

SAMPLE PAPER 1

1. Which of the following countries is not situated in the region between the Caspian Sea and the Black Sea?
 - (a) Armenia
 - (b) Azerbaijan
 - (c) Georgia
 - (d) Ukraine
2. The metal compound commonly found in Sindoor or kumkum is based on
 - (a) Tin
 - (b) Lead
 - (c) Copper
 - (d) Zinc
3. Alum is used as
 - (a) an analgesic
 - (b) a fertilizer
 - (c) a disinfectant
 - (d) a water purifier
4. Which among the following elements (metals) pollutes the air of a city having a large number of automobiles?
 - (a) Cadmium
 - (b) Lead
 - (c) Chromium
 - (d) Nickel
5. Oxygen and ozone are
 - (a) allotropes
 - (b) isomers
 - (c) isotopes
 - (d) isobars
6. When applied to the affected area, which one of the following will relieve the pain due to ant-bite or bee-sting?
 - (a) Lemon juice
 - (b) Vinegar
 - (c) Baking soda
 - (d) Caustic soda
7. Which among the following is a chemical change?
 - (a) A wet towel dries in the sun
 - (b) Lemon juice added to tea causing its colour to change
 - (c) Hot air rises over radiator
 - (d) Coffee is brewed by passing steam through ground coffee
8. Which among the following is an element
 - (a) Alumina
 - (b) Brass
 - (c) Graphite
 - (d) Silica
9. Which one of the following is used as moderator in nuclear reactors?
 - (a) Ozone
 - (b) Heavy Hydrogen
 - (c) Heavy Water
 - (d) Hydrogen Peroxide
10. Which one of the following contains maximum percentge of nitrogen by mass?
 - (a) Urea
 - (b) Ammonium cyanide
 - (c) Ammonium carbonate
 - (d) Ammonium nitrate
11. Two elements gallium and oxygen combine to form a compound Ga_2O_3 . Which among the following is the valency of gallium?
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
12. Vinegar is the trade name of
 - (a) Acetic acid
 - (b) Chloroform
 - (c) Carbon tetrachloride
 - (d) Ethyl alcohol
13. Consider the following statements regarding diamond
 1. It is an allotrope of silicon
 2. It is a bad conductor of heat and electricity
 3. It is the hardest substance
 4. It burns to produce carbon dioxideWhich of the statements given above are correct?
 - (a) 1, 2, 3 and 4
 - (b) 2, 3 and 4 only
 - (c) 1 and 2 only
 - (d) 1, 3 and 4 only
14. Which one of the following chemicals is used in beauty parlours for hair-setting?
 - (a) Sulphur based
 - (b) Phosphorus based
 - (c) Silicon based
 - (d) Iron based
15. Non-conductors, whose polarization is caused by an electric field, are known as
 - (a) Semi-conductors
 - (b) Super-conductors
 - (c) Dielectrics
 - (d) Resistive conductors

16. The resistance of a wire that must be placed parallel with a $12\ \Omega$ resistance to obtain a combined resistance of $4\ \Omega$ is
 (a) 2Ω
 (b) 4Ω
 (c) 6Ω
 (d) 8Ω

17. One light year is equal to
 (a) $9.46 \times 10^{15}\text{ m}$
 (b) 9.46×10^{15}
 (c) 9.46×10^{13}
 (d) 9.46×10^{13}

18. Which among the following thermometers is preferred for measuring temperature around 1250°C ?
 (a) Mercury thermometer
 (b) Constant volume gas thermometer
 (c) Optical pyrometer
 (d) Platinum resistance thermometer

19. Name the continents that form a mirror image of each other?
 (a) North America and South America
 (b) Asia and Africa
 (c) Africa and South America
 (d) Europe and Asia

20. How many kilometers are represented by 1 degree of latitude?
 (a) 321
 (b) 211
 (c) 111
 (d) 91

21. Which of the following rivers does not flow into the Bay of Bengal?
 (a) Mahanadi
 (b) Cauvery
 (c) Tapti
 (d) Godavari

22. Which one of the following cities never get the vertical rays of the sun all through the year?
 (a) Chennai
 (b) Mumbai
 (c) Kolkata
 (d) Srinagar

23. Climate change resulting in rise of temperature may benefit which of the following countries/regions?
 (a) South Africa
 (b) East Indies islands comprising of Java, Sumatra and Borneo
 (c) The western coasts of South America
 (d) Russia and Northern Europe

24. Which of the following statements regarding ozone layer within the atmosphere is/are correct?
 1. It absorbs most of the ultraviolet radiation found in the Sun's rays.
 2. Chlorofluorocarbons are serious threat to the ozone layer.
 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

25. When we consider 15 degree meridian on a world map or globe and count them in an eastward direction starting with Greenwich meridian (0°), we find that the time of this meridian is
 (a) same as Greenwich
 (b) 1 hour fast
 (c) 1 hour slow
 (d) 12 hours fast

26. Kanha National Park belongs to which one among the following biogeographical areas in the world?
 (a) Tropical Sub-humid Forests
 (b) Tropical Humid Forests
 (c) Tropical Dry Forests
 (d) Tropical Moist Forests

27. 'El Nino' associated with the formation of the South West Monsoon of India is
 (a) an abnormally warm ocean current
 (b) a periodic warm air-mass
 (c) a periodic warm wind
 (d) a periodic low pressure centre

28. The thermal equator is found
 (a) at the equator
 (b) south of the geographical equator
 (c) north of geographical equator
 (d) at the tropic of cancer

29. A nautical mile is equal to
 (a) 5060 feet
 (b) 5280 feet
 (c) 6060 feet
 (d) 6080 feet

30. Horse latitudes lie within the atmospheric pressure belts of
 (a) Polar high
 (b) Equatorial low
 (c) Sub-tropical high
 (d) Sub-polar low

31. The warm and dry winds that blow down the steep valleys in Japan are called

(a) Zonda
(b) Yamo
(c) Tramontane
(d) Santa Ana

32. Which of the following statements regarding red soils of India is/are correct?
 1. The colour of the soil is red due to ferric oxide content.
 2. Red soils are rich in lime, humous and potash
 3. They are porous and have friable structure.
 (a) 1 only
 (b) 1 and 3 only
 (c) 2 and 3 only
 (d) 1, 2 and 3

33. Arrange the following oil refineries of India from west to east
 1. Koyali
 2. Bongaigaon
 3. Mathura
 4. Haldia

Select the correct answer using the code given below:
 (a) 1 - 2 - 3 - 4
 (b) 1 - 3 - 4 - 2
 (c) 3 - 1 - 2 - 4
 (d) 2 - 4 - 3 - 1

34. Which one among the following creeks is not associated with the state of Gujarat?
 (a) Kori creek
 (b) Godai creek
 (c) Kajhar creek
 (d) Sir creek

35. Consider the following statements:
 1. National Cadet Corps (NCC) is a preindependence organization.
 2. The motto of NCC is 'Unity and Discipline'.
 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

36. The first effort at drafting a Dominion Status Constitution for India was made in response to the
 (a) Minto-Morley Reforms
 (b) Montague- Chelmsford Reforms
 (c) Simon Commission

(d) First Round Table Conference

37. The Kamraj Plan was a plan formulated in 1963 by the then
 (a) Union Cabinet Minister, whereby a new constitution for the Indian National Congress was proposed
 (b) Chief Minister of Madras, whereby the senior ministers were asked to leave government and work to rejuvenate the party
 (c) Chief Minister of Madras, whereby a new set of principles for accepting donations for the party work was proposed
 (d) Chief Minister of Madras to root out corruption from India

38. Which of the following was/were reason/reasons for the success of European trading companies in South India during the 17th Century?
 1. The presence of the Mughals in the south was not as much as in the north
 2. The Vijaya Nagar kingdom had been overthrown in the late 16th Century
 3. The south had many small and weak states
 Select the correct answer using the code given below:
 (a) 1, 2 and 3
 (b) 1 and 2 only
 (c) 2 and 3 only
 (d) 1 only

39. Which one among the following was a reason for which the French could not succeed in India in the 18th Century?
 (a) They sided with the weak Indian sides such as Chanda Sahib and Muzafer Jang
 (b) Dupleix was called back at a crucial time
 (c) They conspired against the Indian powers
 (d) Their trading company was heavily dependent on the French Government

40. Which one among the following is correct about the Doctrine of Lapse?
 (a) It did not allow the Indian rulers to adopt any heir
 (b) It did not allow an adopted heir to rule a state after the death of the ruler

(c) It made the annexation of Indian state compulsory after the death of a ruler
 (d) It made the annexation of India state compulsory if the adoption of heir had not been approved by the British authorities

41. In 1856 Awadh would not have been annexed with the British Empire if the Nawab of Awadh had
 (a) allied with the British
 (b) not refused to introduce reforms as suggested by the British
 (c) fought against the British
 (d) a natural heir

42. Which of the statements given below about Vivekananda are correct?
 1. He believed that Vedanta was fully rational.
 2. He criticized his countrymen for having lost touch with the outside world.
 3. He condemned the caste system.
 4. He considered the Veda to be infallible.

Select the correct answer using the code given below:

(a) 1, 2 and 3
 (b) 2, 3 and 4
 (c) 1, 3 and 4
 (d) 1 and 2 only

43. Which of the statements given below the Champaran Satyagraha is/are correct?
 1. It was related to Indigo plantations.
 2. It started because the European planters oppressed the Zamindars.

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

44. Which among the following was the most immediate factor for the spread of Swadeshi and boycott of foreign goods during the first decade of the last century?
 (a) Curzon's design to curtail the sphere of local self-government
 (b) Curzon's attempt to control the Universities
 (c) Curzon's partition of Bengal

(d) Curzon's plan to curb the growing popularity of the Indian National Congress

45. Consider the following statements about the Ahmedabad Mill Strike of 1918:
 1. It was related to a dispute between the workers and the European mill owners regarding hours of work.
 2. Gandhiji advised the workers to go on strike.

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

46. Which one among the following was the result of the First Anglo-Maratha War of 1775-82?
 (a) The British won the war
 (b) The Marathas won the war
 (c) There was no victory for either side
 (d) It helped Hyder Ali to gather strength because the British and Marathas were engaged in a mutual war

47. In the case of nuclear disaster which of the following options for cooling the nuclear reactors may be adopted?
 1. Pumping of water to the reactors.
 2. Use of boric acid.
 3. Taking out the fuel rods and keeping them in a cooling pond.

Select the correct answer using the code given below:

(a) 1, 2 and 3
 (b) 1 and 2 only
 (c) 2 and 3 only
 (d) 3 only

48. Which one among the following is not an important factor of climate of an area?
 (a) Latitude
 (b) Longitude
 (c) Altitude
 (d) Distance from the sea

49. Which of the following condition/conditions must be fulfilled by the NRIs to be eligible to vote in elections in India?
 1. They must be physically present in their place of origin to exercise their franchise.

2. NRIs whether they have acquired citizenship of other countries or not are eligible to vote.
3. Eligible NRIs have to register by filling up from 6-A with electoral registration office.

Select the correct answer using the code given below:

- (a) 1, 2 and 3
- (b) 1 and 3 only
- (c) 2 only
- (d) 3 only

50. Gandhiji led the Indian nationalist movement from the front and his leadership was motivated by a wider philosophy he nurtured throughout the course of the movement. Which one among the following was a continuous movement based on this philosophy, and not a specific movement?

- (a) Non-cooperation Movement
- (b) Swadeshi Movement
- (c) Quit India Movement
- (d) Civil Disobedience Movement

51. The Jainas believe that Jainism is the outcome of the teachings of twenty four Tirthankaras. In the light of this statement which one among the following is correct for Vardhamana Mahavira?

- (a) He was the first Trithankara and the founder of Jainism
- (b) He was the twenty third Trithankara, the first twenty two Trithankaras being considered legendary
- (c) He was the last and twenty fourth Trithankara, who was not considered as the founder of the new faith but as a reformer of the existing religious sect
- (d) He was not one of the twenty four Trithankaras

52. The earliest Buddhist literature which deal with the stories of the various birth of Buddha are

- (a) Venaya pitakas
- (b) Sutta pitakas
- (c) Abhidhamma pitakas
- (d) Jatakas

53. Which one among the following is not a characteristic of Rig-Vedic Aryans?

- (a) They were acquainted with horses, chariots and the use of bronze
- (b) They were acquainted with the use of iron

- (c) They were acquainted with the cow, which formed the most important form of wealth
- (d) They were acquainted with the use of copper and the modern ploughshare

54. Which among the following statements about European Union (EU) are correct?

1. The EU is the world's largest economy.
2. The EU has its own flag, anthem and currency.
3. The EU's combined armed forces are the second largest in the world.

Select the correct answer using the code given below:

- (a) 1, 2 and 3
- (b) 1 and 4
- (c) 2 and 3 only
- (d) 3 and 4

55. Which one among the following is not guaranteed by the Constitution of India?

- (a) Freedom to move freely throughout the country
- (b) Freedom to assemble peacefully without arms
- (c) Freedom to own, acquire and dispose of property anywhere in the country
- (d) Freedom to practice any trade or profession

56. Which one among the following pairs of level of government and legislative power is not correctly matched?

- (a) Central Government : Union List
- (b) Local Government : Residuary Powers
- (c) State Governments : State List
- (d) Central and State Governments : Concurrent List

57. Which of the following statements is/are correct?

Under the provisions of Article 200 of the Constitution of India the Governor of a state may:

1. Withhold his assent to a Bill passed by the state legislature.
2. Reserve the Bill passed by the state legislature for consideration of the President.
3. Return to Bill, other than a money Bill, for reconsideration of the legislature.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 1 and 2 only

(c) 2 and 3 only
(d) 1, 2 and 3

58. Which of the following are envisaged as being part of the Right against Exploitation in the Constitution of India?

1. Prohibition of traffic in human beings and forced labour.
2. Abolition of untouchability.
3. Protection of the interests of the minorities.
4. Prohibition of employment of children in factories and mines.

Select the correct answer using the code given below:

- (a) 1 and 2
- (b) 1 and 3
- (c) 1 and 4
- (d) 2, 3 and 4

59. Consider the following statements about the powers of the President of India:

1. The President can direct that any matter on which decision has been taken by a Minister should be placed before the Council of Ministers.
2. The President can call all information relating to proposals for legislation.
3. The President has the right to address and send messages to either House of the Parliament.
4. All decisions of the Council of Ministers relating to the administration of the Union must be communicated to the President.

Which of the statements given above are correct?

