



# SRI CHAITANYA IAS ACADEMY

## COMPONENT WISE COMPREHENSIVE PRACTICE PAPER

### SCIENCE AND TECHNOLOGY

*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. You have to enter your Roll Number on the Test Booklet in the Box provide alongside.

**DO NOT** write *anything else* on the Test Booklet.

4. This Test Booklet contains **100** items (questions). Each item comprises four responses (answer). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your response **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.
6. All items carry equal marks.
7. After You have completed filling in all your response on the Answer Sheet and the examination has concluded, you should hand over to the Invigilator **only the Answer Sheet**. You are permitted to take away with you the Test Booklet.
8. Sheet for rough work are appended in the Test Booklet at the end.

#### 9. Penalty for Wrong answers:

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

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

1. Which of the following statement(s) is/are correct with regards Zika disease?  
 1) Zika infection is more prevalent in Africa.  
 2) Zika disease is a viral infection  
 3) Zika disease is transmitted by *Aedes aegypti*  
 Choose the correct answer from the codes given below:  
 a) 1 and 2                      b) 2 only  
 c) 2 and 3                      d) 1, 2 and 3
2. Which of the following is/are incorrect statement(s) ?  
 1) Pruthvi – II is a surface to surface ballistic missile  
 2) Agni-V is an intercontinental ballistic missile  
 Choose the correct answer from the codes given below:  
 a) 1 only                      b) 2 only  
 c) Both 1 and 2              d) Neither 1 nor 2
3. Which of the following aircraft carrier has been dismantled recently?  
 a) INS Viraat                  b) INS Vikramaditya  
 c) INS Sindhudhwaj        d) INS Sindhurakshak
4. Consider the following statements with regards Immunisation:  
 1) Immunisation in India stands at nearly 65%.  
 2) Operation Indradanush has been initiated to improve immunization among children and pregnant women.  
 Which of the above statements is/are incorrect?  
 a) 1 only                      b) 2 only  
 c) Both 1 and 2              d) Neither 1 nor 2
5. Which state in India has launched India's first Human Papillomavirus (HPV) vaccination programme?  
 a) Delhi                      b) Kerala  
 c) Rajasthan                d) Gujarat
6. Catalytic converters are fitted into automobiles to reduce emission of harmful gases. Catalytic converters change unburnt hydrocarbons into:  
 a) carbon dioxide and water  
 b) carbon mono oxide  
 c) methane  
 d) carbon dioxide and methane
7. Which of the following pair(s) is/are correctly matched?  
 1) Akash - Surface to Air missile  
 2) Astra - Air to Air missile  
 3) Brahmos - Sub-sonic cruise missile  
 4) Nirbhay - Super-sonic cruise missile  
 a) 1 and 2                      b) 1, 2 and 3  
 c) 1, 3 and 4                d) 1, 2, 3 and 4
8. DNA fingerprinting refers to:  
 a) Techniques used for identification of fingerprints of individuals  
 b) Molecular analysis of profiles of DNA samples  
 c) Analysis of DNA samples using imprinting devices  
 d) Techniques used for molecular analysis of different specimens of DNA
9. Consider the following statements:  
 1) The bones consists of eighty percent solid matter and twenty percent water.  
 2) In old age, the proportion of lime decreases and bones become brittle and break easily.  
 3) Solid matter in the bone is made mainly of cartilage  
 Select the correct answer from the codes given below:  
 a) 1 and 2                      b) 1 and 3  
 c) 1, 2 and 3                d) 2 only
10. Progesterone is a hormone necessary for the maintenance of pregnancy. It is produced from  
 a) Pituitary                    b) Ovary  
 c) Uterus                      d) Kidney
11. Consider the following statements with regard to chromosome of bacteria:  
 1) Bacteria always have a single chromosome.  
 2) Bacterial chromosome is circular.  
 Which of the above statement(s) is/are correct?  
 a) 1 only                      b) 2 only  
 c) Both 1 and 2              d) Neither 1 nor 2
12. The vitamin which is water soluble and generally excreted in urine is  
 a) vitamin A                  b) Vitamin C

