Kashmir by
 - (a) the Treaty of Amritsar
 - (b) the Treaty of Lahore
 - (c) the Treaty of Bhyroval
 - (d) the Treaty of Sugauli
- **44.** The practice of *Sati* was outlawed in 1829 by which one of the following promulgated Regulations?
 - (a) Regulation XVI
 - (b) Regulation XVII
 - (c) Regulation XVIII
 - (d) Regulation XIX

- 45. Which one of the following was one of the major currencies in circulation in India when the East India Company first considered the introduction of a uniform currency?
 - (a) Awadh Silver Rupee
 - (b) Arcot Silver Rupee
 - (c) The Madras Silver Rupee
 - (d) Sindh Rupee
- **46.** Who among the following established the Public Works Department (PWD) in India?
 - (a) Lord Dalhousie
 - (b) Lord Bentinck
 - (c) Lord Cornwallis
 - (d) Warren Hastings
- **47.** Which one of the following statements about the *Tufan Dals* of 1943 is **not** correct?
 - (a) They blew up railway bridges.
 - (b) They ran people's court.
 - (c) They organized constructive work.
 - (d) They were part of the Prati Sarkar.

48. Who v	vere Pa	ahar	ias?
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- (a) The cultivators of Deccan
- (b) The forest dwellers of Rajmahal Hills
- (c) The landless labours working under Zamindars
- (d) The stonecutters employed with the East India Company
- 49. Which one of the following caused the ruin of the rural artisan industries in India in the 19th Century?
 - (a) Flooding of Indian markets with machine-produced goods on a mass scale
 - (b) Promotion of urban craftsmen
 - (c) Promotion of expensive silk and woolen goods
 - (d) Import of raw materials from Britain at high prices
- **50.** Which one of the following was a nationalist newspaper published from Bombay?
 - (a) Som Prakash
 - (b) Rast Goftar
 - (c) Advocate
 - (d) Akhbar-e-Am

- 51. As compared to natural greenhouse effect, the enhanced greenhouse effect refers to increase in average surface temperature of the Earth due to
 - (a) volcanic activity
 - (b) warm ocean currents
 - (c) sunspot activity
 - (d) anthropogenic activities
- **52.** The terms 'oligotrophic', 'mesotrophic' and 'eutrophic' are associated with the evolution of
 - (a) scrubland
 - (b) bogs
 - (c) forest
 - (d) lakes
- **53.** Dispersal of species by the agent of wind is termed as
 - (a) thalassochore
 - (b) hydrochore
 - (c) anemochore
 - (d) anemohydrochore

- 54. The term 'biotope' refers to
 - (a) a set of general physical conditions excluding chemical and biological conditions in a given geographic area
 - (b) a homogeneous set of physical and chemical conditions in a given geographic area at a particular time
 - (c) a homogeneous set of both biological and chemical conditions in a given geographic area
 - (d) a particular type of biological assemblage in a given geographic area
- 55. Earthworm is a well-known example of
 - (a) saprophage
 - (b) coprophage
 - (c) necrophage
 - (d) geophage
- **56.** A juvenile ecosystem is characterized by energy usage which is primarily directed towards
 - (a) multiplication and growth of organisms
 - (b) maintenance of biocenose
 - (c) conservation of biocenose
 - (d) reduced growth of plants

- **57.** Which one of the following results due to the 'edge effect' between cold and warm ocean waters?
 - (a) Development of dense phytoplanktons rich in diatoms
 - (b) Decrease in fish population in the area
 - (c) Decrease in mussel population in the area
 - (d) Decrease in primary productivity of the area
- **58.** Soils which reflect the composition of underlying rocks are always
 - (a) young
 - (b) highly evolved
 - (c) mature
 - (d) moderately old
- **59.** Eagle fern, horsetail, chrysanthemum grow well in
 - (a) acidic soil
 - (b) extremely alkaline soil
 - (c) neutral soil
 - (d) highly alkaline soil
- **60.** The term 'lotic facies' is used to denote water of
 - (a) rivers and streams
 - (b) sag ponds
 - (c) ponds
 - (d) deep ocean floor