- (a) 1, 2 and 3 only
- (b) 1 and 3 only
- (c) 2 and 4 only
- (d) 1, 2, 3 and 4

60. In which one of the following cases the Supreme Court of India gave verdicts which have a direct bearing on the Centre-State relations?

- (a) Keshavananda Bharati case
- (b) Vishakha case
- (c) S. R. Bommai case
- (d) Indira Sawhney case

61. Which reference to the conduct of the government business in the Parliament of India, the term 'closure' refers to

1. suspension of debate at the termination of a day's sitting of the Parliament
2. a rule of legislative procedure under which further debate on a motion can be halted
3. the termination of a parliamentary session
4. refusal on the part of the government to have the opposition look at important documents

62. Which of the following Committees are Committees of Parliament?

1. Public Accounts Committee
2. Estimates Committee
3. Committee on Public Undertakings

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

63. The Chief Election Commissioner of India holds office for a period of

- (a) six years
- (b) during the pleasure of the President
- (c) for six years or till the age of 65 years, whichever is earlier
- (d) for five years or till the age of 60 years, whichever is earlier

64. Which of the following statements with respect to the judiciary in India is/are correct?

1. Unlike in the United States, India has not provided for a double system of courts.
2. Under the Constitution of India there is a single integrated system of courts for the Union as well as the states.
3. The organization of the subordinate judiciary varies slightly from state to state.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 1 and 2 only
- (c) 1, 2 and 3
- (d) 2 and 3 only

65. The purpose of Directive Principles of State Policy is to

1. lay down positive instructions which would guide State Policy at all levels
2. implement Gandhiji's idea for a decentralized state
3. check the use of arbitrary powers by the government

4. promote welfare of the backward sections of the society

66. When you pull out the plug connected to an electrical appliance, you often observe a spark. To which property of the appliance is this related?
 (a) Resistance
 (b) Inductance
 (c) Capacitance
 (d) Wattage

67. The focal length of a convex lens is
 (a) the same for all colours
 (b) shorter for blue light than for red
 (c) shorter for red light than for blue
 (d) maximum for yellow light

68. If the door of a running refrigerator in a closed room is kept open, what will be the net effect on the room?
 (a) It will cool the room
 (b) It will heat the room
 (c) It will make no difference on the average
 (d) It will make the temperature go up and down

69. When a ball drops onto the floor it bounces. Why does it bounce?
 (a) Newton's third law implies that for every action (drop) there is a reaction (bounce)
 (b) The floor exerts a force on the ball during the impact
 (c) The floor is perfectly rigid
 (d) The floor heats up on impact

70. Renewable energy can be obtained from
 (a) Fossils
 (b) Radioactive elements
 (c) Biomass
 (d) Natural gas

71. A body has a mass of 6kg on the Earth; when measured on the Moon, its mass would be
 (a) nearly 1 kg
 (b) less than 1 kg
 (c) less than 6 kg
 (d) 6 kg

72. Which one among the following is not included in the basic functions of operating system?
 (a) Job control
 (b) Job scheduling
 (c) Memory management
 (d) Data management

73. Transformer is a kind of appliance that can
 1. Increase power
 2. Increase voltage
 3. Decrease voltage
 4. Measure current and voltage

Select the correct answer using the codes given below:
 (a) 1 and 4
 (b) 4 only
 (c) 2 and 3 only
 (d) 2, 3 and 4

74. What is the main constituent of a Pearl?
 (a) Calcium carbonate and magnesium carbonate
 (b) Calcium sulphate only
 (c) Calcium oxide and calcium sulphate
 (d) Calcium carbonate only

75. From which one among the following water sources, the water is likely to be contaminated with fluoride?
 (a) Ground water
 (b) River water
 (c) Pond water
 (d) Rain water

76. Which one among the following will you put into pure water in order to pass electric current through it?
 (a) Kerosene
 (b) Mustard oil
 (c) Lemon juice
 (d) Sugar

77. Gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) is added to clinker during cement manufacturing to
 (a) decrease the rate of setting of cement
 (b) bind the particles of calcium silicate
 (c) facilitate the formation of colloidal gel
 (d) impart strength to cement

78. Sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3$) solution is used in photography to
 (a) remove reduced silver
 (b) reduce silver bromide (AgBr) grain to silver
 (c) remove undercomposed AgBr as a soluble silver thiosulfate complex
 (d) convert the metallic silver to silver salt

79. Fire fly gives us cold light by virtue of the phenomenon of
 (a) Fluorescence
 (b) Phosphorescence
 (c) Chemiluminescence

(d) Effervescence

80. Sacrificial anode protects iron of ships, underground pipelines etc. from rusting, a process known as cathodic protection. Which one of the following metals cannot be used as a sacrificial anode?

- Tin
- Zinc
- Magnesium
- Aluminum

81. Which one among the following will be absorbed fastest through the wall of digestive system?

- Black coffee as a hot beverage
- DDT taken as a poison
- Raw alcohol taken as a drink
- Ice cream as a desert

82. One of the occupational health hazards commonly faced by the workers of ceramics, pottery and glass industry is

- stone formation in gall bladder
- melanoma
- silicosis
- stone formation in kidney

83. It has been observed the astronauts lose substantial quantity of calcium through urine during space flight. This is due to

- hypergravity
- microgravity
- intake of dehydrated food tablet
- low temperature in cosmos

84. If we sprinkle common salt on an earthworm, it dies due to

- osmotic shock
- respiratory failure
- toxic effect of salt
- closure of pores of skin

85. Cutting and peeling of onion bring tears to the eyes because of the presence of

- sulfur in the cell
- carbon in the cell
- fat in the cell
- aminoacid in the cell

86. The anti-malarial drug Quinine is made from a plant. The plant is

- Neem
- Eucalyptus
- Cinnamon
- Cinchona

87. Endosulfan, which has been in news these days, is

(a) a pesticide
(b) a fertilizer
(c) a sulfa drug
(d) an antibiotic

88. The cat can survive fall from a height much more than human or any other animal. It is because the cat

- can immediately adjust itself to land on all four paws and bend the legs to absorb the impact of falling
- has elastic bones
- has thick and elastic skin
- also gets injury equally with other animals but has tremendous endurance, body resistance and speedy recovery

89. Development of Goitre (enlarged thyroid gland) is mainly due to deficiency of

- Sodium
- Iodine
- Calcium
- Iron

90. To suspect HIV/AIDS in a young individual, which one among the following symptoms is mostly associated with?

- Long standing jaundice and chronic liver disease
- Sever anaemia
- Chronic diarrhoea
- Severe persistent headache

91. The Presidency of the Security Council of United Nations is alternated every

- Month
- Six months
- Year
- Two years

92. With reference to the standard air pressure at sea level, 1 atm is equal to

- 660 mm mercury
- 730 mm mercury
- 760 mm mercury
- 780 mm mercury

93. When it is 12 noon in Allahabad, the time in Tokyo would be about

- 9.30 AM
- 3.30 PM
- 6.30 PM
- 9.30 PM

94. Which among the following are southern-most hills?

- Cardamom hills
- Javadi hills

(c) Nallamalai hills
(d) Nilgiri hills

95. Which among the following is the western-most city?
(a) Jhansi
(b) Gwalior
(c) Agra
(d) Delhi

96. Great Barrier Reef is situated along the coast of
(a) Australia
(b) Canada
(c) U.K.
(d) South Africa

97. Which one among the following makes common border with maximum number of other States of India?
(a) Assam
(b) Madhya Pradesh
(c) Jharkhand

(d) Rajasthan

98. Equatorial radius of the earth is approximately
(a) 6380 Km
(b) 6740 Km
(c) 7380 Km
(d) 7740 Km

99. Which one among the following is the longest continuous mountain range in the world?
(a) The Himalayas
(b) The Andes
(c) The Rocky Mountains
(d) The Alps

100. Which one among the following planets is nearest to the Sun?
(a) Jupiter
(b) Uranus
(c) Mars
(d) Mercury

SAMPLE PAPER 2

1. Which one of the following statements with regard to Cloud Burst is not correct?
(a) Cloud Burst is a localized weather phenomenon representing highly concentrated rainfall over a small area in a short duration of time
(b) Cloud Burst occurs due to upward movement of moisture-laden air with sufficient rapidity to form cumulonimbus clouds
(c) Cloud Burst occurs only in hilly areas
(d) There is no satisfactory technique till now for predicting Cloud Burst

2. Which one among the following substances evolves heat when dissolved in water?
(a) Potassium nitrate
(b) Sodium chloride
(c) Glucose
(d) Calcium oxide

3. Eco-Mark is given to an Indian Product which is
(a) rich in protein
(b) environment friendly
(c) economically viable
(d) pure and unadulterated

4. When we eat something we like, our mouth waters. This is actually not water but fluid secreted from
(a) nasal glands
(b) oral epithelium

(c) salivary glands
(d) tongue

5. Which one among the following groups of items contains only biodegradable items?
(a) Wood, Grass, Plastic
(b) Wood, Grass, Leather
(c) Fruit peels, Lime juice, China clay cup
(d) Lime juice, Grass, Polystyrene

6. Which one among the following is not true for Special Economic Zones?
(a) No licence is required for import
(b) Manufacturing and service activities are allowed
(c) No permission for subcontracting
(d) No routine examination of cargo for export/import by customs authorities

7. Sukhoi-30MKI Squadron is not stationed at
(a) Tezpur
(b) Pune
(c) Jamnagar
(d) Bareilly

8. Dog bite can cause rabies. Which among the following other animals can also cause rabies?
(a) Donkey
(b) Bat
(c) Horse
(d) Crocodile

9. The interest of the Vijayanagar and Bahmani rulers clashed in three separate and distinct areas in Deccan. Which one among the following was not directly associated with this intense conflict?

- Tungabhadra doab
- Krishna-Godavari delta/basin
- Kaveri interior delta
- Marathawada country

10. Wind is often found to blow in a hot summer day due to

- Conduction of heat between air and soil on the Earth
- Radiation from the soil
- Convection current of air
- None of the above

11. The original jurisdiction of the Supreme Court of India extends to

- Treaties and agreements signed by the Government of India
- Disputes between the Government of India and one or more States
- Disputes relating to implementation of the Directive Principles of State Policy
- A bill passed by the Parliament which is violative of the Constitution

12. Heavy water implies

- Water which is used in heavy industries such as thermal power plants
- Water which contains SO_2^{-4} and Cl^- of calcium and magnesium
- deuterated water
- water which has maximum density

13. Most of the communication satellites today are placed in a geostationary orbit. In order to stay over the same spot on the Earth, a geostationary satellite has to be directly above the

- Tropic of Cancer
- Either North or South Pole
- Equator
- Tropic of Capricorn

14. SIMBEX is an annual joint maritime bilateral exercise conducted between

- China and India
- Singapore and Indonesia
- India and Singapore
- Malaysia and Thailand

15. Which one among the following is a function of the Pro-Tem Speaker of the Lok Sabha?

- Conduct of the proceedings of the House in the absence of the Speaker
- To check if the election certificates of the members of the House are in order
- Swear in the members of the House and hold the charge till a regular Speaker is elected
- Give his assent to the bills passed by the House

16. The term 'demographic gap' signifies the difference

- in sex ratio
- in age
- in child/woman ratio
- between the birth and the death rate

17. Dead organs are generally stored in formalin. Formalin is

- aqueous ferrous sulphate
- aqueous formaldehyde
- aqueous formic acid
- aqueous ferric alum

18. When items of jewellery made of metals such as copper or nickel are placed in a solution having a salt of gold, a thin film of gold is deposited by

- cooling to below 0°C
- heating above 100°C
- passing an electric current
- just keeping it for 10 minutes

19. Rainwater collected after 30 to 40 minutes of raining is not suitable for drinking because it

- contains bacteria and dirt
- contains dissolved toxic chemicals
- is deficient in minerals
- is acidic

20. Mr. X was advised by an architect to make outer walls of his house with hollow bricks. The correct reason is that such walls

- make the building stronger
- help keeping inside cooler in summer and warmer in winter
- prevent seepage of moisture from outside
- protect the building from lightning

21. Which one among the following statements about Ashokan Edicts is correct?

- the Pillar Edicts were located in all parts of the empire
- the Edicts give details of his personal concerns but are silent on events of the empire
- the subject of inscribed matter on Rock Edicts differs completely with that of the Pillar Edicts

(d) the Greek or Aramaic Edicts are versions or translations of the texts used in other Edicts

22. Which one among the following is not true of the Planning Commission?
 (a) It is an advisory body and makes recommendations to the Cabinet
 (b) It is responsible for the execution of development programmes and plans
 (c) It is responsible for formulation of a plan for the most effective and balanced utilization of the country's resources
 (d) It indicates the factors which tend to retard economic development

23. White blood cells act
 (a) as a defence against infection
 (b) as source of energy
 (c) for clotting blood
 (d) as a medium for oxygen transport from lung to tissues

24. Water is a good coolant and is used to cool the engines of cars, buses, trucks, etc. It is because water has a
 (a) high specific heat
 (b) low surface tension
 (c) high boiling point
 (d) low expansivity

25. Consider the following:
 1. Acetic acid
 2. Ascorbic acid
 3. Citric acid
 4. Folic acid
 Which of the above are vitamins?
 (a) 1, 2 and 3
 (b) 2 and 4
 (c) 1 and 4
 (d) 2, 3 and 4

26. Who of the following is popularly known as Deshbandhu?
 (a) Aurobindo Ghose
 (b) Chittaranjan Das
 (c) G.B. Pant
 (d) R.M. Lohia

27. Who of the following resigned as Defence Minister in the wake of India-China war in 1962?
 (a) Sardar Baldev Singh
 (b) Sardar Swaran Singh
 (c) V.K. Krishna Menon
 (d) Y.B. Chavan

28. Who was the President of India National Congress at the time of partition of India?
 (a) Pandit Jawaharlal Nehru

(b) Sardar Vallabhbhai Patel
 (c) Maulana Abul Kalam Azad
 (d) Acharya J.B. Kriplani

29. Which one of the following dealt with the subject of local self-government?
 (a) Balwant Rai Mehta Committee
 (b) Kothari Commission
 (c) Veerappa Moily Committee
 (d) Venkatachalam Commission

30. Which of the following is not a Fundamental Right in India?
 (a) Right against exploitation
 (b) Right to Constitutional Remedies
 (c) Right to property
 (d) Cultural and educational rights