- c) Vitamin D                      d) Vitamin E
13. When light passes through a prism, the colour which deviates the least is:  
a) red                                  b) blue  
c) violet                                d) green
14. Which of the following about swine flu is correct?  
a) It is a respiratory disease caused by virus that is endemic in pigs.  
b) The symptoms are the same as the seasonal flu - cough, sore throat, and body aches.  
c) Swine flu is transmitted from person to person by inhalation or ingestion of droplets containing virus from people sneezing or coughing; it is not transmitted by eating cooked pork products.  
d) All the above
15. Which of the following optical phenomenon is used in cinematography or movie projectors?  
a) accommodation  
b) persistence of vision  
c) interference  
d) short sightedness
16. Which phenomenon is responsible for the twinkling of stars?  
a) Atmosphere reflection  
b) Atmosphere refraction  
c) Reflection  
d) Total internal reflection
17. Consider the following statements.  
1) IRNSS is an independent regional navigation satellite system being developed by India.  
2) IRNSS will provide Standard Positioning Service (SPS) only.  
3) IRNSS satellites revolve round the earth at a height of about 18,000 km from the earth's surface.  
Which of the above statement(s) is/are correct?  
a) 1 only                                  b) 1 and 3  
c) 2 and 3                                d) 1, 2 and 3
18. With reference to layers of ionosphere, consider the following statements :
- 1) During day time, D layer's density is less compared to E and F layer.  
2) High-frequency radio waves are reflected from the D layers.  
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
19. Consider the following statements about GSLV Mk III  
1) It can carry up to 4500 to 5000 kg satellites.  
2) It is a four stage vehicle.  
3) It will use cryogenic engine and not solid and liquid propellants.  
Which of the above statement(s) is/are correct?  
a) 1 only                                  b) 3 only  
c) 2 and 3                                d) 1, 2 and 3
20. What is the purpose of India's Mars Orbiter mission?  
a) Study Mars' surface  
b) Study Mars' atmosphere  
c) Study Mars' mineral composition  
d) All the above
21. What is Kessler Syndrome ?  
a) A disease where humans talk while sleeping  
b) A rare viral disease causing respiratory problems  
c) A problem found in space launch vehicles  
d) Proliferation of space debris in low earth orbit
22. What is Japanese Encephalitis ?  
a) A viral disease which affects the brain  
b) A fungal disease which affects kidneys  
c) A bacterial infection affecting elder people  
d) An allergic reaction to dust and pollens
23. Which of the following is not a life-style disease?  
a) Type 2 Diabetes  
b) Cancer  
c) Malaria  
d) Heart disease

24. Which of the following statement(s) is/are incorrect?
- 1) Cryonics is the preservation of humans and animals.
  - 2) Cryotronics is the practical application of cryoelectronics.
  - 3) Liquid hydrogen is used as a cryogenic fuel.
  - 4) Cryoelectronics is the field of research regarding super conductivity at low temperature.
- Choose the correct answer from the codes given below:
- a) 1, 2 and 3
  - b) 2 and 3
  - c) 1 and 4
  - d) None of the above
25. Which of the following is/are true about LiDAR?
- 1) LiDAR stands for Light Detection and Ranging.
  - 2) It uses laser pulses to determine distant objects.
  - 3) In Military, it is also known as Laser Detection and Ranging.
- Choose the correct answer from the codes given below:
- a) 1 and 2
  - b) 2 and 3
  - c) 1 and 3
  - d) 1, 2 and 3
26. Which of the statement(s) is/are true about MAGLEV Technology?
- 1) It is Magnetic Suspension Technology to keep objects suspended with no support.
  - 2) This technology is used in planes and ships.
- a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2
27. Consider the following :
- 1) Rinderpest
  - 2) Small Pox
  - 3) Polio
- Which of the above diseases have been completely eradicated from the Earth?
- a) 1 and 2
  - b) 2 and 3
  - c) 1 and 3
  - d) 1, 2 and 3
28. Which of the following statements is incorrect?
- a) Rough surfaces are better radiators than smooth surfaces
  - b) Highly polished mirror surfaces are very good radiators
  - c) Black surfaces are better absorbers than white ones
  - d) Black surfaces are better radiators than white ones
29. The process of heat transfer in which heat is transferred with actual migration of medium particles is known as
- a) Conduction
  - b) Convection
  - c) Radiation
  - d) Reflection
30. Geo-stationary satellite
- a) revolves about the polar axis
  - b) has a time period less than that of the earth's satellite
  - c) moves faster than a near earth satellite
  - d) is stationary in the space
31. Choose the wrong statement from the following.
- a) Small droplets of a liquid are spherical due to surface tension
  - b) Oil rises through the wick due to capillarity
  - c) In drinking the cold drinks through a straw, we use the phenomenon of capillarity
  - d) Gum is used to stick two surfaces. In this process we use the property of Adhesion
32. Transverse waves can travel through
- a) Air, water and a copper wire
  - b) Air and copper wire but not through water
  - c) A copper wire but not through air and water
  - d) Water but not through air and a copper wire
33. The velocity of sound in air is not affected by change in
- a) Moisture content of air
  - b) Temperature of air
  - c) Atmospheric pressure
  - d) Composition of air
34. Mirage is due to:
- a) unequal heating of different parts of the atmosphere
  - b) magnetic disturbances in the atmosphere
  - c) depletion of ozone layer in the atmosphere
  - d) equal heating of different parts of the atmosphere

