



Name: _____

**SST PUBLIC SCHOOL,
RASHIDABAD
ENTRY TEST, 2023**

TEMP_ID: _____

Subject: Biology Maximum Marks: 25 Time: 30 min Class: HSSC I

- **Answer all the short questions on the answer sheet provided.**
- Do not write on the Question Paper.
- Each MCQ'S carries 01 mark.
- Each short question carries 03 marks.

ATTEMPT ALL QUESTIONS

SECTION-A (Marks 10)

Q. 1 Encircle the correct option.

- (1) How many bronchi are there in the air passageway
A. One B. Two C.Many D. None
- (2) Which organ is responsible for filtering the blood
A. kidney B. lungs C. Brain D. Intestine
- (3) What type of blood vessels surrounds the alveoli
A. Artery B. Arteriole C. Vein D. Capillary
- (4) The tube between kidney and urinary bladder is the
A. Ureter B. Renal tube C. Nephron D. Urethra
- (5) Find the ball and socket joint
A. Joint in finger B. Joint in neck C. Joint in elbow D. Joint at pelvic girdle.
- (6) Growing an entire new plant from part of the original plant is called
A. Budding B. Fragmentation C. Vegetative propagation D. Regeneration
- (7) The hormone Thyroxin produce by
A. Pituitary gland B. Thyroid gland C. Adrenal gland D. Pancreas
- (8) The disorder in which there is an accumulation of uric acid in joints
A. Gout B. Osteoprosis C. Arthritis D. Muscular atrophy
- (9) Organism in the ecosystem that are responsible for the recycling of plant and animals waste are
A. Producers B. Consumers C. Decomposers D. Competitors
- (10) Mendel choose the plant for inheritance of characteristics

A. Potato plant

B. Alem sativa

C. Pisum sativum

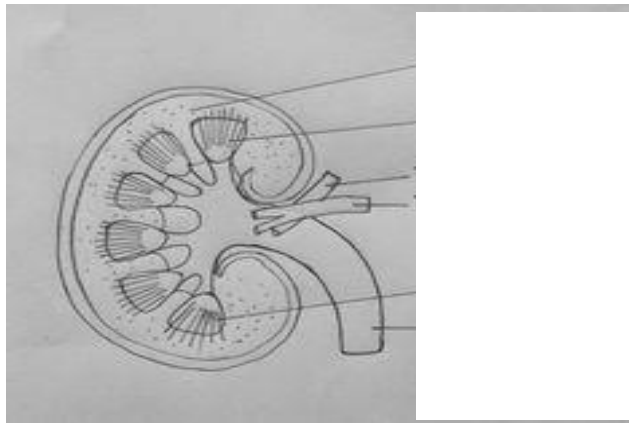
D. Gul mohar

SECTION-B (Marks 15)

Q. 2 Give short answers of the following questions.

(5×3 = 15)

- i. What are the Homozygous and Heterozygous genotypes ?
- ii. Differentiate between diabetes incipidus and diabetes mellitus?
- iii. Label the kidney in the following diagram



- iv Describe the DNA recombinant technology.
- V Define the PCR , endocrine gland, and chromosome ?



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TEMP_ID: _____

Subject: Chemistry Maximum Marks: 25 Time: 30 min Class: HSSC I

- **Answer all the short questions on the answer sheet provided.**
- Do not write on the Question Paper.
- Each MCQ'S carries 01mark.
- Each short question carries 03 marks.

ATTEMPT ALL QUESTIONS

SECTION-A (Marks -10)

Q. 1 Encircle the correct option.

- (1) The boiling point trend of halogen family _____ down the group
A. decreases B. increases C. Remains same D. Both a and b
- (2) Nature of I₂ crystal is
A. Ionic B. Molecular C. Covalent D. Metallic
- (3) Which of the following compound is a pure:
A. Ethanol B. Petrol C. Steel D. Tap water
- (4) "Strato" means:
A. turning B. changing C. spread out D. Middle
- (5) Charge on electron was discovered by
A. Milikan B. Crook C. Neil Bohr D. Rutherford
- (6) The number of Hydrogen atoms in cyclopropane are
A. 2 B. 4 C. 6 D. 8
- (7) The bonding in CO₂ is
A. Ionic B. Macromolecular C. Covalent D. Metallic
- (8) Which of the following is a impure:
A. Ethanol B. Petrol C. Iron D. Tap water
- (9) Sand is a form of
A. metal B. Silicon dioxide C. Non metal D. Silicon
- (10) Atomic model is represented by
A. Milikan B. Crook C. Neil Bohr D. Mosley