31. Which one of the following deals with the Women's Reservation Bill that seeks to provide for one-third reservation of seats for women in Parliament and State Assemblies?
 (a) 98th Amendment of the Constitution
 (b) 100th Amendment of the Constitution
 (c) 105th Amendment of the Constitution
 (d) 108th Amendment of the Constitution

32. Mushrooms are actually
 (a) Algae
 (b) Fungi
 (c) Lichens
 (d) Parasitic moss plants

33. Which of the following is/are produced as a result of photosynthesis in green plants in addition to carbohydrate?
 (a) Carbon dioxide only
 (b) Oxygen only
 (c) Water and Carbon dioxide
 (d) Water and Oxygen

34. All enzymes are actually
 (a) Carbohydrates
 (b) Proteins
 (c) Fatty acids
 (d) Sterols

35. In which one of the following is extra blood stored and is released when shortage occurs?
 (a) Adrenal gland
 (b) Pancreas
 (c) Spleen
 (d) Thyroid gland

36. Which one of the following is essential for preventing dental caries?
 (a) Flourine
 (b) Iodine
 (c) Iron

(d) Zinc

37. Which one among the following minerals is essential for the transmission of nerve impulses in the nerve fibres of human body?
 (a) Calcium
 (b) Cobalt
 (c) Iodine
 (d) Sodium

38. Silk is the product of and secreted by
 (a) Salivary glands of larval silk moth
 (b) Salivary glands of adult silk moth
 (c) Secretion from the whole body of adults and pupae of silk moth
 (d) Excretion from the whole body of adults and pupae of silk moth

39. Which of the following disease is not transmitted by Aedes aegypti?
 (a) Chikungunya
 (b) Dengue
 (c) Chicken-pox
 (d) Yellow fever

40. In the Union Government, the Council of Ministers is collectively responsible to the
 (a) Prime Minister of India
 (b) Lok Sabha
 (c) Lok Sabha and Rajya Sabha
 (d) Union Cabinet

41. Which one of the following is a member of OPEC?
 (a) Vietnam
 (b) Phillipines
 (c) Laos
 (d) Indonesia

42. Under whose direct supervision is the Lok Sabha Secretariat?
 (a) The Cabinet Secretary
 (b) The Minister of Parliamentary Affairs
 (c) The Speaker of Lok Sabha
 (d) The Prime Minister of India

43. If the annual Union Budget is not passed by Lok Sabha
 (a) the President of India asks the Finance Minister to resign
 (b) the Prime Minister asks the Finance Minister to resign
 (c) the Speaker of Lok Sabha asks the Finance Minister to modify it and present it again
 (d) the Prime Minister submits the resignation of his cabinet

44. As per the Constitution of India, how many members can be nominated to the Rajya Sabha by the President of India?
 (a) 10
 (b) 12
 (c) 14
 (d) 18

45. In which region is the Daulatbeg Oldi airbase?
 (a) Jammu
 (b) Ladakh
 (c) Lahaul and Spiti
 (d) Rann of Kachchh

46. Consider the following parts of spectra
 1. Visible
 2. infrared
 3. Ultraviolet
 4. Microwave

Which one of the following is the correct sequence in which their wavelengths increase?
 (a) 4-3-1-2
 (b) 4-1-2-3
 (c) 3-2-1-4
 (d) 3-1-2-4

47. Which one of the following is not electromagnetic in nature?
 (a) Cathode-rays
 (b) X-rays
 (c) Gamma-rays
 (d) Infrared-rays

48. The force experienced by a unit positive test charge placed at a point is called
 (a) Magnetic field at that point
 (b) Gravitational field at that point
 (c) Electrical field at that point
 (d) Nuclear field at that point

49. A long jumper runs before jumping because he
 (a) covers a greater distance
 (b) maintains momentum conservation
 (c) gains energy by running
 (d) gains momentum

50. Which among the following is the necessary condition for simple harmonic motion?
 (a) Constant period
 (b) Contant acceleration
 (c) Displacement and acceleration are proportional
 (d) Displacement and torque are proportional

51. How far must a girl stand in front of a concave spherical mirror of radius 120cm to see an erect image of her face four times its natural size?
 (a) 40 cm from the mirror
 (b) 45 cm from the mirror
 (c) 50 cm from the mirror
 (d) 55 cm from the mirror

52. Which one of the following is the mode of heat transfer in which warm material is transported so as to displace a cooler material?
 (a) Conduction only
 (b) Convection Only
 (c) Radiation
 (d) Both conduction and convection

53. Consider the following statements :
 1. Different plant species grow together.
 2. Light cannot penetrate into the lower strata full of undergrowth.
 Which of the following types of vegetation is characterized by the above?
 (a) Equatorial moist evergreen
 (b) Tropical deciduous
 (c) Mediterranean
 (d) Warm temperate broad leaved deciduous

54. From which one of the following is the percentage of reflected amount of radiation highest?
 (a) wet ground
 (b) thick cloud
 (c) forest
 (d) snow cover

55. On planet Earth there is no centrifugal force at the
 (a) Equator
 (b) Tropic of Cancer
 (c) Tropic of Capricorn
 (d) Poles

56. Which one of the following set of states does not receive most of its rainfall from SW monsoon during the months of June to September?
 (a) Arunachal Pradesh and Gujarat
 (b) Assam and Karnataka
 (c) Himachal Pradesh and Rajasthan
 (d) Tamilnadu and Jammu & Kashmir

57. In which one of the following states is the percentage of Scheduled Tribes population to its total population highest?
 (a) Chhattisgarh
 (b) Madhya Pradesh
 (c) Mizoram
 (d) Rajasthan

58. The mass of water vapour per unit volume of air is known as
 (a) Relative humidity
 (b) Specific humidity
 (c) Absolute humidity
 (d) Variable humidity

59. Which one of the following instruments is used for measuring the humidity of the air?
 (a) Wind vane
 (b) Aneroid barometer
 (c) Wet and dry bulb thermometer
 (d) Maximum and minimum thermometer

60. Which among the following is the correct sequence of the rivers starting from North to South?
 (a) Bhima-Godavari-Penganga-Tungabhadra
 (b) Godavari-Penganga-Tungabhadra-Bhima
 (c) Penganga-Godavari-Bhima-Tungabhadra
 (d) Penganga-Bhima-Godavari-Tungabhadra

61. Which one of the following is the international aircraft identification mark (registration prefix) for India?
 (a) AT
 (b) VT
 (c) IX
 (d) VX

62. Shimsha, Hemavati and Arkavati are the tributaries of which of the following rivers?
 (a) Tapti
 (b) Tungabhadra
 (c) Kaveri
 (d) Krishna

63. Which among the following planets is smaller in size than the Earth?
 (a) Neptune
 (b) Venus
 (c) Saturn
 (d) Uranus

64. The Vindhyan system of rocks is important for the production of
 (a) precious stones and building materials
 (b) iron ore and manganese
 (c) bauxite and mica
 (d) copper and uranium

65. A close bottle containing water at room temperature was taken to the Moon and then the lid is opened. The water will

(a) freeze
(b) boil
(c) decompose into oxygen and hydrogen
(d) not change at all

66. The rainfall distribution pattern over the Ganga basin decreases from the
(a) west to east and north to south
(b) east to west and north to south
(c) west to east and south to north
(d) east to west and south to north

67. Which one among the following elements/ions is essential in small quantities for development of healthy teeth but causes mottling of the teeth if consumed in higher quantities?
(a) Iron
(b) Chloride
(c) Fluoride
(d) Potassium

68. Asia has large areas of inland drainage. Why is it so?
(a) Rainfall is seasonal and scanty
(b) There are a number of intermontane plateaus
(c) River channels are obstructed by lava flows
(d) It is a very large continent

69. In the interior of the Earth
(a) the temperature falls with increasing depth
(b) the pressure falls with increasing depth
(c) the temperature rises with increasing depth
(d) both temperature and pressure fall with increasing depth

70. Half portion of a rectangular piece of ice is wrapped with a white piece of cloth while the other half with a black one. In this context, which one among the following statements is correct?
(a) Ice melts more easily under black wrap
(b) Ice melts more easily under white wrap
(c) No ice melts at all under the black wrap
(d) No ice melts at all under the white wrap

71. Insects that can transmit diseases to human are referred to as
(a) carriers
(b) reservoirs
(c) vectors
(d) incubators

72. The angular speed of a whirlwind in a tornado towards the centre
(a) decreases rapidly
(b) increases
(c) remains constant
(d) slowly becomes zero

73. We observe twinkling of stars due to
(a) frequent and periodic fluctuation of temperature of the surface
(b) constant change of refractive index of the medium between the stars and the Earth because of temperature variation
(c) great distance of stars from the Earth
(d) rise and fall of gaseous ball of fire inside the stars

74. Contact lenses are made from
(a) polyvinyl chloride
(b) polystyrene
(c) Lucite
(d) Teflon

75. The tenure of every Panchayat shall be for five years from the date of
(a) its first meeting
(b) issue of notification for the conduct of elections to the Panchayat
(c) declaration of the election results
(d) taking oath of office by the elected members

76. The blackboard seems black because
(a) reflects every colour
(b) does not reflect any colour
(c) absorbs black colour
(d) reflects black colour

77. Which one of the following statements about the teachings of Kabir is not correct?
(a) He was not against pilgrimage and idol worship
(b) He believed in universal love
(c) He emphasized on one God and the spread of devotionalism
(d) He did not consider it necessary to abandon the normal life of a householder

78. Which one among the following metals is used for making boats because it does not corrode by seawater?
(a) Tungsten
(b) Nickel
(c) Antimony
(d) Titanium

79. A body is charged negatively. It implies that
 (a) it has lost some of its protons
 (b) it has acquired some electrons from outside
 (c) it has lost some of its electrons
 (d) none of the above

80. Which one among the following is strong smelling agent added to LPG cylinder to help in the detection of gas leakage?
 (a) Ethanol
 (b) Thioethanol
 (c) Methane
 (d) Chloroform

81. In scuba-diving, while ascending towards the water surface, there is a danger of bursting the lungs. It is because of
 (a) Archimedes' principle
 (b) Boyle's law
 (c) Gay-Lussac's law of combining volumes
 (d) Graham's law of diffusion

82. Which one among the following was part of Gandhi-Irwin Agreement of 1931?
 (a) Stern action against policemen guilty of brutal assault on Satyagrahis
 (b) Nehru to represent Congress at the Round Table Conference of 1931
 (c) Deletion of communal question from the agenda of the Conference
 (d) Release of political prisoners excepting those guilty of arson and violence

83. Which one among the following industries produces the most non-biodegradable wastes?
 (a) Thermal power plants
 (b) Food processing units
 (c) Textile mills
 (d) Paper mills

84. The President of India is elected by a proportional representation system through single transferable vote. This implies that
 (a) each elected MP or MLA has an equal number of votes
 (b) MPs and MLAs of a State have the same number of votes
 (c) all MPs and MLAs have vote each
 (d) MPs and MLAs of different States have different numbers of votes

85. Which one among the following statements regarding the social and

religious reform ideas of Raja Rammohan Roy is not correct?
 (a) His efforts led to the formation of Brahmo Samaj in 1828
 (b) He considered different religions as embodiments of universal theism
 (c) His Vedantic monism was strengthened after 1815 since an exposure to Christian Unitarianism
 (d) He paid attention exclusively to the problems/issues of the emerging middle class of India

86. Which of the following statements about Fourth Anglo-Mysore War are correct?
 1. The Madras Council suggested a policy of rigorous and intense attack on Mysore
 2. Lord Wellesley tried to revive the Triple Alliance.
 3. Tipu sent emissaries to Arabia, Versailles, Mauritius and Kabul enlisting support against the English
 4. The war was of a very short duration though decisive.

Select the correct answer using the code given below:

(a) 2, 3 and 4
 (b) 1, 3 and 4
 (c) 2 and 4 only
 (d) 1 and 3 only

87. Which of the following statements regarding the American Revolution is/are correct?
 1. The American Revolution was a conflict between British settlers and native Americans
 2. The Americans refused to pay taxes imposed by the British Parliament in which the Americans had no representation.

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

88. Which of the statements given below is/are correct?
 1. The Armed Forces Special Power Act (AFSPA) was first enforced in the hills of Assam.
 2. The AFSPA is enforced in regions notified as 'disturbed area'.
 3. Under the provisions of the Act, the Chief Minister of a State can declare

the whole State or part of it as 'disturbed area'.

Select the correct answer using the code given below:

- (a) 1,2 and 3
- (b) 2 and 3 only
- (c) 1 only
- (d) 1 and 2 only

89. Consider the following statements about black soil of India:

- 1. Black soil becomes sticky when it is wet
- 2. Black soil contains adequate nitrogen as well as phosphorus required for the growth of plants

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

90. Which one of the following is used to induce artificial rain?

- (a) Ammonium chloride
- (b) Calcium carbonate
- (c) Potassium Nitrate
- (d) Silver Iodide

91. Who of the following is the chairman of the National Water Resources Council?

- (a) The Prime Minister of India
- (b) The Union Minister of Water Resources
- (c) The Union Minister of Agriculture
- (d) The Union Minister of Earth Sciences

92. Which one of the following experience the least annual range of temperature?

- (a) Arctic circle
- (b) Tropic of Capricorn
- (c) Tropic of Cancer
- (d) Equator

93. Indus river originates in

- (a) Kinnaur
- (b) Ladakh
- (c) Nepal
- (d) Tibet

94. Which one of the following recommends to the President of India as to the distribution and allocation of the net proceeds of taxes in the context of Centre-State fiscal relations?

- (a) Planning Commission

- (b) Union Ministry of Finance
- (c) Union Finance Commission
- (d) National Development Council

95. Consider the following :

- 1. Panchayati Raj is a four-tier system of governance.
- 2. Members of Gram Panchayat can hold Lok Adalats

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

96. Who is the Chairman of National Integration Council?

- (a) The President of India
- (b) The Vice-President of India
- (c) The Chief Justice of India
- (d) The Prime Minister of India

97. Consider the following statements:

- 1. The highest deciding body for planning in India is the Planning Commission of India.
- 2. The Secretary of the Planning Commission of India is also the Secretary of National Development Council

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

98. Consider the following statements:

- 1. As per the Constitution of India, there are ten Fundamental Duties for every citizen of India.
- 2. The promotion of international peace and security is stated in the Preamble to the Constitution of India?

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

99. In which part of the human body is the smallest bone found?

- (a) Wrist

- (b) Palm
- (c) Nose
- (d) Ear

100. Consider the following statements:

- 1. India has no privately owned oil refineries.
- 2. India has no privately managed major seaports.

