

KARNAL SHER KHAN CADET COLLEGE SWABI
ENTRY TEST FOR CLASS – 11th 2025 (MODEL PAPERS)

R. NO: _____

Maximum Marks: 50

PAPER: CHEMISTRY

Time: 40 Minutes

Marks: 20

Q-1: Choose the correct option.

- i. Which of the following is NOT a compound _____.
(a) He (b) H₂O (c) CO₂ (d) CO
- ii. The branch of chemistry which deals with compound other than hydrocarbon and their derivatives is
(a) Physical chemistry (b) industrial chemistry (c) analytical chemistry (d) inorganic chemistry
- iii. Which of the following is chemical reaction _____.
(a) Melting Ice (b) Rusting Iron (c) Boiling water (d) Mixing salt and water
- iv. The L-Shell has sub-shell
(a) s and p (b) s only (c) s, p and d (d) Only p
- v. _____ is the functional group of aldehydes.
(a) -OH (b) -NH₂ (c) -X (d) -HCO
- vi. Brass is an example of _____.
(a) Heterogeneous mixture (b) Homogenous mixture (c) Compound (d) Pure substance
- vii. What is the IUPAC name of CH₃CH₂OH:
(a) Methanol (b) Ethanol (c) Propanol (d) Butanol
- viii. Which is layer of atmosphere containing more concentration of O₃?
(a) Troposphere (b) Mesosphere (c) Thermosphere (d) Stratosphere
- ix. CH₄⁺ is an example of _____.
(a) Cation (b) Anion (c) Radical (d) Molecular ion
- x. What is the conjugate base of HCl?
(a) Cl⁻ (b) H⁺ (c) HCl⁺ (d) H₂O
- xi. Which one of the following has two shells _____
(a) C (b) He (c) H (d) Cl
- xii. Modern periodic table is based on.
(a) Atomic Number (b) Mass Number (c) Neutron Number (d) Shell Number
- xiii. The building block of protein is _____
(a) Glucose (b) Nucleotides (c) Amino Acids (d) Fatty acid and alcohol
- xiv. what is the Oxidation number of Oxygen in the compound H₂O
(a) +2 (b) -2 (c) +1 (d) -1
- xv. what is the mass (in gram) of 2 moles of NaOH
(a) 25g (b) 40g (c) 80g (d) 50g
- xvi. _____ is the factor which does not affect the solubility of a solute and solvent.
(a) Pressure (b) Temperature (c) IMF (d) Particle size
- xvii. Which of the following statements about chemical equilibrium is true?
(a) Equilibrium is dynamic state (b) Equilibrium is static state (c) The rate of forward and reverse reactions are equal at equilibrium (d) The concentration of reactant and product are equal
- xviii. What is the Oxidation number of Sulphur in the compound H₂SO₄?
(a) +4 (b) -4 (c) +6 (d) -6
- xix. Which acid is responsible for the sour taste of orange?
(a) lactic Acid (b) citric acid (c) Acetic acid (d) Hydrochloric acid
- xx. Solvay's process is used to prepare _____ in industries.
(a) Calcium Carbonate (b) Sodium Carbonate (c) Urea (d) Ammonia

NOTE: Attempt all questions. All questions carry equal marks.

Marks: 30

Q-2: Separate the following compounds into organic and inorganic (CO₂, H₂O, NaCl, C₆H₆, NH₃, C₆H₁₂O₆).

Q-3: Write down the electronic configuration of (a) N⁷ (b) Cl¹⁷.

Q-4: What is functional group give at least 4 examples?

Q-5: Draw structure of following molecules (Glucose, Amino Acid and Urea).

Q-6: Write down Kc Expression and unit for the following reactions:

- 2HI-----→ H₂ + I₂
➤ N₂ + 3H₂-----→ 2NH₃

Maximum Marks: 50

PAPER: BIOLOGY

Time: 40 Minutes

Q-1: Choose the correct option.