35. Rectifiers are used to convert
- Direct current to Alternating current
  - Alternating current to Direct current
  - high voltage to low voltage
  - low voltage to high voltage
36. Light Emitting Diodes (LED) are used in fancy electronic devices such as toys. They emit
- X-rays
  - ultraviolet light
  - visible light
  - radio waves
37. Which of the following pair(s) is/are correctly matched?
- | Nuclear Power Plant | Location      |
|---------------------|---------------|
| 1) Tarapur          | - Maharashtra |
| 2) Kakrapar         | - Rajasthan   |
| 3) Narora           | - Uttarakhand |
| 4) Kaiga            | - Karnataka   |
- Choose the correct answer from the codes given below:
- 1 and 2
  - 1, 3 and 4
  - 1 and 4
  - 1, 2 and 4
38. Consider the following statements:
- Black foot disease is caused by excess of fluoride in water
  - Snow blindness is caused due to Ultraviolet radiations
- Which of the above statement(s) is/are correct?
- 1 only
  - 2 only
  - Both 1 and 2
  - Neither 1 nor 2
39. Rabies has been made as the priority disease for control under the 12th Five Year Plan. Rabies is caused by the bite of:
- Dogs
  - Monkeys
  - Cats
- Choose the correct answer from the codes given below:
- 1 and 3
  - 2 and 3
  - 1, 2 and 3
  - 1 and 2
40. An allotrope of carbon, graphite is a convenient choice to act as a neutron-moderator in a nuclear reactor. What can be a potential reason for this:
- The carbon atom has a light nucleus that can absorb a lot of energy from fast neutrons, slowing them down effectively
  - Carbon is easily available as a solid.
  - It is light and inexpensive to handle.
- Choose the correct answer from the codes given below:
- 1 only
  - 3 only
  - 1, 2 and 3
  - 1 and 2
41. An example of non-ionizing radiations is
- Ultra Violet radiation
  - X rays
  - alpha rays
  - Beta rays
42. Consider the following statements:
- In living organisms, there are two types of cellular organisations.
  - Cells with a defined nucleus are known as Eukaryotes.
  - Blue Cell algae have prokaryote cells.
- Which of the above statements are correct?
- 1 and 3
  - 2 and 3
  - 1 and 2
  - 1, 2 and 3
43. Consider the following statements:
- White blood cells help in clotting of blood.
  - Platelets fight against diseases.
  - Lymph transports nutrients to the heart.
- Which of the above statements are incorrect?
- 1 and 2
  - 2 and 3
  - 1 and 3
  - 1, 2 and 3
44. Consider the following statements:
- The Central Nervous System includes the brain and the spinal cord.
  - The peripheral nervous system consists of all body nerves.
  - Not all animals have a highly specialized nervous system.
- Choose the correct answer from the codes given below:
- 1 and 2
  - 2 and 3
  - 1 only
  - 1, 2 and 3