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

SAMPLE PAPER 3

- 1. Over 90% of the world's biomass is in
 - (a) Tropical rain forest
 - (b) Freshwater wetlands
 - (c) Topsoils
 - (d) Oceans
- 2. Carbon dioxide is called a greenhouse gas because
 - (a) Its concentration remains always higher than other gases
 - (b) It is used in photosynthesis
 - (c) It absorbs infrared radiation
 - (d) It emits visible radiation
- 3. Which of the following statements is/are correct?
 - 1. NIFTY is based upon 50 firms in India
 - 2. NIFTY is governed and regulated by the Reserve Bank of India
 - 3. NIFTY does not trade in mutual fund

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2
- (c) 3 only
- (d) 1 and 3

- 4. Fiscal policy in India is formulated by
 - (a) The Reserve Bank of India
 - (b) The Planning Commission
 - (c) The Finance Ministry
 - (d) The Securities and Exchange board of India
- 5. The imaginary line on the Earth's surface that closely follows the 180° meridian is
 - (a) Prime meridian
 - (b) Equator
 - (c) International date line
 - (d) Tropic of cancer
- 6. The country that shares longest border with India is
 - (a) China
 - (b) Bangladesh

- (c) Nepal
- (d) Pakistan
- 7. The distance between two consecutive longitudes (91° E and 92° E) at the Poles is
 - (a) 0 km
 - (b) 18 km
 - (c) 25 km
 - (d) 111 km
- 8. Lack of atmosphere around the moon is due to
 - (a) Low escape velocity of air molecule and low gravitational attraction
 - (b) High escape velocity of air molecules and low gravitational attraction
 - (c) Low gravitational attraction only
 - (d) High escape velocity of air molecule only
- 9. What is the major role of a greenhouse gas that contributes to temperature rise of the earth's surface?
 - (a) Transparent to both incoming sunlight and outgoing infrared radiation
 - (b) Stops both incoming sunlight and outgoing infrared radiation
 - (c) Lets outgoing infrared radiation pass through but stops incoming sunlight
 - (d) Lets incoming sunlight pass through but stops outgoing infrared radiation
- 10. National income ignores
 - (a) Sales of a firm
 - (b) Salary of employees
 - (c) Exports of the IT sector
 - (d) Sale of land
- 11. The soil formed by wind dust in and around hot deserts is called
 - (a) Silty soil
 - (b) Loamy soil

(c) Sandy soil
(d) Loess soil

12. Which among the following conditions are necessary for the issue of writ of quo warranto?

- The office must be public and must be created by a statute or by the constitution itself.
- The office must be a substantive one and not merely the function or employment of a servant at will and during the pleasure of another.
- There has been a contravention of the constitution or a statute or statutory instrument, in appointing such person to that office.

Select the correct answer using the code given below:

- 1 and 2 only
- 1 and 3 only
- 2 and 3 only
- 1, 2 and 3

13. Among the following animals, the figures of which are found in the state emblem of India?

- Bull, deer and eagle
- Deer and elephant
- Elephant, tiger and bull
- Horse and bull

14. The National Development Council is presided over by :

- The Prime Minister
- The Deputy Chairman of Planning Commision
- The union Finance Minister
- The union Mister of Planning

15. Athlete's Foot disease is caused by

- Bacterium
- Fungus
- Protozoan
- Virus

16. In the Constitution of India, "to renounce practices derogatory to the dignity of women" is :

- a Fundamental right
- a Fundamental duty
- a Directive Principle of State Policy
- None of the above

17. Zero Hour in the Parliament proceeding in India is:

- The time when the proceedings of the House are not recorded
- The time immediately after the Question Hour when any listed business is taken up
- The time reserved for the address by the President of India or any distinguished Guest of the State
- The time when no business is carried out

18. Excise Duty is a tax levied on :

- Commodities that are exported
- Commodities that are imported
- Both the exported and imported commodities
- Commodities that are produced and consumed within the country

19. Banking in India is controlled by :

- Reserve Bank of India
- Union Finance Commission
- Union Ministry of Finance
- Union Ministry of Commerce

20. Regarding Gram Sabha, which of the following statements is/are correct?

- Gram Sabha is a body consisting of all the adults residing in a village.
- A Gram Sabha may exercise such powers and perform such functions at the village level as the legislature at the State level.
- The sessions of Gram Sabha are chaired by a representative of District/Block Administration.

Select the correct answer using the codes given below:

- 1 and 2 only
- 2 only
- 2 and 3 only
- 1, 2 and 3

21. Which one of the following vitamins is most susceptible to deterioration by exposure to air?

- Vitamin A
- Vitamin C
- Vitamin D
- Vitamin E

22. Under the law in India, the Right to Information is available to:

- The residents of India
- The citizens of India
- Non-resident Indians

Select the correct answer using the codes given below:

- 1 only
- 2 only

(c) 1 and 3
(d) 2 and 3

23. Under which of the following conditions can the President of India proclaim Emergency?

- Failure of the constitutional machinery of the State
- Occurrence of large scale natural calamities or epidemics
- Threat to the financial stability of the country

Select the correct answer using the codes given below:

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

24. Which one of the following is not a part of small intestine?

- Caecum
- Duodenum
- Jejunum
- Ileum

25. If the drinking water supply pipeline is damaged and is contaminated with water from domestic sewerage, which one of the following diseases is most likely to occur after drinking such water?

- Meningitis
- Typhoid
- Tuberculosis
- Conjunctivitis

26. In human body, which one of the following synthesizes cholesterol?

- Liver
- Pancreas
- Spleen
- Skeletal muscle

27. In which one of the following animals do distinct black stripes extend from the inner corners of the eyes to the mouth?

- Cheetah
- Jaguar
- Leopard
- Panther

28. In the human body, the antibodies produced as a result of infection are actually :

- Sterols
- Proteins
- Glycolipids
- Carbohydrates

29. A geographical region has the following climatic characteristics :

- Uniformity of temperature throughout the year.
- Rainfall throughout the year with two periods of maximum occurrence.
- Least rainfall at June and December solstices.

Which one of the following climates corresponds to the above characteristics?

- Equatorial
- Mediterranean
- China type
- Tropical monsoon

30. Which one of the following is a reason for conducting a thorough research at present on mitochondrial DNA?

- To understand certain hereditary diseases that are transmitted exclusively from mother to offspring
- To understand the mechanism of transmission of respiratory diseases inherited from parents
- To understand the diseases caused by life style
- To understand certain diseases inherited exclusively from paternal side

31. Consider the following :

- Camphor
- Chicory
- Vanilla

Which of the above is/are plant products?

- 1 and 2 only
- 3 only
- 2 and 3 only
- 1, 2 and 3

32. With reference to atmospheric pressure, consider the following statements :

- Atmospheric pressure decreases towards poles.
- High pressure is experienced over continents during winter.
- All deserts experience low pressure throughout the year.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 2 only
- None

33. The climate of India is mainly tropical because of the :
 (a) Seasonal influence of jet streams.
 (b) Location of the Himalayas in its north.
 (c) Over-powering influence of Indian Ocean
 (d) Country being a part of Asian landmass.

34. Which of the following is not correctly matched?
 (a) Prime Meridian - 0°
 (b) International Date Line - 180°
 (c) Arctic Circle - 66 1/2° N
 (d) Tropic of Cancer - 23 1/2° S

35. Which one of the following is the difference in local time between the places located at 165° East and 165° West?
 (a) 0 hours
 (b) 12 hours
 (c) 22 hours
 (d) 24 hours

36. The natural dye present in turmeric is known as
 (a) Cinnamin
 (b) Phenolphthalein
 (c) Methyl Orange
 (d) Curcumin

37. Which of the following is not an enzyme?
 (a) Amylase
 (b) Pepsin
 (c) Somatotropin
 (d) Trypsin

38. Which one of the following processes takes place in lakes during eutrophication?
 (a) Rapid destruction of algal growth
 (b) Excessive availability of dissolved oxygen
 (c) Loss of dissolved nutrients from water
 (d) Excessive entry of nutrients into water

39. Among the given nutrients milk is a poor source of
 (a) Calcium
 (b) Protein
 (c) Carbohydrate
 (d) Vitamin C

40. Which of the following is not a mammal?
 (a) Dolphin
 (b) Shark
 (c) Seal
 (d) Whale

41. Which of the following organelles of a cell is/are involved in photosynthesis?
 (a) Chloroplast
 (b) Mitochondrion
 (c) Endoplasmic reticulum
 (d) Golgi bodies

42. Oral Rehydration Therapy is recommended for
 (a) Tuberculosis
 (b) Typhoid
 (c) Tetanus
 (d) Cholera

43. Which of the following are the possible blood groups of the offspring of the parents with blood group O and AB?
 (a) O, A, B and AB
 (b) A and B
 (c) A, B and AB
 (d) O and AB

44. Who among the following was a contemporary of Gautam Buddha?
 (a) Nagarjuna
 (b) Kanishka
 (c) Kautilya
 (d) Mahavir

45. Sati was declared illegal and punishable by the Regulation XVII during Governor-Generalship of
 (a) Lord William Bentick
 (b) Lord Canning
 (c) Lord Ripon
 (d) Lord Dalhousie

46. Which one of the following slogans is attributed to Subhash Chandra Bose?
 (a) Jai Jawan Jai Kisan
 (b) Bande Mataram
 (c) Jai Hind
 (d) Inquilab Zindabad

47. Where did Buddha attain Parinirvana?
 (a) Bodh Gaya
 (b) Kushinagara
 (c) Rajgriha
 (d) Vaishali

48. Bande Mataram the nationalist song was a part of
 (a) Durgesh Nandini
 (b) Saraswati Chandra
 (c) Griha Daha

(d) Anand Math

49. Who among the following has authored the book Hind Swaraj?
 (a) Bal Gangadhar Tilak
 (b) Mahatma Gandhi
 (c) Gopal Krishna Gokhale
 (d) M.G. Ranade

50. The entry 'Public Health and Sanitation' is included in the Constitution of India in
 (a) Union List
 (b) State List
 (c) Concurrent List
 (d) None of the above

51. The Instrument of Instructions contained in the Government of India Act 1935 has been incorporated in the Constitution of India in the year 1950 as
 (a) Fundamental Rights
 (b) Directive Principles of State Policy
 (c) Fundamental Duties
 (d) Emergency Provisions

52. Who among the following was the advisor to Drafting Committee of the Constituent Assembly?
 (a) B. Shiva Rao
 (b) Dr. B.R. Ambedkar
 (c) Sachidananda Sinha
 (d) B.N. Rau

53. On which of the following grounds can a Judge of the Supreme Court or a High Court be impeached?
 1. Violation of the Constitution
 2. Proved misbehaviour
 3. Incapacity

Select the correct answer using the code given below:

(a) 1 only
 (b) 2 only
 (c) 1, 2 and 3
 (d) 2 and 3 only

54. Which of the following is/are the function/functions of the Finance Commission of India?
 1. Making recommendations as to the principles governing grant-in-aid of the revenues of the States.
 2. To suggest measures to augment Consolidated Fund 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

55. Which of the following Constitutional Amendments have added Article 15 (5) in the Constitution of India providing for reservation in educational institutions in the private sector also?
 (a) 81st Amendment
 (b) 86th Amendment
 (c) 91st Amendment
 (d) 93rd Amendment

56. If any question arises whether a bill is a Money Bill or not, whose decision shall be final?
 (a) The Supreme Court of India
 (b) The President of India
 (c) The Speaker of the Lok Sabha
 (d) Joint Parliamentary Committee

57. The idea of including the Emergency provisions in the Constitution of India has been borrowed from the
 (a) Constitution of Canada
 (b) Weimar Constitution of Germany
 (c) Constitution of Ireland
 (d) Constitution of the USA

58. The site of Harappa is located on the bank of river
 (a) Saraswati
 (b) Indus
 (c) Beas
 (d) Ravi

59. Which one among the following statements regarding Bal Gangadhar Tilak is not correct?
 (a) He propounded the theory of the arctic home of the Aryans
 (b) He founded the anti-cow-killing society
 (c) He set up the home rule league at Poona
 (d) He supported the age of consent bill

60. Which one among the following principles was not propagated by the theosophical society?
 (a) Belief in karma and rebirth
 (b) Belief in universal brotherhood and humanity
 (c) Belief in vedantic philosophy
 (d) Belief in the eradication of untouchability

61. Which one among the following statements is correct?
 (a) The revolt of 1857 was not supported by Nizam of Hyderabad.

(b) Dinabandhu Mitra was the author of the book, *Unhappy India*.
 (c) The Sindhis of Gwalior gave shelter to the Rani of Jhansi.
 (d) Mangal Pandey led the sepoys March to Delhi.

62. Who among the following Governor Generals formed the Triple Alliance against Tipu Sultan?
 (a) Warren Hastings
 (b) Lord Cornwallis
 (c) Lord Wellesley
 (d) Lord William Bentinck

63. Take the case of dignity and equal rights for women. How do democracies help?
 (a) Women in democracies have equal degree of political representation in legislatures
 (b) Women in democracies have guaranteed rights and are always treated with respect
 (c) Women in democracies are not subjected to sex discrimination in most aspects of social life
 (d) In democracies, the principle of equality is accepted as legal norm, which makes it easier to guarantee their freedom and dignity

64. The constitution of India is republican because it
 (a) provides for an elected Parliament
 (b) provides for an adult franchise
 (c) contains a bill of rights
 (d) has no hereditary elements

65. Which of the following statements is correct with regard to Yudh Abhyas
 (a) It is an Indian military 'war game' with regard to Pakistan
 (b) It is an Indian military exercise with Oman
 (c) It is an Indian military exercise with Bhutan
 (d) It is an Indian military exercise with the US

66. Which one among the following is a fundamental duty of citizens under the Constitution of India?
 (a) To provide friendly cooperation to the people of the neighbouring countries
 (b) To protect monuments of national importance
 (c) To defend the country and render national service when called upon to do so

(d) To know more and more about the history of India

67. The best colours for a Sun umbrella will be
 (a) black on top and red on inside
 (b) black on top and white on inside
 (c) red on top and black on inside
 (d) white on top and black on inside

68. Before X-ray examination (coloured X-ray) of the stomach, patients are given suitable salt of barium because
 (a) barium salts are white in colour and this helps stomach to appear clearly
 (b) barium is good absorber of X-rays and helps stomach to appear clearly
 (c) barium salts are easily available
 (d) barium allows X-rays to pass through the stomach

69. The elements of a group in the periodic table
 (a) have similar chemical properties
 (b) have consecutive atomic numbers
 (c) are isobars
 (d) are isotopes

70. Which one among the following polymers is used for making bullet-proof material?
 (a) Polyvinyl chloride
 (b) Polystyrene
 (c) Polyethylene
 (d) Polyamide

71. The pH of human blood is normally around
 (a) 4.5 - 5.5
 (b) 5.5 - 6.5
 (c) 7.5 - 8.0
 (d) 8.5 - 9.0

72. The pH of fresh groundwater slightly decreases upon exposure to air because
 (a) carbon dioxide from air is dissolved in the water
 (b) oxygen from air is dissolved in the water
 (c) the dissolved carbon dioxide of the groundwater escapes into air
 (d) the dissolved oxygen of the groundwater escapes into air

73. Which among the following vitamins is necessary for blood clotting?
 (a) Vitamin A
 (b) Vitamin D
 (c) Vitamin K
 (d) Vitamin C

74. On the packet of a packaged food product in India, which one of the following symbols is used to indicate that the food is vegetarian?

