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IAS PRELIMS EXAMINATION - 2018

TEST BOOKLET

Test Code

Test Booklet
Series

C

Under the Personal Guidance of

S. BALIYAN

Time Allowed : Two Hours

Maximum Marks : 200

INSTRUCTIONS

1. Immediately after the commencement of the examination, you should check that this test booklet does not have any unprinted or torn or missing pages or items, etc. If so, get it replaced by a complete test booklet.
2. Encode clearly the test booklet series A, B, C or D, as the case may be, in the appropriate place in the answer sheet.
3. This Test Booklet contains all the questions to be answered. Each item comprises four responses (answers). You shall select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose only one response for each question.
4. You have to mark all your responses only on the separate Answer Sheet provided.
5. All items carry equal marks. Your total marks will depend not only on the number of correct responses but also on the number of incorrect responses marked by you in the Answer Sheet. 33% of the marks allotted to question will be deducted for each wrong answer.
6. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in your particulars in the Answer Sheet as per instructions.
7. After you have completed filling in all your responses in the Answer Sheet and the examination has concluded, you should hand over, to the invigilator, only the Answer Sheet. You are permitted to take away with you the Test Booklet.



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SCIENCE AND TECHNOLOGY (FUNDAMENTAL LEVEL)

1. Consider the following statements about various nutrients in our body:

- I. Fats give much more energy as compared to the same amount of carbohydrates.
- II. Proteins are needed for the growth and repair of the body and known as 'Body building foods'.
- III. Vitamins protect the body against various diseases.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

2. Which of the following are the examples of Chemical Change?

- I. Fermentation of grapes.
- II. Dissolving sugar in water.
- III. Cooking of food.
- IV. Respiration by human beings.
- V. Melting of ice candy.

Choose the correct answer from the codes given below:

- (a) Only I, III and IV
- (b) Only II, IV and V
- (c) Only I, II, III and IV
- (d) All of the above

3. Which of the following is/are correctly matched?

LIST –I

(Human Diseases)

- I. Tuberculosis
- II. Polio
- III. Malaria

LIST –II

(Causative Microorganism)

- A. Virus
- B. Bacteria
- C. Protozoa

Choose the correct answer from the codes given below:

- (a) Only III
- (b) Only I and II
- (c) Only II and III
- (d) All of the above

4. Consider the following statements with reference to various plant tissues:

- I. Xylem is located more towards the centre of the stem and it allows water and minerals absorbed from the soil to travel upwards in the plant.
- II. Phloem serves to conduct the food synthesized in the leaves to flow down wards and upward so that food reaches to all other regions.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

5. Consider the following statements about SONAR:

- I. Sonar is a device that uses infrasonic waves to measure the distance, direction and speed of underwater object.
- II. Sonar consists of a transmitter and a detector and is installed to a boat or a ship.
- III. The sonar technique is used to determine the depth of the sea and to locate underwater hills and valleys.
- IV. Whales and dolphins use active sonar to identify underwater objects and to help find food.

Which of the above statements is/are correct?

- (a) Only II and III
- (b) Only I, II and III
- (c) Only II, III and IV
- (d) All of the above

6. Which of the following gases is/are produced in a biogas plant?

- I. Hydrogen Sulphide.
- II. Hydrogen.
- III. Methane.

Choose the correct answer from the codes given below:

- (a) Only III
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

7. Consider the following statements about the transfer of heat:

- I. Conduction is a mode of heat transfer by actual motion of matter.
- II. Convection is possible only in fluids.
- III. Radiation does not need medium for heat transfer.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

8. Which of the following is/are the examples of macronutrients needed by the plants?

- I. Calcium.
- II. Iron.
- III. Sulphur.
- IV. Nitrogen.

Choose the correct answer from the codes given below:

- (a) Only I, II and IV
- (b) Only I, III and IV
- (c) Only II, III and IV
- (d) All of the above

9. Consider the following statements with reference to hybridization of crops:

- I. Hybridisation refers to crossing between genetically dissimilar plants.
- II. It is only way of incorporating desirable characters into crop varieties.
- III. This crossing may be inter varietal (between different varieties), inter-specific (between two different species of the same genus) or inter generic (between different genera).

Which of the statements given above is/are correct?

