

Tsi10S

Tenkasi District
Common Half Yearly Examination - 2023



Time: 3.00 Hours

Standard 10
SCIENCE
Part - I

Marks: 75

I. Choose the correct answer:**12x1=12**

- 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) Ω b) Ωm^{-1} c) Ωm d) Ωm^{-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 in 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**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⁻¹ 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

- 1) Electric current
2) Potential difference
3) Electrical power
4) Electrical energy

Column II

- a) Volt
b) Watt
c) ampere
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 1×10^{-9} M. What is the pH of the solution.

Part - IV

IV. Answer all the questions.

3x7=21

- 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 - Solvility
- (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?