



**(1<sup>ST</sup> LATERAL ENTRY 2014)**  
**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**(ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS – 2014)**

**Total Time: 3 Hours**

**Total Marks: 200**

**Name of Candidate:** \_\_\_\_\_

**Roll No. LE-1/2014-**\_\_\_\_\_

| English<br>(50) | Physics<br>(50) | Chemistry<br>(50) | Math/Bio<br>(50) | Comp<br>(50) | Total<br>(200) |
|-----------------|-----------------|-------------------|------------------|--------------|----------------|
|                 |                 |                   |                  |              |                |

**Board Roll No:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**S.S.C Marks: Class 9<sup>th</sup>** / \_\_\_\_\_

**Board (BISE):** \_\_\_\_\_

**Class 10<sup>th</sup>** / \_\_\_\_\_

(Encircle **RA**, if result awaited)

**Note:** please send copy of Detailed Marks Sheet immediately on declaration of SSC result.

**Telephone Numbers:**

1. Mobile: \_\_\_\_\_

2. Residence: \_\_\_\_\_

**Postal address:**

---

---

---

**Instructions:**

1. Write your **ROLL NO** and **NAME** on the top of each paper.
2. Use same sheet for answers.
3. Overwriting/ Cutting/ Erasing is not allowed.



**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**(ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS – 2014)**

|                       |                    |
|-----------------------|--------------------|
| <b>Roll No:</b> _____ | <b>Name:</b> _____ |
|-----------------------|--------------------|

| Q No 1 (10) | Q No 2 (10) | Q No 3 (30) | Total (50) |
|-------------|-------------|-------------|------------|
|             |             |             |            |

**PAPER: PHYSICS**

**Q No: 1. Fill in the blanks with suitable words. (10)**

- i. The bending of waves around obstacles or sharp edges is called \_\_\_\_\_
- ii. The technique used to reduce the loss of sound energy by soft and porous surface is called \_\_\_\_\_
- iii. The ability of eye to change the focal length of its lens to form clear image of an object on its retina is called \_\_\_\_\_
- iv. The index of refraction depends upon \_\_\_\_\_
- v. The Coulomb's Law is valid for the charges which are \_\_\_\_\_
- vi. The current which does not change its direction of flow is called \_\_\_\_\_
- vii. If the change of current in a circuit induces a current in another circuit this phenomena is known as \_\_\_\_\_
- viii. \_\_\_\_\_ are electrons which are emitted from a hot surface of cathode travel towards anode by applying voltage.
- ix. The typical floppy has a storage capacity of between \_\_\_\_\_
- x. The half-life of polonium  ${}_{84}\text{Po}^{210}$  is \_\_\_\_\_

**Q No.2 Choose the correct answer from the options given below for each statement. (10)**

- i. Which of the following radiations has more penetrating power?  
a. Alpha                      b. Beta                      c. Gamma d. All of these
- ii. Safe limit of radiation exposure per year is  
a. 2 rem                      b. 0.1 rem c. 1.0 rem d. 5 rem
- iii. Which of the following is not processing?  
a. Arranging                      b. Manipulating                      c. Calculating                      d. Gathering
- iv. Not gate is also called as  
a. Calculator                      b. Converter                      c. Inverter d. Divider
- v. The time period of a second pendulum is  
a. 5 s                      b. 3 s                      c. 2 s                      d. 4 s
- vi. Mice can hear frequencies up to the range of  
a. 120000 Hz                      b. 10,000 Hz                      c. 100,000 Hz                      d. 25,000Hz
- vii. The Endoscope used to diagnose the throat is called  
a. Gastro scope b. Cyst scope                      c. Bronchoscope                      d. All of these
- viii. Electric field lines were introduced by  
a. Coulomb                      b. Faraday c. Einstein d. Flaming
- ix. Dry human skin has a resistance of about  
a. 1000 Ohm                      b. 12000 Ohm                      c. 20000 Ohm                      d. 100000 Ohm
- x. The turn ratios of a transformer are 10. It means  
a.  $I_s = 10 I_p$                       b.  $N_s = N_p / 10$                       c.  $N_s = 10 N_p$                       d.  $V_s = V_p / 10$

**Q No. 3. Give the brief answers of the following. (3 x 10 = 30)**

- i. What is difference between fission and fusion nuclear reactions? In which more energy is released?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

ii. What is difference between Hard Disk and floppy? Also write their ranges.

iii. Give three reasons to support the evidence that cathode rays are negatively charged electrons.

iv. Differentiate between self induction and mutual induction?

v. What is the function of circuit breaker in the electricity in homes?

vi. In which combination of capacitors the each capacitor has the same potential difference?

vii.

viii. What is the difference between Telescope and Microscope?

ix. A sound wave has a frequency of 2 kHz and wavelength 35 cm. How long will it take to travel 1.5 km?

x. Write down any three similarities between Camera and Human eye?

- xi. A simple pendulum completes one vibration into two seconds. Calculate its length (where  $g = 10 \text{ ms}^{-2}$ ).



CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL  
(ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS – 2014)

Roll No: \_\_\_\_\_

Name: \_\_\_\_\_

| Q No 1 (10) | Q No 2 (10) | Q No 3 (30) | Total (50) |
|-------------|-------------|-------------|------------|
|             |             |             |            |

**PAPER: BIOLOGY**

**Q # 01: Encircle the correct answer.**

**(1x10= 10)**

- A disease involved in break down of air sacs**  
a) Pneumonia                      b) Bronchitis                      c) Asthma                      d) Emphysema
- In human eye there are about \_\_\_\_\_ cones.**  
a) 5 lac                      b) 7 lac                      c) 5 million                      d) 7 million
- Under production of thyroxin causes**  
a) Goiter                      b) hyperthyroidism  
c) Hypothyroidism                      d) All of these
- Osteoporosis is caused by lack of**  
a) Vitamin A & C                      b) Proteins and vitamin A  
c) Proteins and vitamin B                      d) Proteins & Vitamin C
- Which one is STD?**  
a) Cholera                      b) Cold                      c) SARS                      d) AIDS
- Movement of genes from one population to another**  
a) Transfusion                      b) Genetic drift                      c) Gene flow                      d) Mutation
- Punnet was a**  
a) Biologist                      b) Chemist                      c) Physicist                      d) Mathematician
- In food chain tree > caterpillar > robin > hawk > coyote, which is the secondary consumer?**  
a) Caterpillar                      b) Robin                      c) Hawk                      d) Coyote
- Find the correct match for the fermentation product and organism involved.**  
a) Formic acid- saccharomyces                      b) Ethanol- saccharomyces  
c) Ethanol- aspergillus                      d) Glycerol- aspergillus
- Which of these addictive drugs are also used as pain killers?**  
a) Hallucinogens                      b) Sedatives  
c) Narcotics                      d) All can be used