- (a) Only I and II
- (b) Only I and II
- (c) Only II and III
- (d) All of the above

10. Which of the following diseases can be caused due to drinking non-potable water?

- I. Chickengunya.
- II. Diarrhoea.
- III. Cholera.
- IV. Dysentery.

Choose the correct answer from the following codes given below:

- (a) Only I, II and III
- (b) Only I, II and IV
- (c) Only I, III and IV
- (d) Only II, III and IV

11. Consider the following statements:

- I. Probiotics are digestible food ingredients that stimulate the growth and activity of bacteria in the digestive system in ways claimed to be beneficial to health.
- II. Prebiotics are living micro-organisms which help the host body to digest food and gain immunity.

Which of the statements given above is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

12. Which of the following is/are the examples of Exothermic Reaction?

- I. Burning of natural gas.
- II. Respiration process.
- III. Decomposition of vegetable matter into compost.
- IV. Melting of Ice.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only I and II
- (c) Only I, II and III
- (d) All of the above

13. Consider the following statement with reference to the comparison between 'Light Water' and 'Heavy Water':

- I. Heavy water has a higher freezing point when compared to light water.
- II. Heavy water has a lower boiling point when compared to light water.
- III. Both heavy water and light water are quite similar in their physical and chemical properties.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only I and II
- (c) Only II and III
- (d) All of the above

14. Which of the following micro-organisms can be used as agents of bio-control?

- I. Bacteria.
- II. Fungi.
- III. Virus.

Choose the correct answer from the codes given below:

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

15. Consider the following statements about Blue-Green Algae:

- I. They can fix atmospheric nitrogen in aerobic conditions.
- II. They can be used as bio-fertilizer.
- III. They can be used to produce algal biofuel.
- IV. They do not perform photosynthesis unlike normal algae.

Which of the above statements is/are correct?

- (a) Only I, II and III
- (b) Only I, II and IV
- (c) Only II, III and IV
- (d) All of the above

16. Consider the following statements about Carbon Mono-oxide:

- I. Carbon monoxide is a colorless and odorless gas.
- II. It combines with the hemoglobin of the blood.
- III. It depletes the dissolved oxygen in the blood by forming carbon dioxide.

Which of the statements given above is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

17. What would happen when cool air flows from a high mountain region to a region of lower elevation:

- I. The air will increase in its moisture content.
- II. The air will condense, forming large amounts of dew.

III. The air will undergo adiabatic warming.

IV. The air will undergo adiabatic cooling.

Which of the above statements is/are correct?

- (a) Only III
- (b) Only I and III
- (c) Only I and IV
- (d) Only II and IV

18. Which of the following diseases occur(s) due to genetic disorders?

- I. Thalassemia.
- II. Haemophilia.
- III. Colour Blindness.

Choose the correct answer from the codes given below:

- (a) Only II
- (b) Only I and II
- (c) Only II and III
- (d) All of the above

19. Consider the following statements regarding SYNGAS:

- I. Syngas or synthesis gas is a mixture of carbon monoxide and hydrogen gases in varying amounts.
- II. Syngas can be converted into gasoline through a process called steam reforming.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

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20. Match List -I with List -II and select the correct answer from the codes given below:

LIST -I
(Vitamins/Minerals)

LIST -II
(Deficiency Diseases)

- | | |
|----------------|-------------------|
| I. Vitamin A | A. Rickets |
| II. Vitamin C | B. Goiter |
| III. Vitamin D | C. Loss of Vision |
| IV. Iodine | D. Scurvy |

Code:

- | | A | B | C | D |
|-----|----------|----------|----------|----------|
| (a) | III | IV | I | II |
| (b) | I | IV | I | III |
| (c) | II | I | IV | III |
| (d) | III | I | IV | II |

21. Consider the following statements with reference to various Fibres:

- I. The fibres of fabrics can only be obtained from plants and animals.
- II. Cotton and Jute are examples of fibres obtained from plants.
- III. Wool and silk fibres are obtained from animals.

Which of the statements given above is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

22. Which of the following phenomenon occur due to the principle of Total Internal Reflection?

- I. Transmission of data through optical fibre.
- II. Magnification using a simple optical microscope.

- III. A distant patch of road appearing to be wet on a hot summer day.

- IV. A pencil immersed in water looks bent.