Marks: 20

- i. _____ is the study of the naming and classification of organisms into groups and subgroups.
(A) Physiology (B) Taxonomy (C) Morphology (D) Histology
- ii. Which of the following hormone affects the renal tubules to reabsorb large quantities of water from the glomerular filtrate?
(A) Thyroid Stimulating hormone (B) Luteinising hormone (C) Oxytocin (D) Antidiuretic Hormone
- iii. A food web consists of _____.
(A) Interlocking food chains (B) Producers, consumers and decomposers (C) A portion of a food chain
(D) A set of similar consumers
- iv. The enzymes which are used to cut the DNA in specified sequence is _____.
(A) Ligase (B) Protease (C) DNAase (D) Endonuclease
- v. An organism has two different alleles for a single trait. Its genotype is said to be _____.
(A) Homozygous (B) Heterozygous (C) Hemizygous (D) Homologous
- vi. Internal fertilization occurs in _____.
(A) Fish (B) Amphibians (C) Aquatic animals (D) Mammals
- vii. The purpose of ribcage is to _____.
(A) Protect the stomach (B) Protect the spinal cord (C) Protect the heart and lungs
(D) Provide an object to which the lungs can attach
- viii. Which of these acts an exocrine as well as endocrine gland?
(A) Pituitary (B) Thyroid (C) Adrenal (D) Pancreas
- ix. Organisms have the ability to change and modify their internal conditions according to the environment through _____.
(A) Osmoregulation (B) Excretion (C) Thermoregulation (D) All of these
- x. Which part of the air passageway is also called the windpipe?
(A) Bronchus (B) Trachea (C) Alveolus (D) Larynx
- xi. Entomology is _____.
(A) The study of insects (B) The study of fossils (C) The study of tissues (D) The study of immune system
- xii. The various forms of a gene responsible for the same trait are called _____.
(A) Centromere (B) Character (C) Trait (D) Allele
- xiii. A Hydra reproduces asexually by _____.
(A) Spore formation (B) Multiple fission (C) Budding (D) Binary fission
- xvi. Which of these is a part of the appendicular skeleton?
(A) Ribs (B) Sternum (C) Pectoral girdle (D) Vertebral column
- xv. Intelligence is under the control of _____.
(A) Cerebrum (B) Cerebellum (C) Medulla oblongata (D) Thalamus
- xvi. All of the following are the adaptation of xerophytes except:
(A) Thick cuticle (B) Large number of stomata (C) Sunken stomata (D) Deep root system
- xvii. Oxygen from the lungs enter into the blood due to _____.
(A) Diffusion (B) Less affinity of O₂ for air (C) Higher affinity of CO₂ for air (D) Osmosis
- xviii. The central dogma is best represented by _____.
(A) DNA + RNA = Protein (B) DNA → RNA + Protein (C) DNA → RNA → Protein (D) Protein → RNA → DNA
- xix. All multicellular animals develop from a single cell, called _____.
(A) Egg (B) Sperm (C) Zygote (D) Blood cell
- xx. Bones are stronger than cartilage due to the presence of _____.
(A) Calcium phosphate (B) Osteocytes (C) Collagen fibres (D) Lacunae

Q-2: Fill in the blanks.

- (i) The study of internal structure of organisms is called _____.
- (ii) Inside the thorax, the trachea divides into two tubes called _____.
- (iii) The _____ of human beings and other mammals have been adapted as the organ for thermoregulation.
- (iv) The brain is covered by three layers of membranes, collectively called _____.
- (v) Humans have _____ pairs of cranial nerves.
- (vi) The bio-molecules with low molecular weight are called _____.
- (vii) Genes are short segments of _____.
- (viii) The loss of water from the plants in the form of small droplets is called _____.
- (ix) The larynx or voice box opens into the _____.
- (x) There is one bone in the neck called the _____ bone.

NOTE: Attempt any three questions.

Q-3: Differentiate between the terms breathing and respiration.

Q-4: What is Binomial nomenclature?

Q-5: Differentiate between the adaptations of hydrophytes and xerophytes for osmoregulation.

Q-6: State any five hormones of the pituitary gland and write their functions.

KARNAL SHER KHAN CADET COLLEGE SWABI
ENTRY TEST FOR CLASS – 11th 2025 (MODEL PAPERS)

Maximum Marks: 50

PAPER: COMPUTER SCIENCE

Time: 40 Minutes

Q-1: Choose the correct option.