**Q # 01: Fill in the blanks with correct answer.**

**(1x10=10)**

- The primary chemical stimulus for breathing is the concentration of \_\_\_\_\_.
- The appearance of drops of water on the tips of leaves is called \_\_\_\_\_.
- Lack of hormone somatotrophin causes disease \_\_\_\_\_.
- \_\_\_\_\_ gland produces a secretion that neutralizes the acidity of the fluid sperm.
- Pelvic girdle has \_\_\_\_\_ bones
- If the genotype of a plant is RrYy, how many types of gametes can be formed \_\_\_\_\_.
- An example of exoparasite is \_\_\_\_\_.
- Interferon is an \_\_\_\_\_ protein.
- According to WHO, there are \_\_\_\_\_ dengue infections every year.
- Antibiotic cephalosporin destroys \_\_\_\_\_ part of the bacterial cell

**Q3. Answer the short questions**

**(10x 3=30)**

- 1) State symptoms, causes and treatment of emphysema.

---

---

---

---

2) Give comparison of inspired and expired air.

3) Define lenticels and stomata.

4) Differentiate between tissue culture and cloning.

5) Draw male reproductive system of rabbit.

6) Give justification of Law of Independent assortment by punnet square diagram.

7) What is importance of single cell protein?

8) Names of any five micro-organisms used in fermentation.

---

---

---

9) What are uses of sedatives and analgesics?

---

---

---

---

---

---

---

---

10) How vaccines act?

---

---

---

---

---

SAMPLE



**COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
(ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS – 2014)

**Roll No:** \_\_\_\_\_

**Name:** \_\_\_\_\_

| Q No 1 (10) | Q No 2 (10) | Q No 3 (30) | Total (50) |
|-------------|-------------|-------------|------------|
|             |             |             |            |

**PAPER: CHEMISTRY**

**Q No: 1. Fill in the blanks.**

**(10)**

- When hydrogen Iodide is heated in a closed flask, purple colour appear due to formation of \_\_\_\_\_.
- Calcium chloride is used for \_\_\_\_\_.
- Your tears, perspiration and blood taste is \_\_\_\_\_.
- Sodium nitro prusside test are used for the identification of \_\_\_\_\_ Group.
- The end Product of oxidation of acetylene is \_\_\_\_\_.
- \_\_\_\_\_ is the permanent storage place for genetic information.
- Iron and steel structures are damage by \_\_\_\_\_.
- Hard water contains salts of \_\_\_\_\_.
- A fuel oil which has carbon chain  $C_{15}$  to  $C_{18}$  is used in \_\_\_\_\_.
- $R-O-R'$  is the general formula of \_\_\_\_\_ group.

**Q No: 2. You have four choices for each question. Tick or circle on the correct answer.**

**(1x10=10)**

- $N_2 + O_2 \rightleftharpoons 2 NO$ . the unit of  $K_c$  for this reaction will be  
a.  $mol\ dm^{-3}$       b.  $mol\ dm^{-3}$       c. no unit      d.  $mol^2\ dm^{-3}$
- $NaH_2PO_4$  is called.  
a. Acidic salt      b. basic salt      c. neutral      d. double salt
- The bond energy between C-C single bond is  
a.  $200\ kJ\ mol^{-1}$       b.  $351\ kJ\ mol^{-1}$       c.  $452\ kJ\ mol^{-1}$       d.  $355\ kJ\ mol^{-1}$
- The order of reactivity of hydrogen halides with alkene is  
a.  $HI > HBr$       b.  $HBr > HI$       c.  $HCl > HBr$       d.  $HBr > HCl$
- Carbohydrates provide energy per gram.  
a. 18 kJ      b. 17 kJ      c. 40 kJ      d. 10 kJ
- Atmospheric regions which are present above the earth surface form 50-85 km.  
a. Stratosphere      b. mesosphere      c. Troposphere      d. none of these
- A permanent hardness in water is due to  
a.  $SO_4^{2-}$       b.  $CO_3^{2-}$       c.  $HCO_3^-$       d. None
- Brown hair contains the transition element.  
a. Lead      b. Calcium      c. iron      d. Sodium
- $CN^-$  is called.  
a. Lewis base      b. Arrhenius base      c. Lewis acid      d. None
- Which one of the following organic compound is found in gasoline?  
a.  $C_2H_4$       b.  $C_3H_8$       c.  $C_8H_{18}$       d.  $C_{12}H_{26}$

**Q No: 3. Give brief answers of the following questions.**

**(3 x 10=30)**

- If a reaction has large value of  $K_c$ , will it go to completion and why?

---

---

---

---

---

- Why all Bronsted acids are not Lewis acids?

---

---

---

---

---



iii. What is ammoniacal liquor?

---

---

---

iv. Prepare ethyl bromide from alkene.

---

---

---

v. Write the name of any three fatty acids.

---

---

---

vi. What is global warming?

---

---

---

vii. Why organic compounds are dissolve in water.

---

---

---

viii. Why detergents cause water pollution.

---

---

---

ix. What is matte?