Choose the right answer from the codes given below:

- (a) Only I and III
- (b) Only I and IV
- (c) Only I, II and III
- (d) Only II, III and IV

23. Food preservation prevent spoilage of food due to microbial growth. Which of the following are used as the food preservatives?

- I. Table salt and sugar.
- II. Vegetable oils and sodium benzoate.
- III. Monosodium glutamate (MSG).

Choose the right answer from the codes given below:

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

24. Consider the following statements with reference to Viruses:

- I. Viruses are usually bigger than bacteria.
- II. Viruses can replicate outside living cells and can be cultured outside specific host cells.
- III. Viruses have a cellular structure.

Which of the above statements is/are Incorrect?

- (a) Only I
- (b) Only I and II
- (c) Only I and III
- (d) All of the above

25. Read the following statements carefully and choose the right answer from the codes given below:

- I. Excessive fatty food may cause heart attack.
- II. Low level of hemoglobin causes anaemia.
- III. When bone marrow makes excessive WBCs and feed on RBCs the condition is called Leukemia.
- IV. High Blood pressure leads to hypertension.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and IV
- (c) Only I, II and IV
- (d) All of the above

26. Which of the following is/are the carrier of genetic information?

- I. DNA.
- II. RNA.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

27. Consider the following statements with reference to Semi-conductors:

- I. Resistivity of semiconductors is more than insulators but less than conductors.
- II. Most commonly used semiconductor elements are Silicon and Germanium.
- III. Diode, transistor and capacitor are the most commonly used semiconductor devices.

Which of the above statements is/are correct?

- (a) Only II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

28. Read the following statements carefully and choose the right answer from the codes given below:

- I. White blood cells are lesser in number than the Red blood cells.
- II. Red blood cells protect the body from infections.
- III. White blood cells manufacture antibodies which are responsible for Immunity.
- IV. Blood cells are manufactured in the spleen.

Which of the above statements is/are INCORRECT?

- (a) Only IV
- (b) Only I and III
- (c) Only II and IV
- (d) Only I, II and III

29. Consider the following statements with reference to 'Photosynthesis':

- I. Photosynthesis is exclusively performed by the plants because they have chlorophyll.
- II. Plants can convert light energy (only from the natural sunlight) into chemical energy which is synthesized from CO₂ and water.
- III. There are certain organisms living in deep oceans which can also perform the photosynthesis process.

Which of the above statements is/are correct?

- (a) Only II
- (b) Only I and II
- (c) Only II and III
- (d) None of the above

30. Consider the following statement about Liquefied Petroleum Gas (LPG):

- I. LPG releases less CO_2 per unit of energy than coal or oil.
- II. LPG consists of mainly methane, ethane and hexane.
- III. LPG is heavier than air.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only III
- (c) Only I and III
- (d) All of the above

31. Which of the following is/are correctly matched?

LIST –I

(Vitamins)

- I. Vitamin K
- II. Vitamin E
- III. Vitamin C

LIST –II

(Functions in the Body)

- A. Helps protect the cells against free radicals.
- B. Helps in the clotting of blood.
- C. Helps in the absorption of iron.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only III
- (c) Only II and III
- (d) All of the above

32. Read the following statements carefully and choose the right answer from the codes given below:

- I. The rate of breathing in aquatic organisms is much faster than that seen in terrestrial organisms because they require more energy to move quickly in water.

II. Haemoglobin has high affinity towards oxygen as compared to carbon monoxide.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

33. Consider the following differences between Sugars and Carbohydrates:

- I. Sugars are soluble in water while carbohydrates are insoluble in water.
- II. Sugars have a sweet taste while carbohydrates are not sweet.
- III. Carbohydrates are readily digested in the body while sugars have to be broken down into simpler molecules before being digested.

Choose the correct answer from the codes given below:

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

34. During the day the sky is blue but during the sunset sky becomes red. What could be the possible reason?

- (a) The red color reflects off the retinas in our eyes during sunset.
- (b) The red color has shorter wavelength so it penetrates the atmosphere.
- (c) More of the shorter wavelength colour i.e. blue and green are scattered.
- (d) Longer wavelength red color is scattered so it reaches to our eyes.

35. Arrange the following electromagnetic radiations in decreasing order of energy:

- I. Gamma Rays.
- II. Ultraviolet Rays.
- III. X-Rays.

