

Tsi10S

Tenkasi District

Common Half Yearly Examination - 2023



04-01-2024

Standard 10

SCIENCE

Part - I

Marks: 75

Time: 3.00 Hours

12x1=12

## I. Choose the correct answer:

- 1) If the Earth shrinks to 50% of its real radius its mass remaining the same, the weight of a body on the earth will .....
  - a) decrease by 50%
  - b) increase by 50%
  - c) decrease by 25%
  - d) increase by 300%
- 2) The eye defect 'presbyopia' can be corrected by .....
  - a) convex lens
  - b) Concave lens
  - c) bifocal lenses
  - d) convex mirror
- 3) The SI unit of electrical resistivity is .....
  - a)  $\Omega$
  - b)  $\Omega m^{-1}$
  - c)  $\Omega m$
  - d)  $\Omega m^{-2}$
- 4) ..... is used in the treatment of Skin diseases.
  - a) Radio phosphorous - 32
  - b) Radio iron - 59
  - c) Radio Iodine - 131
  - d) Radio Sodium - 24
- 5) Ozone is a ..... molecule
  - a) heterotriatomic
  - b) homotriatomic
  - c) polyatomic
  - d) diatomic
- 6) Deliquescence is due to .....
  - a) strong affinity to water
  - b) Less affinity to water
  - c) strong hatred to water
  - d) inertness to water
- 7) TFM is soaps represents ..... content in soap
  - a) mineral
  - b) vitamin
  - c) fatty acid
  - d) carbohydrate
- 8) The xylem and phloem arranged side by side same radius is called .....
  - a) radial
  - b) amphivasal
  - c) conjoint
  - d) None of these
- 9) Which one of the given blood group is called universal Recipient.
  - a) A
  - b) B
  - c) AB
  - d) O
- 10) Estrogen is secreted by .....
  - a) Anterior pituitary
  - b) primary follicle
  - c) Graffian follicle
  - d) Corpus Luteum
- 11) Where does alcohol effect immediately after drinking
  - a) Eyes
  - b) Auditory region
  - c) Liver
  - d) Central nervous system
- 12) Global warming will cause .....
  - a) raise in level of oceans
  - b) melting of glaciers
  - c) sinking of islands
  - d) all of these.

## Part - II

Answer any seven question. Q.No. 22 is compulsory.

7x2=14

- 13) Distinguish between ideal gas and real gas.
- 14) Why is tungsten metal used in bulbs, but not in fuse wires?
- 15) State two conditions necessary for rusting of iron.
- 16) Differentiate reversible and irreversible reactions.
- 17) Write the uses of Ethanoic acid.
- 18) Identify whether the statement are True or False. Correct the false statement
  - a) The Vas deferense serves to transport the ovam
  - b) The cerebral hemispheres of rabbit are connected by band of nerve tissues called corpora quadrigemina
- 19) Draw the structure of Adrenal gland and label its parts.
- 20) State the applications of DNA finger printing technique.
- 21) What is stage?
- 22) A sound wave has frequency of 200 Hz and a speed of 400 ms<sup>-1</sup> in a medium. Find the wave Length of the sound wave.

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## Part - III

## III. Answer any seven question. Q.No. 32 is compulsory.

7x4=28

- 23) a) Classify the types of force based on their application.  
b) State Snell's Law
- 24) a) State the law of volume  
b) Match the following
- | Column I                | Column II |
|-------------------------|-----------|
| 1) Electric current     | a) Volt   |
| 2) Potential difference | b) Watt   |
| 3) Electrical power     | c) ampere |
| 4) Electrical energy    | d) joule  |
- 25) a) Mention two cases in which there is no doppler effect in sound.  
b) Define one roentgen
- 26) a) Differentiate atoms and molecules.  
b) Along with cryolite and alumina, another substance is added to the electrolyte mixture. Name the substance and give one reason for the addition
- 27) a) The aquatic animals live more in cold region. Why?  
b) What is called TFM?
- 28) a) Write the reaction for photosynthesis  
b) Why are the rings of cartilages found in trachea of rabbit?
- 29) a) Why mature RBC in mammals do not have cell organelles?  
b) What is Corpora quadrigemina? Name the function associated with it?
- 30) a) Define triple fusion  
b) Draw the structure of a chromosome and label any two parts.
- 31) a) Define Ethnobotany  
b) Differentiate between Outbreeding and inbreeding
- 32) The hydroxide ion concentration of a solution is  $1 \times 10^{-9}$  M. What is the pH of the solution.

## Part - IV

## IV. Answer all the questions.

- 33) a) State Newton's second law  
b) Draw a ray diagram to show the image formed by a convex lens when the object is placed at 2F  
c) What is meant by electric current? Which instrument is used to measure the electric current?

(OR)

- a) State two conditions necessary for hearing an echo?  
b) Compare the properties of alpha, beta and gamma radiations.
- 34) a) Give the salient features of modern atomic theory [any three points]  
b) 'A' is silvery white metal. 'A' combines with  $O_2$  to form 'B' at  $800^\circ C$  the alloy of 'A' is used in making the aircraft. Find 'A' and 'B'  
c) Define - Solvability

(OR)

- a) Why does the reaction rate of a reaction increase on raising the temperature?  
b) Differentiate soaps and detergents.
- 35) a) How does the light dependent reaction differ from the light independent reaction?  
b) Give the importance of transpiration  
c) Why are thyroid hormones referred as personality hormone?

(OR)

- a) Define reflex arc.  
b) What precautions can be taken for preventing heart diseases?  
c) Enumerate the importance of forest?

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