- a) 1 only                      b) 2 only  
c) 1 and 2                      d) Neither 1 nor 2
55. Consider the following statements:  
1) All mammals have internal fertilization.  
2) All aquatic animals have external fertilization.  
3) Animals that lay eggs are oviparous while the one that give birth are viviparous.  
Choose the correct answer from the codes given below:  
a) 2 and 3                      b) 3 only  
c) 2 only                      d) None of the above
56. Consider the following statements regarding Vitamins :  
1) Vitamin C keeps our skin and eyes healthy.  
2) Vitamin D fights against diseases  
3) Vitamin A helps in calcium absorption, thereby strengthening bones and teeth.  
Choose the correct answer from the codes given below:  
a) 2 and 3                      b) 2 only  
c) 1, 2 and 3                      d) None of the above
57. Consider the following statements:  
1) All vertebrates have paired kidneys.  
2) Excretion is not the primary function of kidneys.  
3) Kidneys regulate body fluids and remove waste.  
Which of the above statements is/are correct?  
a) 1 and 2                      b) 2 and 3  
c) 3 only                      d) 1, 2 and 3
58. Consider the following statements:  
1) Some organisms have a symbiotic relationship  
2) Algae and fungus live together always.  
3) Lichens are both algae and fungus.  
Choose the correct answer from the codes given below:  
a) 1 and 2                      b) 2 only  
c) 1, 2 and 3                      d) None of the above
59. Consider the following statements:  
1) Making of curd and bread is done by the bacterium lacto bacillus.
- 2) Yeast is used as a commercial product for producing alcohol and wine.  
3) The process of conversion of sugar into alcohol is called fermentation.  
Which of the above statements is/are incorrect?  
a) 1 and 2                      b) 3 only  
c) 2 only                      d) None of the above
60. Consider the following statements:  
1) Female Anopheles mosquito acts as a carrier for dengue virus.  
2) Female Aedes is carrier parasite of malaria.  
3) Bacillus Anthracis causes anthrax diseases.  
Choose the correct answer from the codes given below:  
a) 1 and 2                      b) 3 only  
c) 2 and 3                      d) None of the above
61. Consider the following statements:  
1) Ethylene gas triggers the ripening of fruits.  
2) Polysaccharides break down to smaller sugars to give fruits the sweet taste.  
Which of the above statements is/are correct?  
a) 1 only                      b) 2 only  
c) Both 1 and 2                      d) Neither 1 nor 2
62. Consider the following statements regarding Artificial Rain :  
1) Artificial rain is produced by a process called cloud seeding.  
2) Silver dioxide is used for producing artificial rain.  
3) It can be produced from a cloudless sky.  
Choose the correct answer from the codes given below:  
a) 1 and 2                      b) 2 only  
c) 3 only                      d) 1 and 3
63. Consider the following statements:  
1) Wool is made up of a protein called keratin.  
2) It is a bad conductor of heat and does not allow heat to escape.  
Choose the correct answer from the codes given below:  
a) 1 only                      b) 2 only  
c) Both 1 and 2                      d) Neither 1 nor 2