- 61. Azotobacter and Clostridium convert
 - (a) gaseous molecular nitrogen into ammonia
 - (b) ammonia present in soil to gaseous nitrogen
 - (c) humus present in soil to mineralized constituents
 - (d) normal healthy soil to toxic soil
- 62. When two species can very well ignore each other totally, each remaining perfectly neutral and causing no advantage or inconvenience to its neighbour, the relationship is termed as
 - (a) commensalism
 - (b) amensalism
 - (c) symbiosis
 - (d) mutualism
- 63. Which one of the following groups contributes the maximum number of species to the biosphere?
 - (a) Reptiles
 - (b) Mammals
 - (c) Insects
 - (d) Birds
- **64.** The ultraviolet solar radiations are largely absorbed by
 - (a) carbon dioxide and nitrogen
 - (b) oxygen and carbon dioxide
 - (c) oxygen and ozone
 - (d) nitrogen and ozone

- **65.** In a juvenile ecosystem, the zoocenoses are often
 - (a) monophagous
 - (b) polyphagous
 - (c) oligophagous
 - (d) carnivorous
- **66.** Which one of the following is **not** an essential factor for the development of peat bog?
 - (a) Presence of stagnant water
 - (b) Presence of permeable soil
 - (c) Presence of low temperature
 - (d) Presence of acidic pH environment
- 67. Which one of the following is **not** correct about marshes?
 - (a) These transform mineral matter into organic matter
 - (b) These function as physico-chemical sinks
 - (c) These contribute to the beauty of the countryside
 - (d) These are least productive natural environments

- 68. The incident solar radiation is trapped by constituents of the atmosphere and reflect it partly towards the Earth as
 - (a) microwaves
 - (b) thermal infrared rays
 - (c) ultraviolet rays
 - (d) shortwave radiation
- **69.** The most significant 'variable gases' in the atmosphere are
 - (a) oxygen and carbon dioxide
 - (b) carbon dioxide and nitrogen
 - (c) water vapour and carbon dioxide
 - (d) water vapour and oxygen
- **70.** Which one of the following is **not** correct in the context of greenhouse effect?
 - (a) Nitrogen and oxygen are poor absorbers of shortwave solar radiation
 - (b) Clouds are poor absorbers of the Earth radiation
 - (c) The most Earth radiation that escapes to space is in a narrow band from 8-13 micrometres
 - (d) More than 70% of the atmospheric radiant energy is directed back to the surface

- 71. Which one of the following is **not** correct in the context of daytime heating experienced on the Earth?
 - (a) The highest daytime temperatures usually occur several hours after the time of maximum solar input
 - (b) Equilibrium between incoming and outgoing radiation occurs about an hour and a half after sunset
 - (c) The extent of daily lag in maximum temperature varies
 - (d) Presence of vegetation cover reduces the maximum temperature
- 72. Which one of the following statements about North-facing slopes and South-facing slopes in the Northern Hemisphere is **not** correct?
 - (a) North-facing slopes are snow covered while South-facing slopes are bare.
 - (b) North-facing slopes get less intense radiation as compared to Southfacing slopes.
 - (c) Snow on North-facing slopes is found at a lower altitude than South-facing slopes.
 - (d) Tree line characteristics on Northfacing slopes and South-facing slopes are similar.

- 73. Dew point temperature represents that
 - (a) thin layer of air near the ground surface has become cold enough to condensate
 - (b) there is thorough mixing of air
 - (c) evaporation has exceeded condensation
 - (d) the night temperature is warm
- 74. Which one of the following events has **not** been attributed to El Niño during early 1980s?
 - (a) The warmest winter in the Eastern US during the last 25 years
 - (b) Drought in Southeast Africa, Australia, New Zealand and Southeast Asia
 - (c) Prolific growth of coral reefs in the Pacific Ocean
 - (d) Increased incidents of bubonic plague in Southwestern United States
- 75. Which one of the following important greenhouse gases is **not** considered to be largely changed in its amount due to human activities?
 - (a) Water vapour
 - (b) Carbon dioxide
 - (c) Chlorofluorocarbon
 - (d) Methane