---

---

---

x. Write the formulas of the following

- a. Carbonic Acid 

---
- b. Formic Acid 

---
- c. Oxalic Acid 

---



**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**(ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS – 2014)**

Roll No: \_\_\_\_\_

Name: \_\_\_\_\_

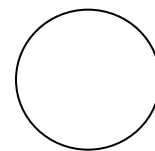
| Q No 1 (30) | Q No 2 (20) | Total (50) |
|-------------|-------------|------------|
|             |             |            |

**PAPER: MATHEMATICS**

**Q No: 1. Fill in the blanks.**

**(2 x 15=30)**

- i. Right bisector of the chord of a circle always passes through the \_\_\_\_\_.
- ii. If  $\tan \theta = \sqrt{3}$  then the value of  $\theta$  is \_\_\_\_\_ degree.
- iii. The extent of variation between two extreme observations of a data set is measured by \_\_\_\_\_.
- iv. If  $\frac{u}{v} = \frac{v}{w} = k$  then  $k^2 w =$  \_\_\_\_\_.
- v. In the figure, O is the centre of the circle then the angle x is equal to \_\_\_\_\_.
- vi. If  $b^2 - 4ac < 0$  then the nature of roots of  $ax^2 + bx + c = 0$  is \_\_\_\_\_.
- vii. The complex cube roots of unity are \_\_\_\_\_.
- viii. A complete circle is divided into \_\_\_\_\_ degree.
- ix. The length of a chord and the radial segment of a circle are congruent, the central Angle made by the chord will be \_\_\_\_\_.
- x. The measure of the external angle of a regular hexagon is \_\_\_\_\_.
- xi. \_\_\_\_\_ tangents can be drawn for two touching circles.
- xii. The mean proportional of  $9p^6q^4$  and  $r^8$  is \_\_\_\_\_.
- xiii. The solution set of  $5x^2 = 30x$  is \_\_\_\_\_.
- xiv. Partial fraction of  $\frac{x+3}{(x+2)(x^2+1)}$  are of the form \_\_\_\_\_.
- xv. The circular measure of the angle between the hands of the watch at 3'0 clock is \_\_\_\_\_ degree.



**Q.NO.2 ATTEMPTS ALL PARTS.****(5x4=20)**

- (i) If  $\tan \theta = -\frac{\sqrt{5}}{2}$  then find the values of other trigonometric Ratios at  $\theta$ .  
When  $\theta$  lies in 2nd Quadrant?

---

---

---

---

---

---

- (ii) What is the difference between Onto and Into function?

---

---

---

---

- (iii) Define Arithmetic mean. Write at least three properties of Arithmetic Mean.

---

---

---

---

---

---

- (iv) What is the difference between incircle and circumcircle? Discuss with figures.

---

---

---

---

---

- (v) How Many types of measures of central tendency. Write their names (any four).

---

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**(ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS – 2014)**

Roll No: \_\_\_\_\_

Name: \_\_\_\_\_

| Q No 1 (10) | Q No 2 (10) | Q No 3 (10) | Q No 4 (20) | Total (50) |
|-------------|-------------|-------------|-------------|------------|
|             |             |             |             |            |

**PAPER: ENGLISH****Q No: 1 Translate the following paragraph into Urdu.****(10)**

Certainly improved technology will assist in more effective management and use of resources but it cannot produce an unlimited flow of those vital natural resources that are the raw materials for sustained agricultural production. For instance, fertilizers enhance the fertility of eroded soils but humans cannot make topsoil. Indeed, fertilizers made from finite fossil fuels are presently being used to compensate for eroded topsoil. A productive and sustainable agricultural system depends on maintaining the integrity of biodiversity.

---

---

---

---

---

**Q No: 2. Translate the following paragraph into English.****(10)**

صدر نے ادیبوں، شاعروں، دانشوروں، مفکروں اور عالموں پر زور دیا ہے کی اپنی ادبی تخلیقات کے ذریعے ملک کو اسلامی اور فلاحی مملکت بنانے میں حکومت کی مدد کریں۔ صدر گزشتہ روز ایک کتاب کی تعارفی تقریب میں شاعروں اور ادیبوں کے بہت بڑے اجتماع سے خطاب کر رہے تھے۔

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Q No: 3. Read the following paragraph and answer the questions given at the end. (10)**

A man is known by the company he keeps. A good student should avoid the company of those who keep playing all the time. Many students miss their classes and seldom do their homework because some other fellow students do the same. There are hardworking students also who work while others play. They know when to study and when to play. They enjoy the games of their choice because they know that playing games is essential for health. A sick student is not so quick in learning his lesson as healthy one.

Questions:

1. What kind of company should a good student keep?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Why do some students miss their classes?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Why do good students enjoy good health?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Why are games necessary for students?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. Where does the success of a student lie?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Q No: 4. (a) Change the narration.**

(5)

1. He said, "My friend left for Lahore."

2. He said, "I enjoy my picnic with you."

3. I said to him, "Are you going today?"

4. Ali said to me, "Where do you live?"

5. The farmer said, "Alas! I am ruined."

**(b) Make noun of the following words.**

(5)

1. Gather \_\_\_\_\_
2. Encourage \_\_\_\_\_
3. Decorate \_\_\_\_\_
4. Symbolic \_\_\_\_\_
5. Prosper \_\_\_\_\_

**(c) Write synonym of the following words.**

(5)

1. Hard \_\_\_\_\_
2. Disgrace \_\_\_\_\_
3. Reward \_\_\_\_\_
4. Courage \_\_\_\_\_
5. Conquer \_\_\_\_\_

**(d) Find a suitable adverb to replace each adverb phrase.**

(5)

1. The two old friends met each other by accident. \_\_\_\_\_
2. You should complete the work in a while. \_\_\_\_\_
3. This plant flowers once every year. \_\_\_\_\_

4. She is without doubt the most caring person I met. \_\_\_\_\_
5. Our teacher wanted that work to be done without delay. \_\_\_\_\_

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**2<sup>ND</sup> LATERAL ENTRY 2015**  
**CLASS XI**