64. Salinization occurs when the irrigation water accumulated in the soil evaporates, leaving behind salts and minerals. What are the effects of salinization on the irrigated land?
- It greatly increases the crop production
  - It makes some soils impermeable
  - It raises the water table
  - It fills the air spaces in the soil with water
65. Consider the following :
- The boiling point of a liquid is affected by addition of soluble solid.
  - The boiling point of a liquid is affected by external vapour pressure.
  - The boiling point is a fixed characteristic of a liquid and does not vary.
- Which of the above statements is/are correct?
- 1 only
  - 1 and 2
  - 2 only
  - 3 only
66. In a barometer, mercury is preferred over water because
- Mercury is a good conductor of heat
  - Mercury is shining and therefore its level can be read easily
  - Mercury is available in pure form
  - Mercury has high density and low vapour pressure
67. Match List-I with List-II and select the correct answer using the codes given below the Lists:
- | List-I                 | List-II             |
|------------------------|---------------------|
| A) Sodium carbonate    | 1) Photography      |
| B) Sodium bicarbonate  | 2) Washing          |
| C) Sodium peroxide     | 3) Baking           |
| D) Sodium thiosulphate | 4) Source of Oxygen |
- |    | A | B | C | D |    | A | B | C | D |
|----|---|---|---|---|----|---|---|---|---|
| a) | 2 | 3 | 1 | 4 | b) | 3 | 2 | 4 | 1 |
| c) | 2 | 3 | 4 | 1 | d) | 3 | 2 | 1 | 4 |
68. Photographic plates are covered with black paper because:
- the cellulose acetate of the paper must remain fresh.
  - sunlight is easily absorbed by black paper and it helps develop the film.
  - the silver bromide present on the plate is very sensitive to light and the black paper prevent contact with light.
  - the conversion of silver bromide to metallic silver is essential
69. The Gadanki Ionospheric Radar Interferometer (GIRI) has been recently established in which city of India?
- Kannur
  - Tirupati
  - Thanjavur
  - Thiruvananthapuram
70. Bedaquiline, a newly launched vaccine by the Health Ministry, is related to the treatment of which disease?
- Zika
  - Tuberculosis
  - Ebola
  - Swine flu
71. Fish can survive inside a frozen lake because:
- Fish are cold-blooded animals
  - Fish can breathe when embedded in ice
  - Fish move to the bottom of the lake where the water is at 40C and hence cannot freeze
  - Fish move to the top of the lake where the water is at 40C and hence cannot freeze
72. Consider the following statements with regards Astra:
- Astra is an indigenously developed air-to-air missile.
  - It is 'beyond visual range' missile.
  - It is an all weather missile.
- Which of above statements is/are correct?
- 1 only
  - 1 and 2
  - 2 and 3
  - 1, 2 and 3
73. Why does a liquid drop assuming a spherical shape?
- because a sphere has the least surface for a given volume.
  - because a sphere has the largest surface for a given volume.
  - because intermolecular forces are strong in liquids.
  - because intermolecular forces are weak in liquids.
74. A man carrying load on his back bends forwards because of one of the following reasons:

- a) to adjust the centre of gravity of the system such that the vertical line through the centre of gravity passes within the base  
 b) the man feels lighter because of greater reaction  
 c) to prevent the load from slipping over and falling down  
 d) to keep the centre of gravity of the system outside the body
75. Match List I with List II and select the correct answer from the codes given below:
- |                        |          |          |          |                |          |          |          |
|------------------------|----------|----------|----------|----------------|----------|----------|----------|
| List I                 |          |          |          | List II        |          |          |          |
| A) Nitrolime           |          |          |          | 1) Rocket fuel |          |          |          |
| B) Sodium thiosulphate |          |          |          | 2) Sodium      |          |          |          |
| C) Liquid ammonia      |          |          |          | 3) Photography |          |          |          |
| D) Hydrazine           |          |          |          | 4) Fertilizer  |          |          |          |
| <b>A</b>               | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>       | <b>B</b> | <b>C</b> | <b>D</b> |
| a) 3                   | 2        | 4        | 1        | b) 1           | 4        | 3        | 2        |
| c) 4                   | 3        | 2        | 1        | d) 3           | 4        | 1        | 2        |
76. Which of the changes occurs when a substance is converted from liquid to gas at the normal boiling point?
- Potential energy of the system increases
  - The distance between molecules increases
  - The average kinetic energy of the molecules increases.
- Choose the correct answer from the codes given below:
- |            |            |
|------------|------------|
| a) 1 only  | b) 2 only  |
| c) 1 and 2 | d) 2 and 3 |
77. Consider the following :
- Most metals are good conductors of heat
  - Most metals are poor conductors of heat
  - Most metals are good conductors of electricity
  - Most metals are poor conductors of electricity
- Choose the correct answer from the codes given below:
- |            |
|------------|
| a) 1 and 3 |
| b) 1 and 4 |
| c) 2 and 3 |
| d) 2 and 4 |
78. What is the end product of alcoholic fermentation?
- |            |                   |
|------------|-------------------|
| 1) Ethanol | 2) Carbon dioxide |
| 3) Oxygen  | 4) Water          |
- Choose the correct answer from the codes given below:
- |            |               |
|------------|---------------|
| a) 1 and 2 | b) 2 and 3    |
| c) 3 and 4 | d) 1, 2 and 3 |
79. Match List I with List II and select the correct answer from the codes given below:
- |                  |          |          |          |             |          |          |          |
|------------------|----------|----------|----------|-------------|----------|----------|----------|
| List I           |          |          |          | List II     |          |          |          |
| A) Malaria       |          |          |          | 1) Fungi    |          |          |          |
| B) Poliomyelites |          |          |          | 2) Protozoa |          |          |          |
| C) Diarrhoea     |          |          |          | 3) Virus    |          |          |          |
| D) Ringworm      |          |          |          | 4) Bacteria |          |          |          |
| <b>A</b>         | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>    | <b>B</b> | <b>C</b> | <b>D</b> |
| a) 3             | 2        | 4        | 1        | b) 2        | 3        | 4        | 1        |
| c) 2             | 3        | 1        | 4        | d) 2        | 1        | 4        | 3        |
80. Which of the following statements is correct?
- Plants carry on photosynthesis all the time
  - Plants carry on photosynthesis during the night and respiration during the day.
  - Plants carry on photosynthesis during the day and respiration all the time.
  - Plants carry on respiration and photosynthesis alternately all the time.
81. Match List I with List II and select the correct answer from the codes given below:
- |                  |          |          |          |  |          |          |          |
|------------------|----------|----------|----------|--|----------|----------|----------|
| List I           |          |          |          | List II  |          |          |          |
| A) Carbohydrates |          |          |          | 1) It constitutes oil, ghee, butter and oilseeds     |          |          |          |
| B) Fats          |          |          |          | 2) The basic substance of every cell in the body     |          |          |          |
| C) Proteins      |          |          |          | 3) Excellent source of energy; it constitutes starch |          |          |          |
| D) Amino acids   |          |          |          | 4) End product of protein hydrolysis                 |          |          |          |
| <b>A</b>         | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>   | <b>B</b> | <b>C</b> | <b>D</b> |
| a) 3             | 1        | 2        | 4        | b) 1   | 2        | 3        | 4        |
| c) 2             | 1        | 3        | 4        | d) 2   | 3        | 1        | 4        |