Marks: 10

- i. Which of the following is an output device for providing hardcopy of output?
(A) Scanner (B) Printer (C) Speaker (D) Microphone
- ii. Which of the following is a novel version of computer which can be worn on face?
(A) Google Glass (B) Glass (C) Smart watch (D) Quantum computer
- iii. Which company is the developer of office automation software ?
(A) Apple (B) Linux (C) Microsoft (D) Intel
- iv. Which type of signals are used in Bluetooth transmission?
(A) Electric waves (B) Light waves (C) Radio waves (D) Magnetic waves
- v. Which of the following is a sequence of computational steps that transform the input into output?
(A) Data structure (B) Algorithm (C) Output (D) All of the above
- vi. A quantity whose value does not change during execution of the program is called _____.
(A) Variable (B) Byte (C) Words (D) Constant
- vii. Which symbol is used to represent a process in a flow chart?
(A) Square (B) Diamond (C) Rectangle (D) Arrow
- viii. _____ is used to describe properties of an algorithm relating to how much of various types of resources it consumes.
(A) Complexity of Algorithm (B) Efficiency of an Algorithm
(C) Candid Solution (D) None of these
- ix. The output of the compiler is called _____.
(A) Program (B) source code (C) linked code (D) object code
- x. The execution of a C program starts from function:
(A) const () (B) main() (C) name() (D) start()

Q-2: Fill in the blanks.

Marks: 10

- i. Text or image in a webpage that links it to another webpage is called _____
- ii. A collection of webpages hosted on a web server is called _____
- iii. Transistors were used in _____ generations
- iv. _____ is considered the father of modern digital computer
- v. _____ translates a program statement by statement or line by line.

NOTE: Attempt any three Questions.

Marks: 30

Q-3: Differentiate between (a) RAM and ROM (b) Half Duplex and Full Duplex Transmission

Q-4: What is flowchart? Explain flowchart symbols in detail.

Q-5: Write a program in C that prints a larger of two numbers.

Q-6: Define the Following:

- (a) Web page (b) Website (c) Search Engine (d) Web browser (e) Loops

KARNAL SHER KHAN CADET COLLEGE SWABI
ENTRY TEST FOR CLASS – 11th 2025 (MODEL PAPERS)

R. NO. _____

Maximum Marks: 50

PAPER: PHYSICS

Time: 60 Minutes

Q-1: Fill in the blanks.

Marks: 10

1. The distance traveled by wave in unit time is called _____
2. The pitch of sound depend on
3. The minimum distance for the echo to be heard is
4. If the angle of incidence is 30 degree then the angle of reflection will be
5. Electric potential V is given by the equation
6. The S.I unit of capacitance is
7. A device used to measure potential difference is called
8. Volt per ampere represent
9. The S.I unit of activity is
10. The slope of distance time graph represent

Q-2: Choose the correct option.

Marks: 20

1. The bending of waves around the edges of the obstacles is:
(A) Reflection (B) refraction (C) diffraction (D) damping.
2. Which of the following cannot transmit sound?
(A) Solid (B) liquid (C) gas (D) vacuum
3. Unit of coefficient of friction is:
(A) N (B) Kg (C) μ (D) it has no units
4. The S.I unit of work is:
(A) Joule (B) watt (C) j/m (D) none
5. A body in equilibrium must not be:
(A) At rest (B) moving (C) rotating (D) accelerating
6. Work done will be zero when the angle between force and displacement is:
(A) 30° (B) 45° (C) 60° (D) 90°
7. Which of the following is the best heat conductor?
(A) Aluminum (B) tin (C) Iron (D) Copper
8. Waves transports:
(A) Energy (B) matter (C) both matter and energy (D) None
9. Cathode rays are beam of
(A) Electrons (B) protons (C) ions (D) neutrons
10. The resistance of wire will decrease by increasing:
(A) Temperature (B) Length (C) diameter (D) Both A and B
11. Which one of the following materials will refract light more?
(A) Water (B) glass (C) air (D) diamond
12. For each 1°C rise in temperature, the speed of sound increases by:
(A) 0.6m/s (B) 0.006m/s (C) 6m/s (D) 1.06m/s
13. Acceleration is the time rate of change of:
(A) Displacement (B) velocity (C) speed (D) all
14. The value of g at the surface of the moon is:
(A) 9.8m/s^2 (B) 1.63 m/s^2 (C) 4.9 m/s^2 (D) 8.9 m/s^2
15. Work done will be maximum when angle between force and displacement is:
(A) 0° (B) 90° (C) 45° (D) 60°
16. Electric field is:
(A) Scalar quantity (B) vector quantity (C) depend on conditions (D) none
17. In lens, all distances are measured from:
(A) Focus (B) pole (C) optical center (D) radius of curvature
18. An electric current is constituted by the flow of:
(A) Neutrons (B) electrons (C) protons (D) all
19. The elongation or increase in size of the eye lens is a cause of:
(A) Myopia (B) hypermetropia (C) no eye defect (D) color blindness
20. How many types of S.I units are _____
(A) Two (B) Five (C) Seven (D) Nine

Note: Attempt any three (3) questions.