**TIME: 03 HOURS**

**MARKS: 200**

**NAME: \_\_\_\_\_ ROLL # \_\_\_\_\_**

**BIOLOGY**

**Q. No: 1      Choose the correct option and write in the given column.**  
**20**

| Sr. # | Question   | Option A            | Option B      | Option C           | Option D      | Correct Option |
|-------|--|---------------------|---------------|--------------------|---------------|----------------|
| 1     | Vegetative propagation in onion occurs by                    | Corns               | Bulbs         | Rhizome            | All of these  |                |
| 2     | Stand of gynoecium which holds stigma is                     | Ovule               | Style         | Tube nucleus       | None of these |                |
| 3     | Protein which is found in DNA is                             | Prolene             | Globose       | Histone            | None of these |                |
| 4     | Which of the following is responsible for ammonification?    | Nitrosomonas        | Oomycetes     | Saprobies          | None of these |                |
| 5     | Which of the following is non-carnivores?                    | Pitcher plant       | Sundew        | Venus fly trap     | nightshade    |                |
| 6     | Which of the following is organization to conserve water?    | UNDP                | WWF           | SLOPE              | None of these |                |
| 7     | Fermentation is carried out by                               | Lactobacillus       | Yeast         | Saccharomyces      | All of these  |                |
| 8     | Genetic engineering uses..... type of bacteria.              | Single stranded DNA | Plasmids      | RNA                | None of these |                |
| 9     | Marijuana is extracted from                                  | Cannabis sativa     | Mushrooms     | Azadirachta indica | All of these  |                |
| 10    | Amount of oxygen in inhaled air is                           | 79%                 | 0.04%         | 16%                | 21%           |                |
| 11    | Destruction of wall of alveoli is called                     | Asthma              | Emphysema     | Pneumonia          | All of these  |                |
| 12    | Plants growing in saline are called                          | Heliophytes         | Halophytes    | Hydrophytes        | None of these |                |
| 13    | Kidney stone is cured by                                     | X-rays              | Lithotripsy   | Lithotripsy        | All of these  |                |
| 14    | Pairs of spinal nerves in human body are                     | 24                  | 15            | 18                 | 31            |                |
| 15    | Myopia is another name of                                    | Short sight         | Long sight    | Eye swelling       | None of these |                |
| 16    | Gigantism is caused by disorder of                           | Adrenal gland       | Thyroid gland | Pituitary gland    | Pancreas      |                |
| 17    | It is not a part of hind brain                               | Pons                | Medulla       | Cerebrum           | Cerebellum    |                |
| 18    | Facial bones are ..... in number                             | 14                  | 16            | 18                 | 12            |                |
| 19    | The scar on seed coat, where seed attached to wall is called | Plumule             | Epicotyle     | Hilum              | Radical       |                |
| 20    | Fluid containing sperm is termed as                          | Hilum               | Semen         | Deferens           | meson         |                |

**Q. No: 2      Give brief answers of the following.**  
**30**

- i. Describe commensalism.

---



---

ii. Differentiate between alcoholic fermentation and lactic acid fermentation.

iii. What are sedatives and narcotics?

iv. Draw labeled diagram of nephron and describe its functions.

v. Discuss arthritis along with its types.

vi. Discuss anatomical structure of seed.

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**2<sup>ND</sup> LATERAL ENTRY 2015**  
**CLASS XI**

**TIME: 03 HOURS**

**MARKS: 200**

**NAME:**

**ROLL #**

**CHEMISTRY**

**Q. No: 01**      **Fill in the blanks with suitable words.**  
**15**

- i. For a reaction between  $\text{PCl}_3$  and  $\text{Cl}_2$  to form  $\text{PCl}_5$ , the units of  $K_c$  are .....
- ii. All Bronsted bases are called Lewis .....
- iii. A solution of  $\text{HCl}$  is 0.01 M. Its  $\text{pH}$  is .....
- iv. Fehling solution is used to identify .....
- v. A reaction  $\text{CH}_2=\text{H}_2 \xrightarrow{\text{Ni}}$  .....
- vi. The deficiency of ..... causes night blindness.
- vii. Cancer is caused by damage to .....

- viii. .... gas protects the earth surface from ultra violet radiations.
- ix. .... ions cause the hardness of water.
- x. Jaundice is caused by .....
- xi. Matte is a mixture of .....
- xii. One mole of  $\text{SO}_2$  contains ..... atoms of oxygen.
- xiii. In  $\text{K}_2\text{Cr}_2\text{O}_7$  the oxidation number of Cr is .....
- xiv. .... number of electron make a triple covalent bond.
- xv. In Boyles Law ..... Remain constant.

**Q. No: 02 Indicate true and false.**

- i. Empirical formula gives the information about the total number of atoms present in a compound.
- ii. When the numerical value of  $K_c$  is smaller than  $Q_c$  the reaction will move in forward direction.
- iii. A reaction between an acid and base produces salt and water.
- iv. Unsaturated compounds show the reaction with  $\text{KMnO}_4$ .
- v.  $\text{NH}_3$  and  $\text{NaCl}$  are used as a raw material for the manufacturing of Urea.

**Q No. 03 Give the answers of the following questions.**

- i. Define function group and which tests are used for the identification of aldehyde and amine group.
- ii. Prepare the following:
  - a. Propane from alkyl halides
  - b. 1,2-ethandial from ethane
  - c. Ethane bromide from ethyne
- iii. Define acid rain. How it form and what are its effects.
- iv. Define smelting and how can we get the pure Cu metal by the refining process.
- v. Define electron affinity and why the electron affinity of fluorine is less than chlorine.
- vi. Explain the following.
  - a. Calculate the number of molecules of  $\text{H}_2\text{CO}_3$
  - b. An atom A which have atomic number 15, tell use, how many electrons are present in last shell and also tell in which sub shell the last electrons is fire.