- (a) A green square in a circle
- (b) A green circular dot in a square
- (c) A green plus mark
- (d) A green leaf of a plant

75. Argemone oil is used to adulterate :

- (a) Butter
- (b) Coconut oil
- (c) Diesel
- (d) Mustard oil

76. Consider the following statements :

1. The Malwa region is drained by the tributaries of Sone river.
2. The Chotanagpur region is drained by the tributaries of Mahanadi river.

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

77. Which light is strongly absorbed by the plants?

- (a) Blue and Red
- (b) Indigo and yellow
- (c) Green and violet
- (d) Orange and yellow

78. Which one among the following is the poorest source of vitamin A?

- (a) Butter
- (b) Fish
- (c) Ripe mango
- (d) Ripe papaya

79. A person sleeping in Leh with his head in the open and legs in the shade of a tree is liable to get sunstroke and frostbite at the same time. The reason for this is :

- (a) Rarefied air
- (b) Dry air
- (c) Low temperature
- (d) Low oxygen level

80. What is/are the use/uses of maize?

1. It is used for the production of starch.
2. It is used in the manufacture of poultry feed.
3. It is used in producing bio-fuel.

Select the correct answer using the codes given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

81. Which one among the following is the world's largest exporter of agricultural products

- (a) Brazil
- (b) China
- (c) India
- (d) USA

82. Which one of the following is not required for the formation of photochemical smog?

- (a) Oxygen
- (b) Oxides of nitrogen
- (c) Carbon monoxide
- (d) Sunlight

83. The fuel of most widely used cryogenic engines consists of :

- (a) Liquid hydrogen only
- (b) Liquid oxygen only
- (c) Liquid hydrogen as fuel and liquid oxygen as oxidizer
- (d) Neither liquid hydrogen nor liquid oxygen

84. The Strait of Malacca passes between :

- (a) India and Myanmar
- (b) Indonesia and Philippines
- (c) Malaysia and Indonesia
- (d) Philippines and Vietnam

85. Which of the following rivers originates near Mahabaleshwar?

- (a) Godavari
- (b) Krishna
- (c) Kaveri
- (d) Tapti

86. Consider the following statements :

1. Tropical rain forests are the only source of "lac".
2. India is the largest producer of "lac" in the world.
3. "Lac" is used in the manufacture of printing-ink, pharmaceuticals and dyes.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only

(d) 1, 2 and 3

87. The species of which of the following kinds of organisms is/are generally used as biofertilizers?

- Blue green algae.
- Ferns
- Mosses

Select the correct answer using the codes given below :

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

88. Pashmina shawl is made from the hair of :

- Sheep
- Goat
- Rabbit
- Yak

89. Which one of the following began with Dandi March?

- Home Rule Movement
- Non-Cooperation Movement
- Civil Disobedience Movement
- Quit India Movement

90. Among the following regions, which one receives comparatively lowest average rainfall from June to September?

- South West Bengal
- Eastern Uttar Pradesh
- Western Uttar Pradesh
- Punjab

91. Consider the following human activities :

- Agriculture
- Fisheries
- Animal husbandry

In the context of global warming, which of the above is/are considered as a source/sources of greenhouse gases?

- 1 only
- 2 and 3
- 1 and 3
- None

92. With which of the following movements is the slogan "Do or die" associated??

- Swadeshi Movement
- Non-Cooperation Movement
- Civil Disobedience Movement
- Quit India Movement

93. With reference to the Security Council of United Nations, which of the following statements is/are correct?

- It has 15 members.
- The non-permanent members are elected by the General Assembly for a five-year period.
- Retiring members are not eligible for immediate re-election

Select the correct answer using the codes given below:

4. Code:

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

94. Why did Rabindranath Tagore renounce his knighthood?

- To protest against the Jallianwala Bagh incident
- To protest against lathi charge on Lala Lajpat Rai that caused his death
- To express solidarity with the leaders of Non-Cooperation Movement
- To express solidarity with the protestors against the arrival of Simon Commission

95. Which of the following is/are the Maharatna Central Public Sector Enterprises?

- National Thermal Power Corporation Ltd.
- Hindustan Fertilizers Corporation Ltd.
- Oil and Natural Gas Corporation Ltd.
- Steel Authority of India Ltd.

Select the correct answer using the codes given below :

- 1 and 3 only
- 2 and 4 only
- 1, 2 and 4
- 1, 3 and 4

96. Indian Army's counter-insurgency school is situated in

- Kanker
- Srinagar
- Tezpur
- Vairengte

Directions: The following seven (2) items consist of two statements, statement I and statement II. You are to examine these two statements carefully and select

the answers to these items using the code given below:

- (a) Both the statements are individually true and statements II is the correct explanation of statement I
- (b) Both the statements are individually true and statements II is not the correct explanation of statement I
- (c) Statement I is true but statement II is false
- (d) Statement I is false but statement II is true

97. Statement I :

Mahatma Gandhi launched the Rowlatt Satyagraha as an all-India mass protest.

Statement II :

Rowlatt Act was passed by the British Government in 1919 to authorize the government to imprison any person without trial.

98. Statement I :

The private trade of the East India Company's officials in the 18th

century had flowered with the indirect patronage of the authorities of the Company.

Statement II :

The extra-legal power enjoyed by the foreign merchants and the duty-free nature of their private trade virtually edged the indigenous merchants out of competition.

99. Statement I :

Water (H₂O) is more polar than Hydrogen Sulphide (H₂S).

Statement II :

Oxygen is more electronegative than Sulphur.

100. Statement I :

Diamond is very hard and has high melting point.

Statement II :

In diamond, each carbon is covalently bonded to four other carbon atoms to form a three-dimensional network.

SAMPLE PAPER 4

1. The main constituent of vinegar is
 - (a) Citric acid
 - (b) Acetic acid
 - (c) Ascorbic acid
 - (d) Tartaric acid
2. Bases turn red litmus blue and acids turn blue litmus red. A student tested a liquid with a red litmus paper and it stayed red with no change. This shows that the liquid
 - (a) must be pure water
 - (b) must be an acid
 - (c) is not a base
 - (d) is neither a base nor an acid
3. Ultrasonic waves are those sound waves having frequency
 - (a) between 20 hertz and 1000 hertz
 - (b) between 1000 hertz and 20000 hertz
 - (c) more than 20 kilohertz
 - (d) less than 20 hertz
4. The phenomenon of trade winds takes place due to
 - (a) conduction of heat
 - (b) convection of heat

- (c) radiation
- (d) None of the above
5. Which one among the following waves are called waves of heat energy?
 - (a) Radio waves
 - (b) Infrared waves
 - (c) Ultraviolet waves
 - (d) Microwaves
6. Which one among the following is the largest monkey?
 - (a) Spider monkey
 - (b) Baboon
 - (c) Gorilla
 - (d) Howler monkey
7. Birds like Flamingos can stand on one leg. Which among the following statements relating to this is/are correct?
 1. By standing on one leg Flamingos can conserve body heat and energy because they can reduce great deal of surface area for the loss of heat.
 2. By standing on one leg, one Flamingo makes a courtship display,

which is a part of ritual prior to reproduction.

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

8. The main function of the inner bark of a woody plant is to

- (a) transport minerals and water from the roots to the leaves
- (b) act as a membrane impermeable to water and gas
- (c) transport food from the leaves to the other parts of the plant
- (d) protect the plant from herbivorous animals

9. A biogeography region with significant reservoir of biodiversity that is under threat from humans is called as

- (a) bioendangered region
- (b) biodiversity hotspot
- (c) biodiversity reservoir
- (d) environmentally endangered region

10. The common edible mushroom is a

- (a) mass of fungal spores
- (b) type of hypha
- (c) tightly packed mycelium
- (d) structure used for producing asexual spores

11. Which of the following statements with regard to the Federal System is/are correct?

1. In a federation, two sets of governments co-exist and there is distribution of power.
2. There is a written constitution.

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

12. Tipu Sultan's major interest in building ships was to

- (a) fight the English at sea
- (b) promote trade and commerce
- (c) maintain diplomatic relations with Muscat (Oman)
- (d) establish an overseas settlement at port Basra (Iraq), which would be

under his control, on lines of the European companies

13. Which one among the following statements is not correct?

- (a) The word 'socialist' in the Preamble of the Constitution of India, read with
- (b) Article 39(d), would enable the Court to uphold the constitutionality of nationalisation laws
- (c) Article 14, would enable the Court to strike down a statute which failed to achieve the socialist goal to the fullest extent
- (d) Article 25, would enable the Court to ensure freedom guaranteed under that Article
- (e) Article 23, would enable the Court to reduce inequality in income and status

14. With regard to the powers of the Rajya Sabha, which one among the following statements is not correct?

- (a) A Money Bill cannot be introduced in the Rajya Sabha
- (b) The Rajya Sabha has no power either to reject or amend a Money Bill
- (c) The Rajya Sabha cannot discuss the Annual Financial Statement
- (d) The Rajya Sabha has no power to vote on the Demands for Grants

15. While a proclamation of emergency is in operation, the duration of the Lok Sabha can be extended for a period

- (a) not exceeding three months
- (b) not exceeding nine months
- (c) of one year at a time
- (d) of two years at a time

16. If you travel along the Suez Canal from Port Said to Suez, you will come across several lakes. Which of the following lakes is not on this Canal?

- (a) Great Bitter Lake
- (b) Little Bitter Lake
- (c) Lake Gatun
- (d) Lake Timsah

17. What is a cloudburst?

- (a) It refers to sudden and copious rainfall over a small area which often lasts for only a few minutes
- (b) It refers to 50 mm rain over a period of time.
- (c) It is caused by rapid condensation of very high clouds.

(d) It refers to a thunderstorm with little rain.

18. Xerophytes represent the class of vegetation found in
 (a) tropical rain forest
 (b) humid micro-thermal climate
 (c) semi-arid steppes
 (d) tundra region

19. Consider the following statements:
 1. Coriolis effect is zero at the Equator.
 2. Coriolis effect is more towards the Poles.
 3. Coriolis effects are related to the decreasing rotational velocity with increasing latitudes.
 4. Coriolis effects are related to the increasing rotational velocity with increasing latitudes

Which of the statements given above are correct?
 (a) 1, 2 and 3
 (b) 1 and 3 only
 (c) 1, 2 and 4
 (d) 2 and 4 only

20. The macro-nutrients provided by inorganic fertilizers are
 (a) carbon, iron and boron
 (b) magnesium, manganese and sulphur
 (c) magnesium, zinc and iron
 (d) nitrogen, phosphorus and potassium

21. The ultimate cause of water movement in a plant stem against gravity is
 (a) osmosis
 (b) transpiration
 (c) photosynthesis
 (d) diffusion

22. Vermicompost is a/an
 (a) inorganic fertilizer
 (b) toxic substance
 (c) organic biofertiliser
 (d) synthetic fertiliser

23. Duncan Passage is located between
 (a) South and Little Andaman
 (b) Little and Great Nicobar
 (c) North and Middle Andaman
 (d) Middle and South Andaman

24. Consider the following statements:
 1. Ozone is mostly found in the stratosphere.

2. Ozone layer lies 55-75 km above the surface of the Earth.

3. Ozone absorbs ultraviolet radiation from the Sun.

4. Ozone layer has no significance for life on the Earth.

Which of the statements given above are correct?
 (a) 1 and 2
 (b) 1 and 3
 (c) 2 and 3
 (d) 3 and 4

25. The main area of production of icebergs is found in
 (a) the West Coast of Greenland
 (b) the East Coast of Japan
 (c) the North Coast of Siberia
 (d) the West Coast of Africa

26. The Operation Polo was associated with annexation of which one among the following Princely States into Indian Union?
 (a) Kashmir
 (b) Junagadh
 (c) Travancore
 (d) Hyderabad

27. The name of Ram Prasad Bismil is associated with
 (a) Kanpur Conspiracy Case
 (b) Alipore Conspiracy Case
 (c) Kakori Conspiracy Case
 (d) Meerut Conspiracy Case

28. Which of the following statements about Permanent Settlement are correct?
 1. It conferred proprietary rights to peasants.
 2. The Zamindars were recognized as the proprietors of land.
 3. The government permanently fixed the land revenue demand.
 4. The Zamindars acted as the middlemen between the peasants and the government.

Select the correct answer using the code given below:
 (a) 2, 3 and 4
 (b) 3 and 4 only
 (c) 1 and 4
 (d) 1 and 3

29. Which among the following nontoxic gases helps in formation of enzymes which ripen fruit?

(a) Acetylene
(b) Ethane
(c) Methane
(d) Carbon dioxide

30. Age of fossil may be found out by determining the ratio of two isotopes of carbon. The isotopes are
(a) C-12 and C-13
(b) C-13 and C-14
(c) C-12 and C-14
(d) C-12 and carbon black

31. The major component used in preparation of different types of glasses is
(a) Silica
(b) Sodium borate
(c) Calcium silicate
(d) Sodium silicate

32. The image formed by a convex mirror of a real object is larger than the object
(a) when $u < 2f$
(b) when $u > 2f$
(c) for all values of u
(d) for no value of u

33. Protons and neutrons are bound in a nucleus by the
(a) short range 'weak interaction'
(b) short range 'strong interaction'
(c) long range 'electromagnetic interaction'
(d) long range 'gravitational interaction'

34. Refractive index of an optical medium changes with
1. the nature of the medium.
2. the change in the angle of incidence of the ray.
3. colour of the incident ray.