82. During elections, a permanent, chemical mark is put at the base of the nail of index finger while exercising your franchise. This mark is not seen after two months or so because
- it is worn out by constant washing with soap and water.
  - constant contact of the hands with hard water corrodes the mark
  - the formation of new nail, forcibly removes the old one.
  - it is gradually oxidised by tannin and caffeine that we ingest in tea and coffee respectively.
83. India has recently signed to purchase Apache and Chinook helicopters. These helicopters are related to which of the following countries?
- Russia
  - France
  - USA
  - Britain
84. Consider the following:
- X-rays – Medical purposes
  - Micro waves – Telecommunications
  - Visible light – Traffic signals
- Which of the above statements is/are correctly matched?
- 1 only
  - 1 and 2
  - 3 only
  - 1, 2 and 3
85. Which of the following is not a function of the kidney?
- Removes nitrogenous metabolic wastes.
  - Removes bile pigments.
  - Removes excess salts and vitamins.
  - Limits the water removal
86. Consider the following statements about sweat:
- A watery secretion produced by sweat glands.
  - It helps to eliminate waste.
  - Sweat removes large quantities of heat from the body surface.
- Select the correct answer from the codes given below.
- 1 and 2
  - 2 and 3
  - 1, 2 and 3
  - 1 and 3
87. Match List - I with List - II and select the correct answer using the codes given below the lists:
- | List - I     |          |          |          | List - II            |          |          |          |
|--------------|----------|----------|----------|----------------------|----------|----------|----------|
| A) Vitamin E |          |          |          | 1) Scurvy            |          |          |          |
| B) Vitamin K |          |          |          | 2) Rickets           |          |          |          |
| C) Vitamin C |          |          |          | 3) Sterility         |          |          |          |
| D) Vitamin D |          |          |          | 4) Blood Coagulation |          |          |          |
| <b>A</b>     | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>             | <b>B</b> | <b>C</b> | <b>D</b> |
| a) 1         | 3        | 4        | 2        | b) 3                 | 4        | 1        | 2        |
| c) 4         | 3        | 1        | 2        | d) 2                 | 1        | 3        | 4        |
88. Among the following types of water, which will have highest spectral reflectance in visible band?
- Clear water
  - Clay filled/Suspended water
  - Algae mixed with water
  - Silt and Algae mixed water
89. Most fish do not sink in water because of:
- Swim bladder
  - Air bladder
  - Air sacs
  - Air in spongy bones
- Select the correct answer from the codes given below :
- 1 and 2
  - 2 and 3
  - 3 and 4
  - 1, 2, 3 and 4
90. By the year 2022, Indian government has set a new target of Solar Power generation of:
- 4 GW
  - 60 GW
  - 75 GW
  - 100 GW
91. Match List – I with List – II and select the correct answer from the codes given below:
- | List – I (Causes)           |          |          |          | List - II (Effects)                       |          |          |          |
|-----------------------------|----------|----------|----------|---|----------|----------|----------|
| A) Soil organisms           |          |          |          | 1) Algal bloom                            |          |          |          |
| B) Phosphorous assimilation |          |          |          | 2) Chronic obstructive pulmonary diseases |          |          |          |
| C) Water pollution          |          |          |          | 3) Decomposition                          |          |          |          |
| D) Air pollution            |          |          |          | 4) Complexing agent                       |          |          |          |
| <b>A</b>                    | <b>B</b> | <b>C</b> | <b>D</b> | <b>A</b>                                  | <b>B</b> | <b>C</b> | <b>D</b> |
| a) 1                        | 2        | 3        | 4        | b) 3                                      | 2        | 4        | 1        |
| c) 2                        | 3        | 4        | 1        | d) 4                                      | 2        | 1        | 3        |