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL  
ABILITY TEST COMPUTER SCIENCE 2015**

**Q1: Fill in the blanks.**

- i. The character `&` also called \_\_\_\_\_
- ii. A proper \_\_\_\_\_ depends on the existence of complete documentation.
- iii. If Auto generates line number that is already being used, a(n) \_\_\_\_\_ symbol appears after the number to warn that any input will replace the existing line.
- iv. When an error occurs its code is assigned to a special variable, named \_\_\_\_\_.
- v. A(n) \_\_\_\_\_ if used has highest priority in a statement.
- vi. \_\_\_\_\_ Statement specifies the location in the file where the record is being sent.
- vii. Color of code 3 in pallet-1 is \_\_\_\_\_
- viii. The shortcut key to insert superscript is \_\_\_\_\_.
- ix. Find the result
- x.
 

```
10 num%=35.73
20 print num%
Run
```

 \_\_\_\_\_
- xi. \_\_\_\_\_ Command is used to clear only the text from GW BASIC Screen.
- xii. The purpose of \_\_\_\_\_ function is to obtain an integer value by simply dropping of the decimal part.
- xiii. In GW-Basic the maximum number of dimensions for an array is \_\_\_\_\_.
- xiv. The \_\_\_\_\_ statement is useful where the programmer does not know in advance how many times the loop will be executed.
- xv. \_\_\_\_\_ Resumes the execution from the statement immediately following the statement that caused error.
- xvi. A \_\_\_\_\_ is an expression that either evaluates to true (usually represented by 1) or false (represented by 0).
- xvii. For ...next is used to implement \_\_\_\_\_.

- xviii. \_\_\_\_\_ Statement reads data input from a file on disk.  
 xix. Syntax of Circle: Circle(x,y),radius[, [color][, [start],[end][\_\_\_\_\_]]]  
 xx. \_\_\_\_\_ is the process of carefully observing the working of an algorithm, on the paper, for some test data.

**Q2 Attempt any six questions.**

- Write Algorithm to find the sum of first hundred even numbers.
- Write a program to calculate the perimeter of a pentagon using read data statement.
- Write a short note on For...Next loop. Also Explain its Syntax
- Write a program that read an array N with 20 numbers and find the product of the elements of array.
- Explain the EOF() function with the help of an example
- Define the color statement and explain its syntaxes.

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**2<sup>ND</sup> LATERAL ENTRY 2015**  
**CLASS XI**

**TIME: 03 HOURS**

**MARKS: 200**

**NAME: \_\_\_\_\_ ROLL # \_\_\_\_\_**

**ENGLISH**

**Q. No: 01 Choose the correct option.**  
**05**

| Sr. # | Question   | Option A         | Option B     | Option C           | Option D      | Correct Option |
|-------|--|------------------|--------------|--------------------|---------------|----------------|
| 1     | Choose the correct spelling  | Convelutions     | Convolutions | Convalutions       | Convolutions  |                |
| 2     | Which of the following does not mean as 'manifold'                                     | Many             | Various      | Diverse            | Few           |                |
| 3     | Beside the ungathered rice he lay. The underlined phrase is a/ an                      | Adjective phrase | Noun phrase  | Preposition phrase | Adverb phrase |                |
| 4     | If I were you, I should not do that. This sentence is conditional sentence type _____. | Type III         | Type II      | Type I             | None of these |                |
| 5     | I am glad that you like it. The underlined clause is an adverb clause of _____,        | Conduction       | Place        | Time               | Reason        |                |

**Q. No: 2 Choose the correct relative pronouns.**  
**05**

| Sr. # | Question  | Option A | Option B | Option C | Option D | Correct Option |
|-------|---|----------|----------|----------|----------|----------------|
| 1     | Fareed said _____ he needed most was a long and quiet holiday.              | That     | Which    | What     | Who      |                |
| 2     | Have you got anything _____ these poor women could take for their children? | Which    | That     | Whom     | What     |                |
| 3     | The man _____ you were talking to is my cousin.                             | That     | What     | Whom     | Which    |                |





**Q. No: 7 Translate into Urdu.**

Each medium has strengths that the other does not. Each makes use of strong points that the other lacks. Television news is like having a fast food meal whereas reading newspaper is like having a ten course dinner. The ideal seems to be, if one has the time, to both read the news and watch it on television.

**Q. No: 8 Translate into English.**

آدمی اپنی قسمت خود بناتا ہے۔ اسکو چاہیے کہ محنت کرے اور لگن سے کام کرے تاکہ وہ اپنی زندگی میں کامیاب ہو سکے۔ محنت اس دنیا کی سب سے بڑی حقیقت ہے جسکو جھٹلایا نہیں جاسکتا۔ اگر ہم ماضی میں نظر دوڑائیں تو معلوم ہو گا کہ جتنے بھی عظیم آدمی گزرے ہیں سب نے محنت اور ہمت سے کام کیا اور اپنی قسمت سنواری۔

**Q. No: 9 Change into indirect speech.**

- i. He said to me, "He does his duty".
- ii. He said to me, "I shall visit you soon".
- iii. He said to me, "Do you smile"?
- iv. I said to him, "Did you occupy this house"?
- v. He said to me, "Who are you"?
- vi. He said, "What a fine day it is today".

**Q. No: 10 Put correct form of the verb "be".**

- i. You cannot see Ali, he \_\_\_\_\_ out today.
- ii. When I saw him, he \_\_\_\_\_ in the garden.
- iii. He \_\_\_\_\_ ill for two weeks.
- iv. He \_\_\_\_\_ a doctor in two years.
- v. Would that he \_\_\_\_\_ rich.

**Q. No: 11 Choose the correct spelling.**

| Sr. # | Option A   | Option B  | Option C   | Option D   | Correct Option |
|-------|------------|-----------|------------|------------|----------------|
| 1     | Persevere  | perserve  | Persever   | Preservere |                |
| 2     | Antibiotic | antibotic | antiboitic | Antiobotic |                |
| 3     | Tweezers   | Teezers   | Twezers    | Twesers    |                |
| 4     | Accessible | Assesible | Acessible  | Accisseble |                |
| 5     | Aptitude   | Amptitude | Ampitude   | ampetude   |                |

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**2<sup>ND</sup> DIRECT ENTRY TEST (PHYSICS)**

**Q No.1 Fill in the blanks with suitable words.**

**(1 x10 =10)**

| Q  | Questions   |
|----|---|
| 1  | Some people use silent whistle to call dogs whose frequency lies between_____ |
| 2  | The endoscope use to diagnose the throat is called _____                      |
| 3  | Each bolt of lightning contains about _____ of energy.                        |
| 4  | Ammeter in a circuit always connected in _____ to measure large current.      |
| 5  | We find the direction of force of current carrying coil by _____              |
| 6  | OR gate gives maximum output if all the inputs are _____                      |
| 7  | Components of computer based information system are _____                     |
| 8  | Safe limit of radiations exposure per year is _____                           |
| 9  | The value of induced e.m.f is directly proportional to _____                  |
| 10 | Where the loops of a spring are close together are called _____               |