Select the correct answer using the code given below :

(a) 1 and 3 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

35. Momentum of a body is
1. a vector quantity.
2. a conserved quantity in an isolated system.
3. same as force in linear motion.

Select the correct answer using the code given below :

(a) 1 and 3 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) 1, 2 and 3

36. Which one among the following is a correct sequence of the Indian ports from north to south?
(a) Haldia - Kandla - Paradeep - Kochi
(b) Kandla - Haldia - Paradeep - Kochi
(c) Kandla - Haldia - Kochi - Paradeep
(d) Kochi - Kandla - Haldia - Paradeep

37. Which one among the following is a correct sequence of production of coal in the Indian States in descending order?
(a) Jharkhand - Madhya Pradesh - West Bengal - Meghalaya
(b) West Bengal - Madhya Pradesh - Jharkhand - Meghalaya
(c) Jharkhand - West Bengal - Meghalaya - Madhya Pradesh
(d) Madhya Pradesh - Jharkhand - West Bengal - Meghalaya

38. The western coasts of India receive very high rainfall in summer mainly due to
(a) Tropical location
(b) Nearness to sea
(c) Western Ghats
(d) Himalayas

39. Which one among the following is the correct value of the gravitational force of the Earth acting on a body of mass 1 kg?
(a) 8.9 N
(b) 9.8 N
(c) 89 N
(d) 98 N

40. A neutral (uncharged) metal ball is suspended using a non-magnetic string. A positively charged insulating rod is placed near the ball which is observed to be attracted to the rod. This is because
(a) the ball becomes positively charged by induction
(b) the ball becomes negatively charged by induction
(c) there is a rearrangement of the electrons in the ball
(d) the number of electrons in the ball is more than the number of electrons on the rod

41. It is impossible for two oscillators, each executing simple harmonic motion, to

remain in phase with each other if they have different

- time periods
- amplitudes
- spring constants
- kinetic energy

42. Identify the correct sequence of the following events of Indian history :

- Foundation of the Indian Muslim League
- Surat Split
- Partition of Bengal
- Transfer of capital from Calcutta to Delhi

Select the correct answer using the code given below :

- 1 - 2 - 3 - 4
- 2 - 3 - 4 - 1
- 3 - 1 - 2 - 4
- 4 - 3 - 2 - 1

43. Which one among the following is not the characteristic feature of the Harappan settlement?

- Doorways and windows generally faced the side lanes and rarely opened onto the main streets
- Houses generally had separate bathing areas and toilets
- The citadel was walled but the lower town was not walled
- Drains and water chutes from the second storey were often built inside the wall

44. Which one among the following is not true with regard to Rig Veda Samhita?

- There are about 300 non-Indo-European words in Rig Veda
- There is a reference to dasarajna (battle of ten kings) in the Rig Veda
- It is mentioned in the Rig Veda that the Bharata chief Sudas fought against a confederacy of ten tribes
- Purus sided with Bharata in the battle of ten kings

45. The first Anglo-Burmese War was concluded by a treaty. Which one among the following is that?

- Treaty of Bharma
- Treaty of Tamu
- Treaty of Bhamo
- Treaty of Yandaboo

46. Rain shadow effect is associated with

- Cyclonic rainfall
- Orographic rainfall

(c) Convective rainfall
(d) Frontal rainfall

47. Which of the following statements is/are correct?

- Cyclone is a low pressure system.
- The wind movement is clockwise in the cyclone of northern hemisphere.

Select the correct answer using the code given below :

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

48. Which one of the following processes of weathering belongs to both mechanical and chemical weathering?

- Crystallization
- Exfoliation
- Hydration
- Carbonation

49. AIDS is caused by Human immunodeficiency Virus (HIV) which is

- Retro virus
- Lente virus
- Arbo virus
- Immune virus

50. Who among the following Chinese travellers visited the kingdoms of Harshavardhana and Kumar Bhaskar Varma?

- I-tsing
- Fa-Hien
- Hiuen Tsang
- Sun Shuyun

51. Which one among the following Indus cities was known for water management?

- Lothal
- Mohenjo-daro
- Harappa
- Dholavira

52. Consider the following statements: According to Hindu Law, marriage is defined as

- a contract
- a sacrament
- mutual understanding
- indissoluble

Which of the statements given above is/are correct?

- 1 only
- 2 only

(c) 1 and 3
(d) 2 and 4

53. Which one among the following States was first annexed by Lord Dalhousie under the Doctrine of Lapse?
 (a) Nagpur
 (b) Jhansi
 (c) Sambalpur
 (d) Satara

54. Identify the correct sequence of the following events of Indian history (starting with the earliest):
 1. The Doctrine of Lapse
 2. The Subsidiary Alliance
 3. The Treaty of Lahore
 4. The Pitt's India Act

Select the correct answer using the code given below

(a) 4-2-3-1
 (b) 1-2-3-4
 (c) 2-1-4-3
 (d) 3-2-1-4

55. Which one among the following statements regarding Jorwe Culture is not correct?
 (a) Pravara-Godavari Valley was the nuclear zone of Jorwe Culture
 (b) The main sites of Jorwe Culture are Daimabad, Inamgaon, Jorwe and Nevasa
 (c) At Daimabad, one gets archaeological evidence of symbolic burial
 (d) Practically all Jorwe settlements in the Northern Deccan were suddenly deserted

56. Ashokan inscriptions of Mansehra and Shahbazgadhi are written in
 (a) Prakrit language, Kharoshthi script
 (b) Prakrit language, Brahmi script
 (c) Prakrit-Aramaic language, Brahmi script
 (d) Aramaic language, Kharoshthi

57. Who among the following scholars were contemporary of Kanishka?
 1. Ashvaghosa
 2. Nagarjuna
 3. Vasumitra
 4. Chanakya

Select the correct answer using the code given below :

(a) 1 and 2 only
 (b) 3 and 4
 (c) 2 and 4

(d) 1, 2 and 3

58. The Indian research station Himadri is located at
 (a) Siachen
 (b) Darjeeling
 (c) Arctic Region
 (d) Antarctica

59. Which one among the following statements is correct?
 (a) All proteins are enzymes
 (b) All enzymes are proteins
 (c) None of the enzymes is protein
 (d) None of the proteins is enzyme

60. Which one among the following statements is correct?
 (a) All bases are alkalis
 (b) None of the bases is alkali
 (c) There are no more bases except the alkalis
 (d) All alkalis are bases but all bases are not alkalis

61. The National Commission for Women was created by
 (a) an amendment in the Constitution of India
 (b) a decision of the Union Cabinet
 (c) an Act passed by the Parliament
 (d) an order of the President of India

62. Under which law it is prescribed that all proceedings in the Supreme Court of India shall be in English language?
 (a) The Supreme Court Rules, 1966
 (b) A Legislation made by the Parliament
 (c) Article 145 of the Constitution of India
 (d) Article 348 of the Constitution of India

63. Which one of the following reactions is the main cause of the energy radiation from the sun?
 (a) Fusion reaction
 (b) Fission reaction
 (c) Chemical reaction
 (d) Diffusion reaction

64. In SONAR we use
 (a) ultrasonic waves
 (b) infrasonic waves
 (c) radio waves
 (d) audible sound waves

65. A liquid is kept in a regular cylindrical vessel up to a certain height. If this vessel is replaced another cylindrical

vessel having half the area of cross-section of the bottom, the pressure on the bottom will

- remain unaffected
- be reduced to half the earlier pressure
- be increased to twice the earlier pressure
- be reduced to one-fourth the earlier pressure

66. The time period of a simple pendulum having a spherical wooden bob is 2 s. If the bob is replaced by metallic one twice as heavy, the time period will be

- more than 2 s
- 2 s
- 1 s
- less than 1 s

67. Which one among the following statements about an atom is not correct?

- Atoms always combine to form molecules
- Atoms are the basic units from which molecules and ions are formed
- Atoms are always neutral in nature
- Atoms aggregate in large numbers to form the matter that we can see, feel and touch

68. A device which is used in our TV set, Computer, Radio set for storing the electric charge is

- resistor
- inductor
- capacitor
- conductor

69. Which one among the following is called terrestrial planet?

- Mercury
- Jupiter
- Saturn
- Uranus

70. Which among the following phenomena can occur when very warm and humid air is rising over a mass of a very cold air?

1. Calm weather
2. Snowfall
3. Storms and cyclonic storms
4. Intense rain and hail

Select the correct answer using the code given below:

- 1 and 2
- 2 and 3

(c) 3 and 4
(d) 1 and 4

71. The waves that help scientists to understand the internal structure of the Earth are

- primary waves
- secondary waves
- surface waves
- longitudinal waves

72. Gaddis are

- fishermen of Kerala
- pastoralists of Arunachal Pradesh
- shepherds of Himachal Pradesh
- nomads of Rajasthan desert

73. Which one among the following is not included in the Fundamental Rights embodied in the Constitution of India?

- Right to Equality
- Right to Freedom
- Right against Exploitation
- Right to Information

74. Consider the following statements relating to the procedure of the election of the Speaker and the Deputy Speaker of the Lok Sabha:

1. The election of Speaker shall be held on such date as the Prime Minister may fix and the Secretary General shall send to every member notice of this date.
2. The election of a Deputy Speaker shall be held on such date as the Speaker may fix and the Secretary General shall send to every member notice of this date.
3. At any time before noon on the day preceding the date so fixed, any member may give notice in writing of a motion that another member be chosen as the Deputy Speaker of the House

Which of the statements given above is/are correct?

- 2 and 3 only
- 2 only
- 1 and 3 only
- 1, 2 and 3

75. The writ of 'Prohibition' is issued by a superior court

- to prevent an inferior court or tribunal from exceeding its jurisdiction or acting contrary to the rules of natural justice

(b) to an inferior court or body exercising judicial or quasi-judicial functions to transfer the record of proceedings in a case for its review
 (c) where it can call upon a person to show under what authority he/she is holding the office
 (d) to an authority to produce an illegally detained person before the court for trial

76. Which one among the following is not a Fundamental Duty of the citizen of India?
 (a) To develop scientific temper, humanism and the spirit of inquiry and reform
 (b) To safeguard public property and to abjure violence
 (c) To uphold and protect sovereignty, unity and integrity of India.
 (d) To practice family planning and to control population

77. Which one among the following writs literally means 'you may have the body'?
 (a) Certiorari
 (b) Habeas corpus
 (c) Mandamus
 (d) Quo warranto

78. Which one among the following is not a recommendation of the Sarkaria Commission on the appointment of the Governor in a State?
 (a) He/She must not have participated in active politics at least for some time before his/her appointment as Governor
 (b) The Chief Justice of the Supreme Court may be consulted by the President in selecting a Governor
 (c) The Governor's term of office of five years should not be disturbed except very rarely
 (d) The Governor should not be the native of the State

79. The year of 2002 Code of Conduct related to territorial and maritime dispute in the South China Sea was signed between China and
 (a) Philippines
 (b) Vietnam
 (c) United States of America
 (d) ASEAN

80. The polity of the Harappan people, as derived from the material evidence, was
 (a) secular-federalist
 (b) theocratic-federalist
 (c) oligarchic
 (d) theocratic-unitary

81. Who among the following cultures were the first to paint their pottery?
 (a) Mesolithic
 (b) Chalcolithic
 (c) Neolithic
 (d) Iron-age

82. Consider the following statements about Shivaji's military acumen:
 1. He was a master in guerilla tactics and swift cavalry warfare
 2. He had built a series of fortified strongholds on the table mountains of the Western Deccan
 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

83. Iodized salt is a
 (a) mixture of potassium iodide and common salt
 (b) mixture of molecular iodine and common salt
 (c) compound formed by combination of potassium iodide and common salt
 (d) compound formed by molecular iodine and common salt

84. Antacids are commonly used to get rid of acidity in the stomach. A commonly used antacid is
 (a) sodium hydrogen phthalate
 (b) magnesium hydroxide
 (c) calcium hydroxide
 (d) manganese acetate

85. Which of the following are the forms of precipitation?
 1. Dew
 2. Fog
 3. Hail
 4. Snow
 Select the correct answer using the code given below :
 (a) 1 and 2
 (b) 3 and 4
 (c) 1 and 3
 (d) 2 and 4

86. Who among the following can attend the meetings of both Houses of Parliament while being not a member of either House?
 (a) Solicitor General of India
 (b) Vice President of India
 (c) Comptroller and Auditor General of India
 (d) Attorney General of India

87. The Judges of High Court are appointed by :
 (a) The Chief Justice of India
 (b) The Governor of the concerned State
 (c) The Union Minister of Law
 (d) The President of India

88. The authorization for withdrawal of any funds from the Consolidated Fund of India must come from :
 (a) The President of India
 (b) The Parliament of India
 (c) The Prime Minister of India
 (d) The Union Finance Minister

89. In India, recognition to political parties is accorded by :
 (a) The President of India
 (b) The Speaker of Lok Sabha
 (c) The Election Commission
 (d) The Ministry of Parliamentary Affairs

90. Which one of the following is not a constituent of biogas?
 (a) Carbon dioxide
 (b) Hydrogen
 (c) Methane
 (d) Nitrogen dioxide

91. Tides are mainly caused by the :
 (a) strong ocean currents dashing against the coasts
 (b) strong winds on the surface of the ocean
 (c) gravitational pulls on oceanic water by the sun and the moon
 (d) development of high pressure areas in certain parts of the oceans

92. Which one among the following radioactive substances has maximum half-life period?
 (a) Carbon-14
 (b) Plutonium-239
 (c) Radium-226
 (d) Uranium-238

93. Which one of the following is not a structural component of a plant?
 (a) Calcium
 (b) Nitrogen
 (c) Phosphorus
 (d) Potassium

94. Which one of the following is the community from which the President of India can nominate two members to Lok Sabha?
 (a) Anglo-Indians
 (b) Buddhists
 (c) Jains
 (d) Parsis

95. The organ most damaged by heavy consumption of alcohol is :
 (a) Brain
 (b) Kidney
 (c) Liver
 (d) Stomach

96. The Himalayan mountain ranges are the result of :
 (a) Differential erosion
 (b) Faulting of crustal blocks
 (c) Large scale folding
 (d) Volcanic eruption

97. The tropical cyclones of the Bay of Bengal are usually called :
 (a) Depressions
 (b) Hurricanes
 (c) Tornadoes
 (d) Typhoons

98. Which of the following do not produce energy but are still essential for the human body?
 (a) Carbohydrates
 (b) Fats
 (c) Proteins
 (d) Vitamins

99. The strait which connects the Arabian Sea and the Bay of Bengal is known as :
 (a) Bering
 (b) Hormuz
 (c) Palk
 (d) Malacca