- **76.** Which of the following can be used to determine the polarity of an unmarked bar magnet?
 - (a) An electroscope
 - (b) Iron filings
 - (c) A compass
 - (d) Another unmarked bar magnet
- **77.** The magnetization in ferromagnetic materials
 - (a) can never vanish
 - (b) is always opposite to the direction of applied magnetic field
 - (c) is always in the direction perpendicular to the applied magnetic field
 - (d) may not vanish even when the applied magnetic field is reduced to zero
- **78.** Which one of the following is the conservation law from which the Bernoulli's equation for fluid flow is derived?
 - (a) Conservation of momentum
 - (b) Conservation of volume
 - (c) Conservation of mass
 - (d) Conservation of energy

- 79. Who among the following is known to be the first one to consider the role of inertia in motion?
 - (a) Galileo Galilei
 - (b) Isaac Newton
 - (c) Albert Einstein
 - (d) Nicolaus Copernicus
- **80.** Which one of the following statements is **not** correct for a freely falling object?
 - (a) It accelerates.
 - (b) Its momentum keeps on changing.
 - (c) Its motion is affected only by the gravity.
 - (d) Its motion is affected both by the gravity as well as by the air resistance.
- **81.** Which one of the following statements is true for nuclear fission processes?
 - (a) Light initial nuclides have lesser number of neutrons than protons.
 - (b) Heavy initial nuclides have lesser number of neutrons than protons.
 - (c) All initial nuclides have larger number of neutrons than protons.
 - (d) All initial nuclides have equal number of protons and neutrons.

- **82.** The centre of gravity of a system of rigid bodies coincides with their centre of mass if and only if
 - (a) their centre of mass is at their geometrical centre
 - (b) the acceleration due to gravity is same throughout the system of bodies
 - (c) the rigid bodies have same uniform mass densities
 - (d) the rigid bodies are very large
- **83.** How do the scalar quantities differ from the vector quantities?
 - (a) The only difference between the two quantities is that a scalar quantity includes magnitude only, whereas a vector quantity includes both magnitude as well as direction
 - (b) Both the quantities include direction and magnitude. Scalar quantities can be combined using the rules of ordinary algebra, whereas vector quantities can be combined using the rules of vector algebra
 - (c) A scalar quantity includes magnitude only, whereas a vector quantity includes both magnitude and direction, and both the quantities can be combined using the rules of ordinary algebra
 - (d) A scalar quantity includes magnitude only and scalar quantities can be combined using the rules of ordinary algebra, whereas a vector quantity includes both magnitude and direction, and vector quantities can be combined using the rules of vector algebra

- **84.** Which two competing effects determine the size of a star?
 - (a) Nuclear fusion and electrostatic effects
 - (b) Nuclear fusion and magnetic effects
 - (c) Nuclear fusion and gravitational effects
 - (d) Gravitational and electromagnetic effects
- 85. The characteristics of gravitational waves that make them difficult to detect are
 - (a) long wavelength and high energy
 - (b) long wavelength and low energy
 - (c) short wavelength and high energy
 - (d) short wavelength and low energy
- **86.** Which one of the following statements is true about the appearance of colour of the Sun in the sky?
 - (a) At sunset (or sunrise), sunlight travels more distance in the atmosphere and higher frequency radiations scatter away resulting into red sunset (or sunrise).
 - (b) At sunset (or sunrise), sunlight travels least distance in the atmosphere and higher frequency radiations scatter away resulting into red sunset (or sunrise).
 - (c) At noon, sunlight travels least distance in the atmosphere and relatively less amount of sunlight is scattered and therefore the Sun appears reddish.
 - (d) At noon, sunlight travels least distance in the atmosphere and larger amount of sunlight is scattered and therefore the Sun appears reddish.