**Q No.1 Tick the correct option from the followings.**

**(1 x10 =10)**

| Q. 1 | Questions                                  | A        | B       | C       | D        |
|------|--|----------|---------|---------|----------|
| 1    | The energy released in each fission is     | 200Me V  | 200e V  | 200me V | 200ke V  |
| 2    | 1024 megabytes are equal to                | 1GB      | 1kB     | 1TB     | 1PB      |
| 3    | In C.R.O the potential of grid is          | Negative | Neutral | Zero    | positive |
| 4    | Transformer is used to change the value of | Voltage  | Power   | Energy  | Charge   |
| 5    | Electrical energy is given by              | W=QV     | W=QC    | W=Qt    | W=QR     |
| 6    | The time period of double pendulum is      | 2 s      | 3s      | 4 s     | 1 s      |

|    |   |                |              |             |             |
|----|---|----------------|--------------|-------------|-------------|
| 7  | In electric circuit when electrons move from low to high potential they | Gain potential | Lose energy  | Gain energy | Gain power  |
| 8  | Speed of sound in a liquid is ____ times greater than in gases          | 3              | 4            | 15          | 5           |
| 9  | The endoscope to diagnose the bladder is called                         | Gastro scope   | Bronchoscope | Cystoscope  | Stethoscope |
| 10 | Which of the following is not changed during refraction of light        | Direction      | Speed        | Frequency   | Wavelength  |

**Q No.3 Give the short answers from the followings.**

**(3 x10 =30)**

- I. Differentiate between fission and fusion reaction with the help of chemical equations.
  - II. What is difference between floppy and Hard Disk. Also give their ranges.
  - III. Write the functions of electron gun and florescent screen in Cathode Ray Oscilloscope.
  - IV. What is difference between permanent magnet and electromagnet?
  - V. Write the difference between step-up and step-down a.c transformer.
- 
- VI. Define parallel combination of resistors. In which combination voltage remains same.
  - VII. What is a Mica capacitor?
  - VIII. The power of a convex lens is 5D. At what distance the object should be placed from the lens so that its real and 2times larger image is formed?
- What is difference between noise and music? Also give their examples.
- What is the wavelength of radiowaves transmitted by an FM station at 90MHz? Where  $1\text{M}=10^6$  and speed of radiowaves is  $3 \times 10^8 \text{ms}^{-1}$ .



**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**(3<sup>rd</sup> LATERAL ENTRANCE EXAMINATION 11<sup>TH</sup> CLASS-2016)**

**Total Time: 3 Hours**

**Total Marks: 200**

**Name of Candidate:** \_\_\_\_\_

**Roll No: IV-LE-2/2017-** \_\_\_\_\_

| English<br>(50) | Physics<br>(50) | Chemistry<br>(50) | Math/Bio<br>(50) | Comp<br>(50) | Total<br>(200) |
|-----------------|-----------------|-------------------|------------------|--------------|----------------|
|                 |                 |                   |                  |              |                |

**Board Roll No:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**S.S.C Marks: Class 9<sup>th</sup>**      /

**Board (BISE):** \_\_\_\_\_

**S.S.C Marks: Class 10<sup>th</sup>**      /

**(Encircle RA, if result awaited)**

Note: please send copy of Detailed Marks Sheet immediately on declaration of SSC result.

**Telephone Numbers;**

1. \_\_\_\_\_

2. \_\_\_\_\_

**Postal address:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Instructions:**

1. Use same sheet for answers.
2. Overwriting /Cutting/Erasing in not allowed.

\_\_\_\_\_  
**Superintendent**

SAMPLE

# BIOLOGY

| Q no.1 (10) |   | Q no.2 (10)               |                | Q no.3 (30)                   |               | Total Marks (50) |  |
|-------------|---|---------------------------|----------------|-------------------------------|---------------|------------------|--|
| Sr#         | Questions   | A                         | B              | C                             | D             |                  |  |
| 1           | Cells of cartilage are called                           | Matrix                    | Chondrocyte    | Osteocyte                     | None of these |                  |  |
| 2           | Biceps is ____ muscles                                  | Flexor                    | Extensor       | Puller                        | None of these |                  |  |
| 3           | Generative nucleus then connects to                     | Egg cell                  | Endosperm cell | Both a&b                      | None of these |                  |  |
| 4           | Cotton germinates_____                                  | Epigealy                  | Hypogealy      | Both a&b                      | None of these |                  |  |
| 5           | Testis are located in bag of skin called                | Urethra                   | Epididymis     | Scrotum                       | None of these |                  |  |
| 6           | Myopia is treated by                                    | Concave lens              | Convex lens    | Plane lens                    | All of these  |                  |  |
| 7           | Ginger is an example of____                             | Rhizome                   | Stem tuber     | Bulb                          | Corms         |                  |  |
| 8           | Ovule contain egg cell and__                            | Microspore                | Polar bodies   | Endosperm nuclease            | All of these  |                  |  |
| 9           | Dengue fever is caused by__                             | Culex                     | Aedes          | Anopheles                     | All of these  |                  |  |
| 10          | Find correct pair of fermentation and organism involved | (A) Ethanol_Saccharomyces |                | (B) Formic acid_Saccharomyces |               |                  |  |
|             |   | (C) Glycerol_AspERGILLUS  |                | (D) Ethanol__Aspergillus      |               |                  |  |

**Q#1 Choose the correct option.**  
=10)

(1 x 10)

**Q#2. Fill in the blanks**  
(10)

- I. Sulphonamides is an example of\_\_\_\_\_
- II. Interferon are anti-viral protein produced by\_\_\_\_\_
- III. The complete human genome project was published in \_\_\_\_\_
- IV. Relation between termites and protozoan in its gut is an example of \_\_\_\_\_
- V. Nitrosomonas convert ammonia to \_\_\_\_\_

**Q#3: Give short answers to the following. Each question carries three marks. (3 x 10=30)**

- I. What are chemical composition of chromosomes?