100. The term fourth estate refers to :
 (a) Executive
 (b) Judiciary
 (c) Parliament
 (d) Press

SAMPLE PAPER 5

1. In the cells of living organisms, the protein synthesis takes place in :
 (a) Golgi bodies
 (b) Mitochondria
 (c) Plastids
 (d) Ribosomes
2. The primary product of photosynthesis is :
 (a) Cellulose
 (b) Glucose
 (c) Glycogen
 (d) Sucrose
3. Which one of the following is not an endocrine gland?
 (a) Adrenal
 (b) Liver
 (c) Pancreas
 (d) Thymus
4. In addition to iron, the intake of which one of the following prevents anaemia?
 (a) Acetic acid
 (b) Citric acid
 (c) Folic acid
 (d) Tartaric acid
5. In which of the following rocks are coal and petroleum found?
 (a) Igneous
 (b) Metamorphic
 (c) Sedimentary
 (d) Metamorphic and sedimentary
6. Lichens represent symbiotic relationship between :
 (a) Algae and fungi
 (b) Bacteria and fungi
 (c) Algae and higher plants
 (d) Bacteria and higher plants
7. In which one of the following regions of India would one find vegetation types ranging from tropical to alpine types?
 (a) Eastern Ghats
 (b) Deccan Plateau
 (c) Himalayan range
 (d) Maikala range
8. Excessive release of the pollutant carbon monoxide (CO) into the air may produce a condition in which oxygen supply in the human body decreases. What causes this condition?
 (a) When inhaled into the human body, CO is converted into CO₂
 (b) The inhaled CO destroys the chemical structure of haemoglobin
 (c) The inhaled CO has much higher affinity for haemoglobin as compared to oxygen
 (d) The inhaled CO adversely affects the respiratory centre in the brain
9. The most important component(s) for the paper industry is/are
 (a) Cellulose
 (b) Lignin and secondary xylem
 (c) Lignin only
 (d) Starch
10. How does silver iodide help in the creation of artificial rainfall?
 (a) It is used to provide freezing nuclei in cloud seeding
 (b) It is used as catalyst to bring together hydrogen and oxygen to form water
 (c) It is used to lower water vapour at high altitudes
 (d) It helps in the ways as mentioned at (a) and (c) above
11. Who among the following is credited with the introduction of local self-government in India?
 (a) Lord Mayo
 (b) Lord Ripon
 (c) Lord Lytton
 (d) Lord Curzon
12. The Constituent Assembly of India was created under :
 (a) Cripps proposals
 (b) Cabinet Mission Plan
 (c) Simla Agreement
 (d) Mountbatten Recommendations
13. Provincial autonomy was introduced in India under :
 (a) Morley-Minto Reforms
 (b) Montagu-Chelmsford Reforms
 (c) Government of India Act, 1935
 (d) Indian Independence Act, 1947
14. The Parliament of India consists of :

(a) The President, the Lok Sabha and the Rajya Sabha
 (b) The President, the Vice President, the Lok Sabha and the Rajya Sabha
 (c) The Lok Sabha and the Rajya Sabha only
 (d) The Union Cabinet, the Lok Sabha and the Rajya Sabha

15. The Government of India Act, 1935 provided for :
 (a) dyarchy (diarchy) in the provinces and dyarchy (diarchy) at the Centre
 (b) autonomy to the provinces and dyarchy (diarchy) at the Centre
 (c) abolition of the system of dyarchy (diarchy)
 (d) autonomy at the Centre as well as in the provinces

16. The National Development Council is presided over by the :
 (a) Union Finance Minister
 (b) Prime Minister
 (c) Deputy Chairman of Planning Commission
 (d) Union Home Minister

17. Which of the following bodies is/are presided over by a non-member?
 (a) Lok Sabha
 (b) Rajya Sabha
 (c) Both Lok Sabha and Rajya Sabha
 (d) Vidhan Sabhas of various states

18. According to the Constitution of India, which of the following is/are guidelines to the Government of India for framing laws and policies?
 (a) Fundamental Rights
 (b) Fundamental Duties
 (c) Directive Principles of State Policy
 (d) Fundamental Rights and Fundamental Duties

19. Which one of the following statements is correct?
 (a) In India, the same person cannot be appointed as Governor for two or more States at the same time
 (b) The Judges of the High Court of the States in India are appointed by the Governor of the State just as the judges of the Supreme Court are appointed by the President
 (c) No procedure has been laid down in the Constitution of India for the removal of a Governor from his post
 (d) In the case of a Union Territory having a legislative set up, the Chief Minister is appointed by the Lt. Governor

20. A dispute arising out of the election of the President of India is referred to the :
 (a) Election Commission
 (b) Supreme Court of India
 (c) Lok Sabha
 (d) Law Commission

21. In the Parliamentary form of governance, the Executive is :
 (a) independent of the Legislature
 (b) responsible to the Legislature
 (c) responsible to the Judiciary
 (d) directly responsible to the People

22. When solar radiation impinges on a snow surface, then :
 (a) most of the radiation is absorbed and a little portion is reflected
 (b) transmitted through snow and into ground
 (c) most of the radiation is reflected and a little portion is absorbed
 (d) evenly absorbed and reflected

23. Which of the following countries has Black Sea on one side and Mediterranean Sea on other side?:
 (a) Turkey
 (b) Iran
 (c) Greece
 (d) Azerbaijan

24. Concept of "Zero Hour" in Indian parliamentary process means
 (a) intervening time between two different items on the agenda
 (b) time between the Question Hour and the next item on the agenda
 (c) time immediately after the Question Hour which is extended for more number of question-answer sessions at the discretion of the Speaker
 (d) None of the above statements is correct in this context

25. Which of the following statements is/are correct?
 1. District Collector directs and supervises the revenue department of the district
 2. District Superintendent of Police grants licences for arms and explosives in the district

Select the correct answer using the codes given below :

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

26. The only Indian State having common border with Sikkim is :
(a) Arunachal Pradesh
(b) Assam
(c) Meghalaya
(d) West Bengal

27. Who of the following is/are appointed by the President of India?
1. The Chairman of Rajya Sabha
2. The Chief Justice of India
3. The Speaker of Lok Sabha
Select the correct answer using the codes given below :
(a) 1 and 2 only
(b) 2 only
(c) 2 and 3 only
(d) 1, 2 and 3

28. Which one of the following is the cell organelle that is referred to as the 'Suicide bag' for containing enzymes that can break down cell components or even the whole cell?
(a) Lysosome
(b) Mesosome
(c) Phagosome
(d) Ribosome

29. Which of the following is the longest National Highway?
(a) NH 4
(b) NH 5
(c) NH 6
(d) NH 7

30. An ecosystem comprises :
(a) only trees, shrubs and herbs in an area
(b) only animals in an area
(c) all plants and animals in an area
(d) all living and non-living things in an area

31. Which one among the following statements regarding heart sound is correct?
(a) Heart sounds are caused by the internal blood flow inside the heart
(b) Heart sounds are caused by the external blood flow outside the heart
(c) Heart sounds are caused by opening and closing of heart valves
(d) Normal sounds are called 'murmurs'

32. With regard to animal breeding, which one among the following is not correct?
(a) In-breeding : Mating of more closely related animals within the same breed for 1 - 2 generations
(b) Out-breeding : Breeding of unrelated animals of the same breed without common ancestors for 4 — 6 generations
(c) Cross-breeding : Superior males of one breed are mated with superior females of another breed
(d) Out-crossing : Offspring is called an 'out-cross'

33. Which one among the following cell organelles is semi-permeable?
(a) Cell membrane
(b) Plasma membrane
(c) Cell wall
(d) Nucleus

34. Which one among the following most correctly determines the atomic number of an element?
(a) Number of protons
(b) Number of protons and electrons
(c) Number of ions
(d) Number of nucleons

35. Which one among the following is used to make periscope?
(a) Concave lens
(b) Concave mirror
(c) Plane mirror
(d) None of the above

36. Kilowatt-hour is the unit of
(a) potential differences
(b) electric power
(c) electric energy
(d) electric potential

37. In oxidation
1. Hydrogen is displaced from a substance.
2. An electropositive element is added to or proportion of electropositive element increases in a substance.

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

38. When a copper rod is dipped in aqueous silver nitrate solution, the colour of the solution changes to blue. This is because
 (a) Cu is more easily reduced than Ag
 (b) Ag is more easily reduced than Cu
 (c) Nitrate ion acts as an oxidizing agent
 (d) Nitrate ion acts as a reducing agent

39. The reaction that takes place in soap making is called saponification. Basically soap is sodium or potassium salts of
 (a) long chain monocarboxylic acids
 (b) glycerol
 (c) long chain dicarboxylic acids
 (d) long chain tricarboxylic acids

40. The number of protons in a negatively charged atom (anion) is
 (a) more than the atomic number of the element
 (b) less than the atomic number of the element
 (c) more than the number of electrons in the atom
 (d) less than the number of electrons in the atom

41. Which of the following is statements regarding consolidation of British power in 18th century Bengal is/are correct?
 1. The Nawab granted the Company the Nizamat powers in 1765.
 2. The duties of collecting revenues and administration of justice were entrusted with the European officials of the East India Company.

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

42. The Supreme Court of India has expanded the meaning of the Right to Life to include the following derivative rights. Which one among the following is not included in the Court's definition?
 (a) Right to food and adequate livelihood
 (b) Right to education

(c) Right to live in a healthy environment
 (d) Right to health and information

43. Three resistance coils of $1\ \Omega$, $2\ \Omega$ and $3\ \Omega$ are connected in series. If the combination is connected to a battery of 9 V, what is the potential drop across the resistance coil of $3\ \Omega$?
 (a) 2.0 volt
 (b) 3.0 volt
 (c) 4.5 volt
 (d) 6.0 volt

44. What is the power of the lens, if the far point of a short-sighted eye is 200 cm?
 (a) - 0.5 D
 (b) 2 D
 (c) 1 D
 (d) - 1.5 D

45. Which one among the following is not a mixture?
 (a) Graphite
 (b) Glass
 (c) Brass
 (d) Steel

46. The river with highest tidal bore in India is
 (a) Cauvery
 (b) Mahanadi
 (c) Hoogli
 (d) Krishna

47. The Gulf of Mannar is situated along the coast of
 (a) Tamil Nadu
 (b) Kerala
 (c) Karnataka
 (d) Andhra Pradesh

48. Consider the following statements :
 1. LED-based lamps do not contain mercury.
 2. LED-based lamps cannot be used as street-lights.

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

49. Which of the following places is known for Salt Water Crocodiles ?
 (a) Bhitarkanika
 (b) Machilipatnam

(c) Pulicat Lake
(d) Rann of Kutch

50. Which one of the following is spread over three States ?
 (a) Mudumalai Wildlife Sanctuary
 (b) National Chambal Sanctuary
 (c) Eravikulam national Park
 (d) Bandavgarh National Park

51. India is a member of :
 1. Asia-Pacific Economic Cooperation (APEC)
 2. Asian Development Bank (ADB)
 3. Organization for Economic Cooperation and Development (OECD)
 4. World Trade Organization (WTO)

Select the correct answer using the code given below :
 (a) 1 and 3 only
 (b) 2 and 4 only
 (c) 2, 3 and 4 only
 (d) 1, 2, 3 and 4

52. Which one of the following rivers drains into Rann of Kutch ?
 (a) Luni
 (b) Mahi
 (c) Narmada
 (d) Sabarmati

53. Which one of the following chemicals is a food preservative ?
 (a) Sodium carbonate
 (b) Sodium bicarbonate
 (c) Sodium benzoate
 (d) Sodium thiosulphate

54. Which of the following are sources of methane, a greenhouse gas ?
 1. Domestic animals
 2. Coal mining
 3. Wetlands

Select the correct answer using the code given below :
 (a) 1 and 2 only
 (b) 2 only
 (c) 1 and 3 only
 (d) 1, 2 and 3

55. Duodenum in human body is a part of
 (a) Digestive system
 (b) Excretory system
 (c) Reproductive system
 (d) Respiratory system

56. The first Indian ruler to be shown in images as wearing a dress akin to trousers is
 (a) Chandragupta
 (b) Ashoka
 (c) Kanishka
 (d) Samudragupta

57. Which one among the following is not a function of Mir Bakshi, the head of the military department as well as of the nobility under Mughal rule?
 (a) He made recommendations for appointment to Mansabs to the Emperor
 (b) He collected reports of intelligence and information agencies of the empire and presented them to the Emperor at the court
 (c) He was responsible for all incomes and expenditures, and held control over Khalisa, Jagir and Inam lands
 (d) He was responsible for the security of foreign travelers on the highways of the empire

58. Which among the following statements regarding the Gupta dynasty is/are correct?
 1. The Kumaramatyas were the most important officers and they were appointed directly by the King in the home provinces
 2. The village headmen lost importance and the land transaction began to be effected without their consent

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

59. On the labels of the bottles, some soft drinks are claimed to be acidity regulators. They regulate acidity using
 (a) carbon dioxide
 (b) bicarbonate salts
 (c) both carbon dioxide and bicarbonate salts
 (d) carbon dioxide and lime

60. The gas which turns limewater milky is
 (a) carbon dioxide
 (b) carbon monoxide
 (c) ammonia
 (d) nitrogen dioxide

61. The expression 'South Asia' usually includes
 (a) Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka
 (b) Nepal, Bhutan, India, Afghanistan, China, Pakistan and Sri Lanka
 (c) Bangladesh, India, China, Nepal, Japan, Pakistan and Maldives
 (d) Bangladesh, Bhutan, China, Maldives, Nepal, Pakistan and Sri Lanka

62. Which one among the following statements about Veto Power with regard to United Nations is correct?
 (a) One veto can stall Security Council resolution
 (b) It is a kind of positive vote power
 (c) The Secretary General uses this power when not satisfied with any decision of the Council
 (d) All the members of the Security Council possess the veto power

(Q63-68) Directions: The following seven (5) items consist of two statements, statement I and statement II. You are to examine these two statements carefully and select the answers to these items using the code given below:

Code:

Both the statements are individually true and statement II is the correct explanation of statement I
 Both the statements are individually true and statement II is not the correct explanation of statement I
 Statement I is true but statement II is false
 Statement I is false but statement II is true

63. Statement I :
 The planet Neptune appears blue in colour.
 Statement II :
 The presence of methane gas in the atmosphere of Neptune is responsible for its colour.