SECTION-B (Marks 15)

Q. 2 Attempt all questions. Each question carries three marks.

(5×3 = 15)

- i. Na_2O is more basic than MgO . Give two reasons.
- ii. What is TMS? Describe the role of TMS in NMR?
- iii. What is coordination number in complex compound?
- iv. Justify fluorine has the least bond enthalpy among the halogen.
- v. Calculate the number of +ve and -ve ions dispersed when 2.35×10^{22} molecule of H_2SO_4 were dissolved in solution.



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TEMP_ID: _____

Subject: Physics Maximum Marks: 25 Time: 30 min Class: HSSC I

- **Answer all the short questions on the answer sheet provided.**
- Do not write on the Question Paper.
- Each MCQ'S carries 01mark.
- Each short question carries 03 marks.

- 1) The maximum potential energy of a vibrating mass attached to spring is
 - i) at equilibrium position
 - ii) at extreme position
 - iii) between extreme and equilibrium
 - iv) none of above
- 2) In a vacuum all electromagnetic waves have same
 - i) velocity
 - ii) wavelength
 - iii) frequency
 - iv) amplitude
- 3) When the frequency of a sound wave is increased, which of the following will decrease?
I)wavelength II) period III) amplitude
 - i) Only I
 - ii) Only II
 - iii) Both I & II
 - iv) None of the above
- 4) A converging mirror with a radius of 20 cm creates a real image 30 cm from the mirror. What is the object distance?
 - i) -5 cm
 - ii) 7.5 cm
 - iii) 15 cm
 - iv) 20 cm
- 5) The position of fish inside the water seems to be at less depth than that of actual depth , because of
 - i) dispersion of light
 - ii) total internal reflection of light
 - iii) refraction of light
 - iv) reflection of light
- 6) Two uncharged object A and B are rubbed against each other. When object B is placed near a negatively charged object C, the two objects repel each other. Which of these statements is true about object A?
 - i) remains uncharged
 - ii) remains positively charged
 - iii) remains negatively charged
 - iv) unpredictable
- 7) By connected the shunt across the galvanometer, the resistance of galvanometer
 - i) decreases
 - ii) increases

- iii) becomes zero
 - iv) remains same
- 8) Which is the most suitable means of reliable continuous communication between an orbiting satellite and Earth?
- i) micro waves
 - ii) sound waves
 - iii) radio waves
 - iv) any light waves
- 9) What happens to the atomic number of an element which emits one alpha particle and a beta particle?
- i) remains same
 - ii) increases by 1
 - iii) decreases by 1
 - iv) decreases by 2
- 10) Those quantities whose values vary continuously or remain constant are called
- i) constant quantities
 - ii) variable quantities
 - iii) digital quantities
 - iv) analogue quantities

SECTION – B (Marks 15)

- 1) A simple pendulum has a time period T in Murree. In Karachi, it has different time period. What would you do to make its time period same as it was in Murree?
- 2) Your grandfather uses spectacles to read newspaper. You see through the spectacles and you observe that objects behind it were inverted. Why was it so observed?
- 3) The force between two point charges is 10N. If their charge is doubled and distance between them is reduced to half, what will be magnitude of force between them?
- 4) A house is installed with 30 LED bulbs of 12W each of which are used 10 hours daily. Find the number of electrical units used (total energy consumed in kWh) for a month for these devices. If PKR 15 is the rate of electrical unit, then find the monthly expenditure of electricity (one month = 30 days).
- 5) In 420 days, the activity of a sample of polonium (Po) to one eighth of its initial value. What is the half-life of polonium?