\_\_\_\_\_

- II. What are the types of cartilage?

\_\_\_\_\_

- III. How Antagonist Muscles work?

\_\_\_\_\_

- IV. What is Callus?

\_\_\_\_\_

- V. Describe the Phenomenon of Alternation of generation?

\_\_\_\_\_

- VI. How transcriptions occur?

\_\_\_\_\_

VII. What does meant by phenotype? Give two examples in human.

VIII. What is double fertilization?

IX. What is parthenogenesis?

X. What is meant by feedback mechanism?

### CHEMISTRY

| Q no.1 (14) | Q no.2 (24) | Q no.3 (12) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             |                  |

**Q#1: Tick or circle on the correct answer.**  
(1 X 14 =14)

| Sr# | Question   | A   | B                                     | C   | D   |
|-----|--|---|---------------------------------------|---|---|
| 1   | Soda lime is a mixture of                              | CaO and NaOH                                  | CaCl <sub>2</sub> and NaOH            | CaO and Ca(OH) <sub>2</sub>               | CaCl <sub>2</sub> and KOH                                     |
| 2   | When a catalyst is added to a system at equilibrium    | The value of the equilibrium constant changes | The equilibrium concentration changes | A new lower energy pathway is established | The rate of forward and reverse reaction are not longer equal |
| 3   | Aromatic compounds are given this name because of      | Smell they have                               | Slippery touch they have              | Bitter taste they have                    | None  |
| 4   | Ester are recognized by their                          | Fruity smell                                  | Rotten egg smell                      | Greenish colour                           | None  |
| 5   | NH <sub>2</sub> is the functional group of             | Esters  | Amines                                | Alkyl halides                             | Alcohols  |
| 6   | Hypoglycemia results due to                            | High sugar level in body                      | High cholesterol level                | Low sugar level                           | Low cholesterol level   |
| 7   | The molten mixture of Cu <sub>2</sub> S .FeS is called | Gange   | Slag                                  | Mineral                                   | Matte   |
| 8   | Which type of metals are responsible for hair colour   | Alkali metals                                 | Alkaline earth metals                 | Transition metals                         | Noble metals  |
| 9   | Dioxins and Furans are the part of                     | Natural gas                                   | Flue gas                              | Crude oil                                 | Residual oil  |
| 10  | Mercury poisoning causes                               | High blood pressure                           | Neurological damage                   | Kidney damage                             | None  |
| 11  | Oxidation of alkenes produce                           | Glyoxal                                       | Glycol                                | Oxalic acid                               | formic acid   |
| 12  | Alkenes are prepared from                              | Dehydrogenations                              | Dehalogenation                        | Dehydration                               | dehydrohalogenation   |

|    |   |               |                           |               |                           |
|----|---|---------------|---------------------------|---------------|---------------------------|
|    | alcohols by a process called  |               |                           |               |                           |
| 13 | Ferric hydroxide[ $\text{Fe}(\text{OH})_3$ ] is precipitated out of solution when aqueous sodium hydroxide solution is added to ferric chloride( $\text{FeCl}_3$ )<br>$\text{FeCl}_3 + 3\text{NaOH} \rightarrow \text{Fe}(\text{OH})_3 + \text{NaCl}$<br>Colour of the precipitate is | White         | blue                      | Dirty green   | brown                     |
| 14 | According to Lewis concept, acid is a substance which can.  | Donate proton | Donate a pair of electron | Accept proton | Accept a pair of electron |

**Q#2: Give brief answers of the following questions.**

**(3 x 8 =24)**

I. How can you prepare ethene from alcohol and ethyl bromide?

\_\_\_\_\_

\_\_\_\_\_

II. How can you justify that  $\text{Pb}(\text{OH})\text{NO}_3$  is a basic salt?

\_\_\_\_\_

\_\_\_\_\_

III. Why alkanes cannot be oxidized with  $\text{KMnO}_4$  solution?

\_\_\_\_\_

\_\_\_\_\_

IV. How you justify RNA works like a messenger?

\_\_\_\_\_

\_\_\_\_\_

V. What are the causes of hardness in water?

\_\_\_\_\_

\_\_\_\_\_

VI. Write the chemical reactions of nitric acid for the following.

(i)  $\text{CaCO}_3$  (ii)  $\text{Zn}$  (iii)  $\text{Cu}$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

VII. Why a small amount of coke is required in smelting process.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

VIII. Describe the chemistry of swimming pool cleanliness.

\_\_\_\_\_

\_\_\_\_\_

**NOTE: ATTEMPT THE FOLLOWING QUESTION.**

**(12)**

Q#3: (a) Explain that agricultural effluents are fatal for aquatic life.

(4)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



(b) Write the equation of oxidation of Alkenes with  $\text{KMnO}_4$ .

(2)

Q#4: (a) why strong acids have weak conjugate base and weak acids have strong conjugate base.

(3)

(b) Write the macroscopic characteristics of chemical equilibrium.

(3)

### COMPUTER SCIENCE

| Q no.1 (10) | Q no.2 (40) | Total Marks (50) |
|-------------|-------------|------------------|
|             |             |                  |

| #   | Questions  | (a)                       | (b)                  | (c)         | (d)        |
|-----|--|---------------------------|----------------------|-------------|------------|
| i   | A proper ____ depends on the existence of complete documentation.  | Testing                   | Debugging            | Maintenance | Coding     |
| ii  | If two or more statements are written on a line, they must be separated by a:  | colon                     | Semi Colon           | Comma       | Hyphen     |
| iii | If Auto generates line number that is already being used, a(n) ____ appears after the number to warn that any input will replace the existing line | Trailing exclamation sign | Trailing number sign | Asterisk    | Ampersand  |
| iv  | ____ Operator(s) always evaluates to true or false.  | Concatenation             | Relational           | Arithmetic  | Assignment |
| v   | When an error occurs, its code is assigned to a special variable, named ____.  | Erl                       | Err                  | Error       | Er         |

|      |  |              |              |              |               |
|------|--|--------------|--------------|--------------|---------------|
| vi   | The _____ loop has been used to change the index values of rows and ____ loop has been used to change the index values of columns. | For, while   | Outer, inner | Inner, outer | None of these |
| vii  | A _____ if used, bears the highest priority in a statement.  | Function     | /            | %            | None of these |
| viii | _____ Statement specifies the location in the file where the record is being sent.   | Get          | input        | Read         | None of these |
| ix   | The shortcut key to insert subscript is  | Ctrl+SHIFT+= | Ctrl+SHIFT   | Ctrl+=       | Ctrl+K        |
| x    | Which keyboard shortcut key is used to make the selected word bold?  | Ctrl+B       | Alt+B        | Ctrl+K       | SHIFT+B       |