Choose the correct answer from the codes given below:

- (a) I – III – II
- (b) I – II – III
- (c) II – I – III
- (d) III – I – II

36. Which of the following is/are the methods for the transmission of AIDS?

- I. By blood transfusion.
- II. By sexual intercourse.
- III. By Infected needle.
- IV. By mosquitoes and other blood sucking insects.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only I and II
- (c) Only I, II and III
- (d) All of the above

37. Which among the following are celestial bodies?

- I. Planets.
- II. Asteroids.
- III. Comets.
- IV. Stars.
- V. Galaxy.

Choose the correct answer from the codes given below:

- (a) Only I, II and III
- (b) Only I, III and IV
- (c) Only I, II, III and IV
- (d) All of the above

38. Consider the following statements with reference to the Rhizobium bacteria:

- I. It lives in the roots of gram, peas, moong beans and other legumes and provides them with nitrogen.
- II. It can take atmospheric nitrogen and convert it into a soluble form.
- III. It can make its own food.

Which of the statements given above is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

39. Rainbow is produced when sunlight fall on drops of rain. Which of the following physical phenomena is/are responsible for this?

- I. Diffusion.
- II. Refraction.
- III. Internal Reflection.

Which of the above statements is/are correct?

- (a) Only II
- (b) Only I and II
- (c) Only II and III
- (d) All of the above

40. Consider the following points:

- I. Fragmentation.
- II. Budding.
- III. Spore formation.
- IV. Vegetative propagation.

Which of the above is/are the methods of asexual reproduction?

- (a) Only I and II
- (b) Only I, II and III
- (c) Only II, III and IV
- (d) All of the above

41. Consider the following statements with reference to 'Dry Ice':

- I. It is the solid form of carbon dioxide.
- II. It is used primarily as a cooling agent.
- III. It has lower temperature than that of water ice and does not leave any residue.
- IV. Earth has vast blankets of dry ice.

Which of the above statements is/are correct?

- (a) Only II and III
- (b) Only I, II and III
- (c) Only I, II and IV
- (d) Only II, III and IV

42. Which of the following missiles are developed under the Integrated Guided Missile Development Programme (IGMDP)?

- I. Prithvi.
- II. Nag.
- III. Akash.
- IV. Nirbhay.
- V. Sagarika.

Select the correct answer from the codes given below:

- (a) Only I and II
- (b) Only I, II and III
- (c) Only I, III and V
- (d) Only I, II, III and IV

43. Consider the following statements:

- I. Longitudinal wave is the one where the individual particles in the medium move in a direction parallel to the direction of propagation of the disturbance.
- II. Transverse Wave is the one where the individual particles in the medium move in a direction perpendicular to the direction of propagation of the disturbance.

Which of the statements given above is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

44. Consider the following statements with reference to the digestion in grass-eating animals:

- I. They quickly swallow the grass and store it in a separate part of the stomach called rumen.
- II. The partially digested food in the rumen is called cud.
- III. In ruminants, the cellulose of the food is digested by the action of certain bacteria which are not present in humans.

Which of the statements given above is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

45. Why does the sunlight looks scattered when it passes through the canopy of a dense forest?
- While travelling through the dense forest, the speed of light reduces which also causes its wavelength to reduce.
 - Particles dispersed in the air scatter light.
 - The forest trees act as obstructions causing the light to scatter.
 - None of the above
46. Consider the following statements about 'Scramjet Engine':
- It uses Hydrogen as fuel and the oxygen from the atmospheric air as the oxidiser.
 - It is used only during the atmospheric phase of the rocket's flight.
 - India is the fourth country to demonstrate the flight testing of scramjet engine.
- Which of the above points is/are correct?
- Only III
 - Only I and II
 - Only I and III
 - All of the above
47. Which of the following blood cells participate in clotting of blood?
- RBC.
 - WBC.
 - Thrombocytes.
- Choose the correct answer from the codes given below:
- Only III
 - Only I and II
 - Only I and III
 - All of the above
48. Which of the following is/are produced in Coal-Based Thermal Power Plants?
- Fly Ash.
 - Mercury.
 - Sulphur Dioxide.
- Choose the correct answer from the codes given below:
- Only I
 - Only III
 - Only I and III
 - All of the above
49. Consider the following statements with reference to the 'Neem Tree':
- Neem oil can be used as a pesticide to control the proliferation of some species of insects and mites.
 - Neem seeds are used in the manufacture of bio-fuels and hospital detergents.
 - Neem oil has applications in pharmaceutical industry.
- Which of the above points is/are correct?
- Only III
 - Only I and II
 - Only I and III
 - All of the above
50. Which of the following satellites are Indian Remote Sensing (IRS) Satellites?
- Cartosat.
 - SARAL.
 - EDUSAT.
 - Resourcesat - 1.