(Marks: 20)

Q-3: Define newton second law, relate force to change in momentum I .e, $F = \Delta P/\Delta t$

Q-4: Define simple harmonic motion, show that mass spring system executes simple harmonic motion.

Q-5: What are fission and fussion?

Q-6: What is capacitor? Define capacitance and its units.

Maximum Marks: 50

PAPER: MATHS

Time: 40 Minutes

Marks: 20

Q-1: Choose the correct option.

- i. How many circles can be drawn from three non collinear points?
(a) one (b) two (c) three (d) None
- ii. The formula $\frac{\sum x}{n}$ determines _____.
(a) Mode (b) Arithmetic mean (c) Median (d) Geometric
- iii. When $3x^3 - 2x^2 - 150$ is divided by $x - 4$ then remainder = _____.
(a) 4 (b) 10 (c) 0 (d) -10
- iv. If $A = \{1, 2, 3\}$, $B = \{4, 5\}$ and $R = \{(1, 4), (2, 5), (3, 4)\}$ then R is _____.
(a) An one one function from A to B (b) A function from B to A
(c) Not a function (d) An onto function from A to B
- v. If $2a + 1 : 21 :: 4 : 7$ then $a =$ _____.
(a) $\frac{13}{2}$ (b) $\frac{11}{2}$ (c) 10 (d) $\frac{9}{2}$
- vi. What will be added to complete the square of $9a^2 - 12ab$?
(a) $-16b^2$ (b) $4b^2$ (c) $16b^2$ (d) $-4b^2$
- vii. If three points lie on the same line they are said to be ----- points.
(a) Similar (b) co-planer (c) collinear (d) Non
- viii. If sum of the measures of $\angle A$ and $\angle C$ of a parallelogram ABCD is 120° then $m \angle B =$ _____.
(a) 25° (b) 120° (c) 65° (d) None of these
- ix. Point of intersection of the angle bisectors of a triangle is equidistant from _____ of the triangle.
(a) The vertices (b) the sides (c) midpoints of the side (d) All of these
- x. Which of the following represents the sides of a triangle?
(a) 3, 4 and 5 (b) 3, 4 and 7 (c) 3, 4 and 8 (d) 3, 4 and 1
- xi. In mathematics class with 32 students, the ratio of girls to boys is 5 to 3. How many girls are there in the class?
(a) 2 (b) 8 (c) 12 (d) 20
- xii. The graph of the quadratic equation is always _____.
(a) Straight line (b) parabola (c) ellipse (d) none
- xiii. If $a=0$, in $ax^2+bx+c=0$, then it reduces to:
(a) Pure quadratic equation (b) Linear equation (c) Radical equations (d) Exponential equation
- xiv. $1 + w + w^8 =$ _____ for complex cube root w .
(a) 0 (b) -1 (c) 1 (d) w^9
- xv. For what value of D is the (2×2) matrix $\begin{bmatrix} 5 & 1.5 \\ 2 & D \end{bmatrix}$ not invertible? ---
(a) -0.6 (b) 0.6 (c) 3 (d)
- xvi. Characteristic of $\log 0.000 059$
(a) -5 (b) 5 (c) -4 (d) 4
- xvii. If $U=\{x/x \text{ is a positive odd number less than } 30\}$, $R=\{1, 5, 7\}$ and $S=\{1, 3, 7, 11, 13\}$ then the number of elements in $(R \cap S)^c$ = _____.
(a) 15 (b) 13 (c) 7 (d) 2
- xviii. If f is a function from A to B, then f is into function if _____.
(a) $\text{Rang } f = B$ (b) $\text{Rang } f \neq B$ (c) $\text{Rang } f = A$ (d) $\text{Dom } f \neq A$

NOTE: Attempt all questions.

Marks 4*8=32

Q-2: Find the values of m and n , if both sum and product of roots of the equation $mx^2 - 3x - n = 0$ are equal to $\frac{3}{5}$?

Q-3: Prove that $\tan \theta + \sec \theta = \frac{1 + \sin \theta}{\cos \theta}$

Q-4: If α, β are roots of $2x^2 + 3x + 1 = 0$ then find value of $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$

Q-5: Find the continued product of $(x + y)(x - y)(x^2 + xy + y^2)(x^2 - xy + y^2)$

KARNAL SHER KHAN CADET COLLEGE SWABI
ENTRY TEST FOR CLASS – 11th 2025 (MODEL PAPERS)

Maximum Marks: 50

PAPER: ENGLISH

Time: 40 Minutes

NOTE: Attempt all questions. No overwriting, cutting or use of ink remover is allowed.