92. Consider the following statements:
- 1) Circumpolar vortex acts as a reaction chamber
  - 2) Polar Stratospheric Clouds (PSCs) are formed within the vortex
  - 3) There is very low temperature inside the vortex
- Choose the correct answer from the codes given below:
- a) 1 only
  - b) 1 and 2
  - c) 2 and 3
  - d) 1, 2 and 3
93. In certain diseases antibiotics are administered. The objective is to:
- a) stimulate production of white blood cells for fighting the disease
  - b) stimulate the production of antibodies
  - c) inhibit the growth of bacteria
  - d) produce antigens to fight bacteria
94. Freshly passed urine has hardly any smell but when it is allowed to stand, it develops a strong ammoniacal odour owing to:
- a) conversion of urea to ammonia via urea cycle
  - b) conversion of urea to ammonia by bacteria
  - c) conversion of uric acid and urea to ammonia
  - d) conversion of uric acid, urea and creatinine to ammonia
95. Consider the following statements with respect to rate of evaporation?
- 1) Increases with rise in temperature of liquid.
  - 2) Increases with decrease of atmospheric pressure.
  - 3) Increases with the decrease in moisture in air.
- Choose the correct answer from the codes given below:
- a) 1 and 2
  - b) 2 and 3
  - c) 1 and 3
  - d) 1, 2 and 3
96. Why does a piece of bread when chewed tastes sweet?
- a) The sugar content of bread is drawn out
  - b) The taste buds are stimulated by chewing
  - c) Saliva's action converts starch into maltose
  - d) It does not taste sweet; it is just an illusion
97. Leather shoes are often covered by patches of a greenish fluffy mass during the rainy season, if unattended for sometime. This is due to the growth of a:
- a) bacterium
  - b) blue-green algae
  - c) green algae
  - d) fungus
98. Which of the following is/are correct with regards REDD+?
- 1) The objective of mitigating climate change through enhanced forest management in both developed and developing countries.
  - 2) India is implementing the UN REDD+ programme.
- Choose the correct answer using the codes given below:
- a) 1 only
  - b) 2 only
  - c) Both 1 and 2
  - d) Neither 1 nor 2
99. If waste materials contaminate the source of drinking water, which of the following diseases will spread?
- a) Scurvy
  - b) Typhoid
  - c) Malaria
  - d) Anaemia
100. Which of the animal(s) is/are active during night?
- 1) Owl
  - 2) Rat
  - 3) Cockroach
- Choose the correct answer from the codes given below:
- a) 1 and 2
  - b) 2 and 3
  - c) 1 and 3
  - d) 1, 2 and 3