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Select the correct answer from the codes given below:

- (a) Only I and IV
- (b) Only II and III
- (c) Only I, II and IV
- (d) All of the above

51. Match List –I with List –II and select the correct answer from the codes given below.

| LIST –I (Outer Space Mission) | LIST –II (Location) |
|----------------------------------|------------------------|
| A. MAVEN | I. Jupiter and Saturn |
| B. Juno | II. Mars |
| C. New Horizons | III. Jupiter |
| D. Voyager I | IV. Pluto |

Code:

| | A | B | C | D |
|-----|----|-----|-----|-----|
| (a) | II | III | IV | I |
| (b) | II | I | IV | III |
| (c) | I | IV | III | II |
| (d) | IV | II | III | I |

52. Consider the following statements with reference to the 'Vegetative Propagation' of plants:

- I. Vegetative propagation produces clonal population.
- II. Vegetative propagation helps in eliminating the virus.
- III. Vegetative propagation can be practiced all around the year.

Which of the above points is/are correct?

- (a) Only I
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

53. Which of the following is/are the examples of oxidation process in everyday life?

- I. Combustion.
- II. Corrosion.
- III. Rancidity.
- IV. Digestion of food.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only I and II
- (c) Only I, II and III
- (d) All of the above

54. Metals are good conductors of electricity but they are good conductors of heats also. Which of the following statement explains the reason behind good conduction of heat?

- (a) It is because they contain free electrons and the electrons are free to move in a network of metal atom.
- (b) It is because the atoms of metal are relatively far apart.
- (c) It is because they have very high melting point.
- (d) None of the above.

55. Which of the following is/are the common fissile material?

- I. Uranium – 235.
- II. Plutonium – 239.
- III. Thorium – 232.
- IV. Uranium – 238.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only I and II
- (c) Only I, II and III
- (d) All of the above

56. Which of the following products is/are acidic in nature?

- I. Milk.
- II. Human Blood.
- III. Sea Water.
- IV. Coffee

Choose the correct answer from the codes given below:

- (a) Only IV
- (b) Only I and IV
- (c) Only II and IV
- (d) Only II, III and IV

57. Which of the following is/are the examples of Contact Forces?

- I. Electromagnetic Force.
- II. Gravitational Force.
- III. Frictional Force.
- IV. Air Resistance.
- V. Viscous Force.

Choose the correct answer from the codes given below:

- (a) Only I, II and III
- (b) Only III, IV and V
- (c) Only I, II, IV and V
- (d) Only I, III, IV and V

58. Consider the following statements:

- I. Dietary fibres also known as roughage are mainly provided by plant products in our food.
- II. Whole grains and pulses, potatoes, fresh fruits and vegetables are main sources of roughage.
- III. Roughage also helps our body get rid of undigested food.

IV. Roughage provides many nutrients to our body and is an essential component of our food.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I, II and III
- (c) Only II, III and IV
- (d) All of the above

59. Match List –I with List –II and select the correct answer by using the codes given below.

| LIST –I | LIST –II |
|----------------|----------------|
| A. Acetic acid | I. Ant's sting |
| B. Formic acid | II. Vinegar |
| C. Citric acid | III. Spinach |
| D. Oxalic acid | IV. Orange |

Code:

| | A | B | C | D |
|-----|----|----|-----|-----|
| (a) | I | II | III | IV |
| (b) | II | I | IV | III |
| (c) | II | I | III | IV |
| (d) | I | II | IV | III |

60. Read the following statements carefully:

- I. Each cell in our body contains an acid known as deoxyribonucleic acid or DNA.
- II. Proteins that build part of our cells are made up of amino acids.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

61. Consider the following points:

- I. The melting of ice candy.
- II. Dissolving sugar in water.
- III. The cooking of food.
- IV. The ripening of a mango.
- V. Souring of milk.