Q-1: Do as directed. (10)

- a) The soft blanket kept us warm. The underlined word is a/an(adjective, adverb, verb)
- b) Always respect your elders. Is a \an _____ sentence.(optative, imperative, exclamatory)
- c) The police is investigating the matter.(Change the voice)
- d) I followed his instructions. (change into simple future tense)
- e) I wish I had _____ powers. (magic, magical, magician)
- f) All day long the sun plays hide and seek with shadows, is an example of (simile, hyperbole, personification)
- g) What do you like to do ___ the weekend. (on, at, in)
- h) She said to me, “The always make a noise in the class”. (Change the narration).
- i) I want to go to the park, but it’s raining outside. The underlined word is a/an(conjunction, interjection, verb)
- j) The synonym of ‘abundance’ is _____(shortage, plenty, huge)

Q-2: Use the following words/expression in meaning sentences. (10)

- (i) figure out (ii) impeccable (iii) tender (iv) scarcity (v) on account of

Q-3: Read the following paragraph and answer the questions given below (copy and pasting of answers from the paragraph is not allowed. (10)

Genetics is the study of genes, genetic variations, and heredity in living organisms. It is generally considered a field of biology, but intersects frequently with many other life sciences. Genes are subunit of DNA, the information database of any organisms that is contained inside the cell nucleus. DNA carries many pairs of genes that transmit character traits of parents to the offsprings.

QUESTIONS:

- (i) What is genetics generally considered?
- (ii) What are genes made up of?
- (iii) What does DNA carry?
- (iv) Write meaning of the underlined words.
- (v) Give a suitable title to the passage.

Q-4: Write an essay of 200 to 250 words on the topic. (20)

Advantages and disadvantages of Social Media

KARNAL SHER KHAN CADET COLLEGE SWABI
ENTRY TEST FOR CLASS – 11TH 2025 (MODEL PAPERS)

Maximum Marks: 50

PAPER: URDU

Time: 60 Minutes

سوال نمبر 1:- مندرجہ ذیل الفاظ، تراکیب اور محاورات کو اپنے جملوں میں استعمال کریں۔ (5)

1- آفتِ ناگہانی 2- جلتی پر تیل ڈالنا 3- مٹھی گرم کرنا 4- طفظہ 5- نگنی کا ناچ نچانا

سوال نمبر 2:- مرکبات کی نشاندہی کریں۔ (5)

1- غم و آلام 2- ویران گزرگاہ 3- ٹرک سے 4- شمعِ آزادی 5- وہ دیوار

سوال نمبر 3:- تذکیر و تانیث کے لحاظ سے درج ذیل الفاظ کو الگ الگ کریں۔ (5)

1- آواز 2- چادر 3- صلہ 4- شناخت 5- سایہ

سوال نمبر 4:- مندرجہ ذیل ضرب المثال کی مطلب واضح کریں۔ (6)

1- دُور کے ڈھول سہانے 2- رام رام چپنا، پر ایماں اپنا 3- آپ آئے، بھاگ آئے

4- ناچ نہ جانے آگن ٹیڑھا 5- زبانِ خلق کو نفاہِ خدا سمجھو 6- جیسا دیس، ویسا بھیس

سوال نمبر 5:- درج ذیل سوالات میں سے صرف تین کے جواب لکھیں۔ (9)

(الف) محاورہ اور روزمرہ میں مثالوں سے فرق واضح کریں (ب) مجاز مرسل کی تعریف لکھیں نیز دو اقسام کے نام لکھ کر مثالیں تحریر کریں۔ (ج)

جملہ معترضہ کی تعریف اور دو مثالیں لکھیں۔ (د) صنعتِ تلج اور صنعتِ تلج میں فرق واضح کریں۔

سوال نمبر 6:- اپنے دوست کو کیڈٹ کالج کے "انٹری ٹیسٹ" میں کامیابی پر مبارک باد کا خط لکھیں۔ (8)

یا

چیئر مین بورڈ کے نام حصول سرٹیفکیٹ / سند (میٹرک) کے لیے درخواست لکھیں۔

سوال نمبر 7:- مندرجہ ذیل میں کسی ایک موضوع پر مضمون لکھیں جو 150 الفاظ سے کم نہ ہو۔ (12)

(الف) طالب علم کے فرائض (ب) کمپیوٹر۔ عہدِ حاضر کی اہم ضرورت (ج) کھیلوں کی اہمیت