- 87. The appearance of a rainbow in the sky after a rain shower is due to
 - (a) diffraction and refraction of light in water droplets
 - (b) total internal reflection of light in water droplets only
 - (c) refraction of light in water droplets only
 - (d) both total internal reflection and refraction of light in water droplets
- **88.** On a very hot day, we often see shimmering wavy lines near the ground. It is due to
 - (a) dispersion of light
 - (b) refraction of light
 - (c) reflection of light
 - (d) total internal reflection of light
- 89. Which one of the following is the conservation law from which the equation of continuity for fluid flow is derived?
 - (a) Conservation of momentum
 - (b) Conservation of volume
 - (c) Conservation of mass
 - (d) Conservation of energy

- **90.** The derivation of Bernoulli's equation for fluid flow takes certain assumptions. Which one of the following assumptions is **not** among them?
 - (a) Gravitational forces can be neglected
 - (b) Turbulence of fluid flow can be neglected
 - (c) Viscous forces can be neglected
 - (d) Frictional forces can be neglected
- **91.** With reference to the electron drift speed in a current-carrying conductor, which one of the following statements is correct?
 - (a) It is much more than the average electron speed.
 - (b) It is much lesser than the average electron speed.
 - (c) It is very close to the average electron speed.
 - (d) It is close to the speed of light.
- **92.** Which one of the following greenhouse gases is man-made?
 - (a) Carbon dioxide
 - (b) Chlorofluorocarbon
 - (c) Methane
 - (d) Nitrous oxide

- 93. Which one of the following colours of the visible spectrum of light is least absorbed by the green plants?
 - (a) Violet
 - (b) Red
 - (c) Green
 - (d) Yellow
- **94.** The refractive index of a prism made of flint glass is
 - (a) the same for all wavelengths in white light
 - (b) higher for red light than for violet light
 - (c) higher for violet light than for red light
 - (d) highest for green and yellow lights and lowest for violet and red lights
- **95.** What happens to a bar magnet when it is heated?
 - (a) Its polarity reverses
 - (b) Its magnetism is increased
 - (c) Its magnetism remains unchanged
 - (d) Its magnetism is either reduced or lost

- **96.** Which of the following statements is/are correct about 'eSanjeevani'?
 - 1. It is a platform of the Ministry of Health and Family Welfare that provides physical presence of the doctors to the doorstep of the patients.
 - 2. One of its components is facilitating 'doctor-to-doctor teleconsultation'.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 97. The President of India may resign from his post by writing under his hand addressed to
 - (a) the Chief Justice of the Supreme Court of India
 - (b) the Speaker of the Lok Sabha
 - (c) the Vice President of India
 - (d) the Prime Minister of India

- 98. Which of the following statements is/are correct?
 - 1. The Fundamental Duties are enlisted in Part IV-A of the Constitution of India.
 - 2. The 44th Amendment to the Constitution of India added the word 'Secular' to the Preamble of the Constitution of India.

Select the correct answer using the code given below.

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- **99.** Article 324 of the Constitution of India provides for the establishment of which one of the following institutions in India?
 - (a) The National Human Rights
 Commission
 - (b) The Central Vigilance Commission
 - (c) The Central Information Commission
 - (d) The Election Commission of India
- 100. Which one of the following provisions of the Constitution of India was **not** adopted from the British Constitution?
 - (a) First past the post system
 - (b) Directive Principles of State Policy
 - (c) Law-making procedure
 - (d) Parliamentary form of government

- 101. Which among the following Supreme Court Judgements established the principle that the 'basic structure' of the Constitution of India was unamendable?
 - (a) Golaknath vs State of Punjab
 - (b) Kesavananda Bharati vs State of Kerala
 - (c) Sankari Prasad vs Union of India
 - (d) Sajjan Singh vs State of Rajasthan
- 102. Who among the following was the Chairman of the National Commission for Review of the Working of the Constitution (NCRWC)?
 - (a) Justice Ranganath Misra
 - (b) Justice J. S. Verma
 - (c) Justice A. M. Ahmadi
 - (d) Justice M. N. Venkatachaliah
- 103. The S. R. Bommai and Others vs Union of India case relates to which one of the following issues?
 - (a) Sexual harassment at workplace
 - (b) Proclamation of Emergency in States
 - (c) Issuing of Ordinances by the President of India
 - (d) Power to amend the Constitution by the Parliament