Which of the above are examples of physical change?

- (a) Only I and II
- (b) Only I, II and III
- (c) Only I, II, III and IV
- (d) All of the above

62. Consider the following statements about 'Radioactive Decay':

- I. Alpha decay is the one in which a helium nucleus is emitted.
- II. Beta decay is the one in which electrons are emitted.
- III. Gamma Decay is the one in which high energy photons are emitted.

Choose the correct answer from the codes given below:

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

63. Which of the following best describes 'Raman Effect'?

- (a) Change in the direction of light that occurs when a light beam is deflected by an obstacle.
- (b) Change in the wavelength of light that occurs when a light beam is deflected by molecules.

(c) Refraction of Light when a light beam is obstructed by a sharp edged opaque body.

(d) Reflection of light by a transparent body without changing its wavelength.

64. Which of the following is/are the components of Photochemical Smog?

- I. Nitric Oxide.
- II. Ozone.
- III. Formaldehyde.
- IV. Acrolein.
- V. Peroxyacetyl Nitrate (PAN).

Choose the correct answer from the codes given below:

- (a) Only I and V
- (b) Only I, II and V
- (c) Only I, II, III and V
- (d) All of the above

65. Which of the following can be infected by Virus?

- I. Plants.
- II. Animals.
- III. Bacteria.
- IV. Fungi.

Choose the correct answer from the codes given below:

- (a) Only I and II
- (b) Only I, II and III
- (c) Only I, II and IV
- (d) All of the above

66. Read the following statements carefully and choose the right answer from the codes given below:

- I. The red blood cells (RBC) contain a red pigment called haemoglobin which binds with oxygen and transports it to all the parts of the body and ultimately to all the cells.

II. The red blood cells (RBC) also fight against germs that may enter our body.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

67. Consider the following statements with reference to the role of Anti-Oxidants in Human Body:

- I. They prevent damage caused by oxidation of fatty acids and proteins by free radicals.
- II. They restrict the damage to the cell and cellular components from reactive oxygen free radicals.
- III. They provide protection from asthma, diabetes and cancer.

Which of the above statements is/are correct?

- (a) Only II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

68. Which of the following produces an Ultrasonic sound?

- I. Dolphins.
- II. Whales.
- III. Moths.
- IV. Porpoises.
- V. Rats.
- VI. Rhinoceros

Choose the correct answer from the codes given below:

- (a) Only I, II, III and IV
- (b) Only I, III, IV and V
- (c) Only I, II, III, IV and V
- (d) Only I, III, IV, V and VI

69. Consider the following statements about Mitochondria:

- I. The energy required for various chemical activities needed for life is provided by mitochondria.
- II. They have their own DNA and ribosomes.
- III. Mitochondria are storage sack for solid or liquid content.
- IV. They are known as powerhouse of the cell.

Which of the statements given above is/are correct?

- (a) Only I and IV
- (b) Only I, II and III
- (c) Only I, II and IV
- (d) All of the above

70. Which of the following is correct with respect to Pressurized Water Reactor (PWR)?

- (a) Light water is used as coolant.
- (b) Heavy water is used as coolant and moderator.
- (c) Light water is used as coolant and moderator.
- (d) Heavy water is used as coolant.

71. Consider the following statements:

- I. Anaerobic bacteria digest animal waste and produce biogas.
- II. Yeasts are single-celled organisms which respire anaerobically and during this process the yeasts yield alcohol.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

72. Read the following statements carefully and choose the right answer by using the codes given below:

- I. The International Union of Pure and Applied Chemistry (IUPAC) announced addition of four elements.
- II. All these four elements are synthetic in nature.
- III. These four elements complete the 7th row of periodic table of elements.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

73. Which of the following are correct about GPS Aided GEO Augmented Navigation (GAGAN)?

- I. It is jointly established by Indian Space Research Organisation (ISRO) and Airports Authority of India (AAI).
- II. It will provide augmentation service for the GPS over the country, the Bay of Bengal, South East Asia, and Middle East and up to Africa.
- III. It will provide benefits beyond aviation to many other user segments such as intelligent transportation, maritime, highways and railways.