64. Statement I :
 Comets revolve round the Sun only in long elliptical orbits.
 Statement II :
 A comet develops a tail when it gets close to the Sun.

65. Statement I :
 Pulling a lawn roller is easier than pushing it.
 Statement II :
 Pushing increases the apparent weight and hence the force of friction.

66. Statement I :
 All compounds contain more than one element.
 Statement II :
 All compounds are heterogeneous mixtures.

67. Statement I :
 Tsunami is small in open ocean yet may be over 30 m high when it reaches a coastline.
 Statement II :
 Tsunamis have long wavelength and they travel across the open ocean at high speed. As they approach shore, the wavelength and the wave height increases.

68. Statement I :
 Operation Parakram involved the mobilization of India troops along India's border with Pakistan.
 Statement II :
 After the year 2001 Parliament attacks, India wanted to pressure Pakistan into acting against terror groups operating from areas under its control.

69. The Indian Army undertook Operation Meghdoot to establish Indian control over
 (a) Sir Creek
 (b) Aksai Chin
 (c) Siachin Glacier
 (d) Drass Sector

70. Consider the following statements about Sufism:
 1. The Sufis were critical of the dogmatic definitions and scholastic methods of interpreting the Quran and Sunna (traditions of the Prophet) adopted by the theologians.
 2. The Sufis sought an interpretation of the Quran on the basis of their personal experience.

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

71. The rigid lithospheric slabs are known as 'Plates'. What would be the result, if the oceanic plate collides with the continental plate?
 1. Oceanic plate is forced below the continental plate.
 2. Continental plate is forced below the oceanic plate.
 3. Continental and oceanic plates never collide.

Select the correct answer using the code given below

(a) 1 only
(b) 2 only
(c) 1 and 2 only
(d) 1, 2 and 3

72. Consider the following layers of the atmosphere :
 1. Troposphere
 2. Stratosphere
 3. Mesosphere
 4. Thermosphere

Which one among the following is the correct sequence of the layers with increasing altitude from the Earth's surface?

(a) 1 - 2 - 3 - 4
(b) 2 - 1 - 3 - 4
(c) 3 - 2 - 1 - 4
(d) 4 - 2 - 3 - 1

73. Which of the following statements is/are correct?
 1. Air close to the Earth's surface is heavier.
 2. Air close to the Earth's surface contains larger quantity of water vapour and dust particles.

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

74. The term albedo implies the
 (a) capacity to absorb solar radiation.
 (b) capacity to modify the path of solar radiation.

(c) proportion of the shortwave solar radiation reflected by a surface.
(d) amount of solar radiation returned to air by a surface.

75. Which of the following statements are correct?
 1. Assam produces nearly 80% of jute in India.
 2. Jute grows well on loamy soil.
 3. Hot and humid conditions are ideal for growing jute.
 4. Jute is commonly cultivated with wheat in rotation.

Select the correct answer using the code given below :

(a) 1, 2 and 3
(b) 2, 3 and 4
(c) 2 and 3 only
(d) 1 and 4 only

76. The Indian Standard time is ahead of Greenwich Mean Time by
 (a) 3 hrs and 30 minutes
 (b) 4 hrs and 30 minutes
 (c) 5 hrs and 30 minutes
 (d) 6 hrs and 30 minutes

77. Which of the following are the results of El Nino?
 1. Reduction in the amount of planktons which further reduces the number of fish in the sea.
 2. Irregularities in the evaporation of sea water.
 3. Distortion of equatorial atmospheric circulation.

Select the correct answer using the code given below

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

78. For Mahatma Gandhi, Satyagraha is
 1. a political force.
 2. a philosophy of life.
 3. an ideology of action.

Select the correct answer using the code given below :

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

79. Presbyopia is a visual defect caused by

(a) Elongation of the eye ball.
 (b) Shortened curvature of the eye lens.
 (c) Weakening of the ciliary muscles.
 (d) Gradually increasing flexibility of the eye lens.

80. Which one among the following animals gives birth to the biggest baby?
 (a) Elephant
 (b) Rhinoceros
 (c) Blue whale
 (d) Hippopotamus

81. No Indian shall by reason only of his religion, place of birth, descent, colour or any of them be disabled from holding any office or employment under the company." This was a pledge first given by the
 (a) Charter act of 1813
 (b) Charter Act of 1833
 (c) Queen's Proclamation of 1858
 (d) Indian Civil Service Act of 1861

82. Consider the following statements about Salt Satyagraha :
 1. It was a form of Civil Disobedience.
 2. It was the first nationalist activity in which women participated in large numbers.
 3. Gandhiji first experimented with Salt Satyagraha in South Africa.
 Which of the statements given above is/are correct?
 (a) 1 only
 (b) 2 only
 (c) 1 and 2 only
 (d) 1, 2 and 3

83. A beautiful rainbow on the sky is due to the
 (a) dispersion of sunlight from a water droplet only.
 (b) reflection of sunlight from a water droplet only.
 (c) reflection and refraction of sunlight from a water droplet only.
 (d) refraction, dispersion and reflection of sunlight from a water droplet.

84. Which of the following statements about Ryotwari system is/are correct?
 1. The government collected the revenue directly from the individual cultivators.
 2. The cultivators were not recognized in law as the owners of the land.

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

85. Consider the following statements :
 1. Dadabhai Naoroji first put forward 'the theory of drain of wealth'.
 2. The Indian National Congress adopted a resolution to criticize the drain of wealth in its annual session at Calcutta in 1896.

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

86. Which of the following statements about Quit India Movement of 1942 is/are correct?
 1. The movement was massive in character.
 2. One of the unique features of the movement was the participation of the communists at the local level defying the official stand of the Communist Party.
 3. It was a completely non-violent movement.

Select the correct answer using the code given below :

(a) 1 only
 (b) 1 and 2
 (c) 2 only
 (d) 1 and 3

87. Consider the following statements :
 1. Annie Besant was the first woman President of the Indian national Congress.
 2. The historic Lucknow session of the Congress in 1916 was presided by Madan Mohan Malviya.
 3. Mahatma Gandhi presided over the annual session of Congress only once at Belgaum in 1924.

Which of the statements given above is/are correct?

(a) 1, 2 and 3
 (b) 2 and 3 only
 (c) 1 and 3 only

(d) 1 only

88. During our freedom struggle, which one of the following was started immediately after the partition of Bengal?
 (a) Civil Disobedience Movement
 (b) Non-Cooperation Movement
 (c) Quit India Movement
 (d) Swadeshi and Boycott Movement

89. Who of the following is popularly known for leading the Bardoli satyagraha?
 (a) Acharya J. B. Kriplani
 (b) Lala Lajpat Rai
 (c) Sardar Vallabhbhai Patel
 (d) Pandit Jawaharlal Nehru

90. Who of the following is popularly known as the Grand Old Man of India?
 (a) Acharya Vinoba Bhave
 (b) Dadabhai Naoroji
 (c) Gopal Krishna Gokhale
 (d) Mahadev Govind Ranade

91. Consider the following statements:
 1. A Money Bill can be introduced in either Lok Sabha or Rajya Sabha.
 2. The President of India can refuse his assent to a Money Bill and return it to Parliament for reconsideration.
 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

92. With reference to Indian Freedom Struggle, which of the following coincides with the formation of Indian National Army (Azad Hind Fauz)?
 (a) First World War
 (b) Home Rule Movement
 (c) Non-Cooperation Movement
 (d) Second World War

93. The Civil Disobedience Movement started with which of the following?
 (a) Anti-Rowlatt agitation
 (b) Dandi march
 (c) Demonstrations against the arrival of Simon Commission in India
 (d) No-tax campaign in Bardoli district

94. Consider the following kinds of organisms:
 1. Algae
 2. Fungi
 3. Protozoa
 In which of the above are unicellular organisms found?
 (a) 1 only
 (b) 2 and 3 only
 (c) 1 and 3 only
 (d) 1, 2 and 3

95. Who of the following wrote "The Story of My Experiments with Truth"?
 (a) Babasaheb B. R. Ambedkar
 (b) Gurudev Rabindranath Tagore
 (c) Raja Ram Mohan Roy
 (d) Mahatma Gandhi

96. Which one among the following is an appropriate description of 'deflation'?
 (a) It is a sudden fall in the value of a currency against other currencies
 (b) It is a persistent recession in the economy
 (c) It is a persistent fall in the general price level of goods and services
 (d) It is a fall in the rate of inflation over a period of time

97. With reference to Lok Adalats, which one among the following statements is correct?
 (a) Lok Adalats have the jurisdiction to settle the matters at pre-litigative stage and not those matters pending before any court
 (b) Lok Adalats can deal with matters which are civil and not criminal in nature
 (c) The Lok Adalat has not been given any statutory status so far
 (d) No appeal lies in a civil court against the order of the Lok Adalat

98. Which one among the following statements about 'Revolution' is not correct?
 (a) Revolution implies change of the system itself
 (b) Revolution implies change within the system's rules
 (c) Attempts at revolution often produce violence
 (d) No type of political system is immune to revolution

99. Consider the following statements :
 1. In India, only two Union Territories have Legislative Assemblies.

2. Mizoram, Nagaland and Meghalaya, the three North-Eastern States of India, have only one seat each in the Lok Sabha.

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

100. Which one among the following correctly describes Gandhiji's attitude towards Swarajist leaders?

- (a) He was not opposed to their entry into Council
- (b) He had full trust in their bona fides and considered them most valued and respected leaders
- (c) He was not in favour of maintaining warm personal relations with them
- (d) He was neutral to Government's offensive against the Swarajists and did not defend them

Answer Key:

Sample Paper 1									
1.d	11.c	21.c	31.d	41.b	51.c	61.b	71.d	81.c	91.a
2.b	12.a	22.d	32.b	42.a	52.d	62.d	72.a	82.c	92.c
3.d	13.b	23.d	33.b	43.a	53.b	63.c	73.c	83.b	93.b
4.b	14.a	24.c	34.b	44.c	54.a	64.c	74.a	84.a	94.a
5.a	15.c	25.b	35.b	45.b	55.c	65.a	75.a	85.a	95.a
6.c	16.c	26.c	36.d	46.b	56.b	66.c	76.c	86.d	96.a
7.b	17.b	27.a	37.b	47.b	57.d	67.b	77.a	87.a	97.a
8.c	18.c	28.c	38.c	48.b	58.c	68.b	78.c	88.a	98.a
9.c	19.c	29.d	39.c	49.b	59.d	69.a	79.c	89.b	99.b
10.a	20.c	30.c	40.d	50.b	60.c	70.c	80.a	90.c	100.d

Sample Paper 2									
1.c	11.b	21.a	31.d	41.d	51.b	61.b	71.c	81.b	91.a
2.d	12.c	22.b	32.b	42.c	52.b	62.c	72.c	82.d	92.d
3.b	13.c	23.a	33.b	43.d	53.b	63.b	73.b	83.a	93.d
4.c	14.c	24.a	34.b	44.b	54.d	64.a	74.c	84.d	94.c
5.b	15.c	25.b	35.c	45.b	55.d	65.b	75.a	85.d	95.d
6.c	16.d	26.b	36.a	46.d	56.d	66.b	76.b	86.a	96.d
7.c	17.b	27.c	37.d	47.a	57.c	67.c	77.a	87.b	97.b
8.b	18.c	28.d	38.a	48.c	58.c	68.a	78.d	88.d	98.d
9.c	19.d	29.a	39.c	49.d	59.c	69.c	79.b	89.a	99.d
10.a	20.b	30.c	40.b	50.c	60.c	70.a	80.b	90.d	100.b

Sample Paper 3									
1.d	11.d	21.b	31.d	41.a	51.b	61.a	71.c	81.d	91.c
2.c	12.d	22.d	32.c	42.d	52.d	62.b	72.a	82.c	92.d
3.d	13.d	23.c	33.b	43.b	53.d	63.d	73.c	83.c	93.c
4.c	14.a	24.a	34.d	44.d	54.c	64.d	74.b	84.c	94.a
5.c	15.b	25.b	35.c	45.a	55.d	65.d	75.d	85.b	95.d
6.b	16.b	26.a	36.d	46.c	56.c	66.c	76.d	86.b	96.d
7.a	17.b	27.a	37.c	47.b	57.b	67.d	77.a	87.d	97.a
8.b	18.d	28.b	38.d	48.d	58.d	68.b	78.a	88.b	98.b
9.d	19.a	29.a	39.d	49.b	59.d	69.a	79.a	89.c	99.b
10.d	20.a	30.a	40.b	50.b	60.c	70.c	80.d	90.b	100.a

Sample Paper 4									
1.b	11.c	21.b	31.a	41.a	51.d	61.c	71.d	81.b	91.c
2.c	12.b	22.c	32.d	42.c	52.b	62.d	72.c	82.c	92.d
3.c	13.c	23.a	33.b	43.c	53.d	63.a	73.d	83.a	93.a
4.b	14.c	24.b	34.a	44.d	54.a	64.a	74.a	84.b	94.a
5.b	15.c	25.a	35.c	45.d	55.c	65.c	75.a	85.b	95.c
6.b	16.c	26.d	36.b	46.b	56.a	66.b	76.d	86.d	96.c
7.a	17.a	27.c	37.a	47.a	57.d	67.a	77.b	87.d	97.a
8.c	18.c	28.a	38.c	48.c	58.c	68.c	78.b	88.b	98.d
9.b	19.a	29.a	39.b	49.a	59.b	69.a	79.d	89.c	99.c
10.c	20.d	30.c	40.c	50.c	60.d	70.b	80.d	90.d	100.d

Sample Paper 5									
1.d	11.b	21.b	31.c	41.a	51.b	61.a	71.a	81.b	91.d
2.b	12.b	22.c	32.d	42.b	52.a	62.a	72.a	82.c	92.d
3.b	13.c	23.a	33.a	43.c	53.c	63.a	73.c	83.d	93.b
4.c	14.a	24.b	34.a	44.a	54.d	64.b	74.c	84.a	94.c
5.c	15.b	25.a	35.c	45.a	55.a	65.a	75.b	85.a	95.d
6.a	16.b	26.d	36.b	46.c	56.c	66.c	76.c	86.b	96.c
7.c	17.b	27.b	37.a	47.a	57.c	67.c	77.d	87.c	97.d
8.c	18.c	28.a	38.b	48.a	58.a	68.a	78.c	88.d	98.b
9.a	19.c	29.d	39.a	49.a	59.b	69.c	79.c	89.c	99.a
10.a	20.b	30.d	40.d	50.b	60.a	70.c	80.c	90.b	100.b