- 104. Which one of the following programmes is **not** a part of poverty alleviation programmes in India?
 - (a) Integrated Rural Development Programme
 - (b) Deendayal Antyodaya Yojana
 - (c) Ayushman Bharat Yojana
 - (d) National Family Benefit Scheme
- **105.** Which one of the following is **not** applicable to a writ of *Habeas Corpus*?
 - (a) It is a powerful safeguard to citizens against arbitrary acts of the State
 - (b) It can be invoked for the enforcement of Fundamental Rights
 - (c) The writ may be addressed to any person, private or official, who has another person in his custody
 - (d) It secures the release of a person who has been imprisoned by a court of law on a criminal charge
- 106. Through which one of the following amendment acts were Fundamental Duties introduced to the Constitution of India?
 - (a) The 44th Amendment Act
 - (b) The 42nd Amendment Act
 - (c) The 43rd Amendment Act
 - (d) The 25th Amendment Act

- 107. Which one of the following is **not** a Fundamental Right under the Constitution of India?
 - (a) Right to property
 - (b) Right against exploitation
 - (c) Right to constitutional remedies
 - (d) Cultural and educational right
- 108. Which one of the following is referred to in the Constitution of India as the 'Date of its Commencement'?
 - (a) 14th November, 1949
 - (b) 17th October, 1949
 - (c) 26th January, 1950
 - (d) 26th November, 1949
- 109. The Green Revolution as an agrarian revolution aimed at revolutionizing the production of
 - (a) food grains
 - (b) fruits and vegetables
 - (c) cereals
 - (d) fisheries
- 110. 'Van Panchayats or Village Forest Councils' are unique to which one among the following States?
 - (a) Himachal Pradesh
 - (b) Chhattisgarh
 - (c) Uttarakhand
 - (d) Sikkim

- 111. What is 'Pegasus' often heard in news?
 - (a) A type of cloud computing
 - (b) A digital payment platform
 - (c) A spyware
 - (d) A radar system
- 112. Consider the following statements:
 - 1. The Regional Comprehensive Economic Partnership (RCEP) is the world's biggest free trade deal.
 - 2. India is a member of the RCEP.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2
- 113. Among the following, which one has been accorded the status of UNESCO World Heritage Site recently?
 - (a) Chausath Yogini Temple, near Morena
 - (b) Sri Kalahastheeswara Temple, near Tirupati
 - (c) Ramappa Temple, near Warangal
 - (d) Manjunatha Temple, near Dharmasthala

- 114. The term Polymerase Chain Reaction' is often mentioned in news in the context of
 - (a) alternate sources of energy
 - (b) production of safe plastics
 - (c) developing hypersonic missiles
 - (d) diagnosis of infectious diseases
- 115. Consider the following pairs of name of famous person and name of the company associated with:
 - 1. Elon Musk: Apple
 - 2. Jeff Bezos: Amazon
 - 3. Tim Cook : Tesla

Which of the pairs given above is/are correctly matched?

- (a) 1 only
- (b) 2 only
- (c) 3 only
- (d) 1, 2 and 3
- 116. Recently which one of the following countries became the first in the world to adopt the cryptocurrency 'Bitcoin' as legal tender?
 - (a) Argentina
 - (b) Bolivia
 - (c) El Salvador
 - (d) Peru

- 117. Which one of the following was recently considered to be a suitable site for introducing African cheetah in India?
 - (a) Bandhavgarh National Park
 - (b) Dudhwa National Park
 - (c) Kuno National Park
 - (d) Manas National Park
- 118. The e-AMRIT web portal on electric vehicles, launched at COP26 Summit in Glasgow recently, has been developed by NITI Aayog in collaboration with the Government of
 - (a) USA
 - (b) UK
 - (c) Russia
 - (d) Canada
- 119. What is common to the places called 'Aliyar, Idukki, Mettur, Parambikulam'?
 - (a) Buddhist archaeological sites
 - (b) Underground cave systems
 - (c) Pre-historic cave paintings
 - (d) Water reservoirs
- 120. The United Nations has recently warned that 'famine-like conditions have been created by climate change' in which one of the following countries?
 - (a) Madagascar
 - (b) Mongolia
 - (c) Papua New Guinea
 - (d) Venezuela

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