Select the correct answer from the codes given below:

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

74. Consider the following statements about different types of missiles:

- I. Nag is fire and forget type anti-tank guided missile.

- II. All the Agni Series missiles are Inter-Continental Ballistic Missiles (ICBM).
- III. Nirbhay is indigenously developed subsonic cruise missile.

Which of the above statements is/are correct?

- (a) Only III
- (b) Only I and II
- (c) Only I and III
- (d) All of the above

75. Which of the following could be used as a Moderator in a nuclear reactor?

- I. Light Water.
- II. Heavy Water.
- III. Solid Graphite.
- IV. Cadmium.

Choose the correct answer from the codes given below:

- (a) Only I
- (b) Only I and II
- (c) Only I, II and III
- (d) All of the above

76. Consider the following differences between 'Nuclear Fission' and 'Nuclear Fusion':

- I. Fission is the splitting of a larger atom into two or more smaller ones while Fusion is the fusing of two or more lighter atoms into a larger one.
- II. Fission reaction does not normally occur in nature while Fusion occurs naturally.
- III. The energy released during the Fission process is higher than released during Fusion process.

Which of the statements given above is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

77. Which one of the following types of waves is used in a night vision apparatus?

- (a) Radio Waves.
- (b) Infrared Waves.
- (c) X-rays.
- (d) Micro Waves.

Direction for the next three questions

Given below are two statements, labelled as Assertion (A) and Reason (R). Read these statements carefully and answer the question as per the codes given below:

Codes:

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

78. **Assertion (A)** : CO₂, being heavier than oxygen, covers the fire like a blanket when used for extinguishing fire.

Reason (R) : For fires involving electrical equipment and inflammable materials like petrol, carbon dioxide (CO₂) is the best extinguisher.

79. **Assertion (A)** : Though nitrogen gas is available in plenty in the air, plants cannot use it in the manner they can use carbon dioxide.

Reason (R) : The plants need nitrogen in a soluble form.

80. **Assertion (A)** : Infectious agents are spread through air, water, physical contact or vectors.

Reason (R) : Infectious diseases can be prevented by using immunisation.

QUESTIONS ON CURRENT DEVELOPMENTS

81. Read the following statements carefully and choose the correct answer by using the codes give below

- I. Rashtriya Ekta Diwas is observed to commemorate death anniversary of Sardar Patel.
- II. Sardar Patel was the first Deputy Prime Minister and also the first home minister of India.
- III. Sardar Patel had led the Bardoli Satyagraha, 1928.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

82. Consider the following statements with reference to Bharat Net Project:

- I. It aims to provide broadband connectivity to Gram Nyayalayas.
- II. It is executed by the National Informatics Centre (NIC).
- III. It is funded by Universal Service Obligation Fund (USOF),

Which of the above statements is/are correct?

- (a) Only I
- (b) Only III
- (c) Only I and II
- (d) Only II and III

83. Consider the following statements with reference to pesticides:
- Virus can act as pesticide.
 - Ministry of Chemicals and Fertilizers regulates the use of pesticides.
- Which of the above statements is/are incorrect?
- Only I
 - Only II
 - Both I and II
 - Neither I nor II
84. Consider the following statements with reference to Meenakshi Sundareswarar Temple:
- It got the best 'Swachh Iconic Place' status in October, 2017.
 - It is situated on the banks of Vaigai River in Karnataka.
- Which of the above statements is/are correct?
- Only I
 - Only II
 - Both I and II
 - Neither I nor II
85. Consider the following statements with reference to Indian Vulture:
- They are Schedule I species under Wildlife Protection Act, 1972.
 - They are provided with highest protection under Convention on Conservation of Migratory Species of Wild Animals (CMS).
 - Diclofenac drug lead to near extinction of the species in India.
- Which of the above statements is/are correct?
- Only I and II
 - Only I and III
 - Only II and III
 - All of the above
86. Consider the following statements with reference to the Ease of Doing Business Ranking:
- It is published by World Bank.
 - India's ranking is last among BRICS countries.
 - Ease of doing business report for states is prepared by World Bank in collaboration with Finance Ministry.
- Which of the above statements is/are correct?
- Only I
 - Only II
 - Only I and III
 - All of the above
87. Which of the following are the common components of Ready-to-use therapeutic food (RUTF)?
- Peanuts.
 - Oil.
 - Sugar.
 - Mineral supplements.
 - Milk powder.
- Choose the correct answer from the codes given below:
- Only I, II and III
 - Only I, II and IV
 - Only II, III, IV and V
 - All of the above
88. Consider the following statements with reference to Joint Comprehensive Plan of Action (JCPOA):
- It is an international agreement on the nuclear program of Iran.
 - The agreement is between Iran and United Nations.
 - Under this agreement, Iran agreed to eliminate its stockpile of medium-enriched uranium.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

89. Consider the following statements with reference to National Financial Reporting Authority (NFRA):

- I. It is an independent body set up to test financial statements and can take disciplinary action against errant professionals.
- II. Companies Act 2013 provides for the setting up of NFRA.
- III. It will be under the administrative control of Finance Ministry.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

90. *Musa paramjitiana*, a species of banana is found at:

- (a) Western Ghat Region
- (b) Odisha
- (c) Lakshadweep
- (d) Andaman and Nicobar Islands

91. Consider the following statements with reference to International Criminal Court (ICC):

- I. It was established by Rome Statue.
- II. It is the primary judicial branch of the United Nations (UN).
- III. Burundi has left the organization recently.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only III
- (c) Only I and II
- (d) Only I and III

92. Consider the following statements with reference to Global TB Report 2017:

- I. TB is a viral disease.
- II. Rifampicin is the first line drug to treat TB.
- III. Highest number of TB patients are in China.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Only I and II
- (d) Only II and III

93. Which of the following countries will be part of Quadrilateral Dialogue that was recently in news?

- I. USA.
- II. Japan.
- III. China.
- IV. Canada.
- V. Australia.
- VI. India.

Choose the correct answer from the codes given below:

- (a) Only I, II, III and IV
- (b) Only I, II, III and V
- (c) Only I, II, V and VI
- (d) Only II, III, IV and VI

94. Consider the following statements with reference to the Logistics Data Bank:

- I. It uses RFID technology.
- II. It helps in reducing time of cargo movement.
- III. It covers only the country's western logistics corridor.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

95. Which of the following is/are correctly matched?

| LIST –I (Navigation Satellite System) | LIST –II (Country) |
|---|-----------------------|
|---|-----------------------|

- | | |
|------------------------------|------------|
| A. Global Positioning System | I. USA |
| B. Galileo | II. France |
| C. BeiDou | III. Japan |
| D. IRNSS | IV. India |

Choose the correct answer from the codes given below:

- (a) Only I and IV
- (b) Only II and III
- (c) Only I, II and IV
- (d) Only I, III and IV

96. Consider the following statements with reference to the 'Integrity Index':

- I. It aims to increase the transparency in organisations.
- II. All the central government ministries are covered under it.
- III. It is developed by Central Vigilance Commission (CVC).

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

97. Read the following statements carefully and choose the correct answer by using the codes given below:

- I. The turtle sanctuary will be established in Allahabad as a part of National Mission for Clean Ganga (NMCG).
- II. It will be the first turtle sanctuary in the country.
- III. Turtle are categorised as vulnerable species under IUCN Red list.

Which of the above statements is/are correct?

- (a) Only I and II
- (b) Only I and III
- (c) Only II and III
- (d) All of the above

98. Consider the following statements with reference to the fossils of 'Fish-lizards':

- I. They were large reptiles that lived at the same time as dinosaurs.
- II. The fossils have been unearthed in Kutch, Gujarat.

Which of the above statements is/are correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

99. Which of the following is/are correctly matched?

| List – I (Committee headed by) | List – II (Report on) |
|--------------------------------------|--------------------------------------|
| I. Uday Kotak | A. Corporate Governance |
| II. YM Deosthale | B. Public Credit Registry |
| III. V. Kamakoti | C. Artificial Intelligence |
| IV. R. Gandhi | D. Market Infrastructure Institution |

Choose the correct answer from the codes given below:

- (a) Only III
- (b) Only I and II
- (c) Only II and III
- (d) All of the above

100. Consider the following statements with reference to the 'Pet Coke':

- I. It is an end product in cement manufacturing.
- II. It has high sulphur content.

Which of the above statements is/are Correct?

- (a) Only I
- (b) Only II
- (c) Both I and II
- (d) Neither I nor II

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