**Q1. Choose the Correct Answer.**  
=10)

(1 x 10

**2. Attempt any eight parts.**  
[8\*5=40]

i. What is meant by Coding?

---



---

ii. Differentiate between Redo and undo command.

---



---

iii. Write a command in BASIC language to draw an ellipse.

---



---



---



---

iv. Write limitations of flowcharts.

---



---



---

v. Write any four rules for naming Variables in BASIC.

---



---



---

vi. Using while loop, write a program to print digits from 1 to 20.

\_\_\_\_\_

Vii What is the difference between CLEAR and CLS command?

\_\_\_\_\_  
\_\_\_\_\_

Viii Define Concatenation operator with example?

\_\_\_\_\_

ix What is an Array?

\_\_\_\_\_  
\_\_\_\_\_

X Define nested loop?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### ENGLISH

| Q no.1 (20) | Q no.2 (15) | Q no.3 (15) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             | /50              |

**Q.1 (a) Translate the following paragraph into Urdu.**  
(10)

There is a frequently asked question. What would the world be like without books? The very question is absurd and depressing. It is always said that the latest technology signals the demise of books. Decades ago it was thought that radio would replace books. The fear has persisted throughout with the inventions of television and internet.

\_\_\_\_\_  
\_\_\_\_\_

**(b) Translate the following paragraphs into English.**  
(10)

ایک نوجوان باغ میں بیٹھا ہوا تھا۔ وہ کچھ فکر مند تھا۔ کچھ دیر بعد ایک بوڑھا آدمی باغ میں داخل ہوا۔ اس نے نوجوان کو ایک خط دیا۔ نوجوان نے خط کھولا اور اسے پڑھا۔ وہ خط پڑھ کر بہت خوش ہوا۔ اس کے فکر مندی کے آثار غائب ہو گئے۔ اس نے بوڑھے آدمی کا شکریہ ادا کیا۔

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Q.2(a) Name three kinds of sentences with respect to structure.**  
(5)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(b) What is phrase and write three kinds of phrase.

(5)

three kinds of adverb.

(c) Define adverb and write

(5)

Q.3(a) Define cataphoric and anaphoric reference with one example for each.

(10)

(b) Make nouns of the following words.

(5)

I. just

II. relevant

III. convenient

IV. effective

V. cover

### MATHEMATICS

| Q no.1 (20) | Q no.2 (10) | Q no.3 (20) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             | /50              |

Q1 (a). Choose the Correct Answer.

(1x10=10)

| #   | Questions  | (a)               | (b)                     | (c)                  | (d)                  |
|-----|--|-------------------|-------------------------|----------------------|----------------------|
| I   | Roots of the equation $4x^2 - 5x + 2 = 0$ are  | irrational        | imaginary               | rational             | None of these        |
| ii  | A statement which is expressed as equivalence of two ratios is called                                | Identity          | Property of equivalence | Proportion           | None of these        |
| iii | A fraction in which the degree of the numerator is less than the degree of the denominator is called | An equation       | A proper fraction       | An improper fraction | An identity          |
| iv  | Mean is affected by change in.....   | value             | ratio                   | rate                 | None of these        |
| V   | The total of frequency up to an upper class limit or boundary is called .....                        | Frequency polygon | Frequency distribution  | Histogram            | Cumulative frequency |
| vi  | The minimum and the maximum values defined for a class or group are called .....                     | Class boundary    | Class limits            | Class interval       | None of these        |

|             |   |        |          |            |               |
|-------------|---|--------|----------|------------|---------------|
| <b>vii</b>  | The terminal side of the angle $235^\circ$ lies in .... quadrant                | I      | II       | III        | IV            |
| <b>viii</b> | A ..... is the portion of a circle bounded by an arc and a corresponding chord. | Sector | Segment  | arc        | None of these |
| <b>ix</b>   | Locus of a point in a plane equidistant from a fixed point is called .....      | Radius | Diameter | Circle     | None of these |
| <b>X</b>    | $0^\circ$ is equal to .....   | 1      | 0        | Both a & b | None of these |

Q.1 (b)

**Fill in the blanks**

(5 x 2= 10)

- A root of an equation which do not satisfy the equation is called ...
- The name of the method to derive a quadratic formula is .....
- If  $2\omega$  and  $2\omega^2$  are the roots of an equation, then equation is ....
- If two chords of a circle are congruent, then they will be ..... from the Centre.
- If two circles touch each other, their centers and point of contact are .....

**Q.2 Attempt the following questions**

(5 x 2=10)

- What is a pure quadratic equation?

---

---

---

---

- What is synthetic division?

---

---

- Define joint variation with example.

---

---

---

---

- Differentiate between one-to-one correspondence and one-one function.

---

---

- Differentiate between co-terminal and quadrantal angle .

---

---

Q.3(a) Find the value of “m” if 7, m-3, 28 are in continued proportions.

(4)

Q.3(b) Differentiate between function and relation.

(4)

Q.3(c) A road is inclined at an angle  $5.7^\circ$ . Suppose that we drive 2 miles up this road starting from sea level. How high above sea level are we?

(4)

Q.3(d) Solve the equation  $3x^2 + 5 = 8x^{-1}$

(4)

Q.3(e) What is a cyclic quadrilateral? Explain with example.

(4)

### PHYSICS

| Q no.1 (16) | Q no.2 (24) | Q no.3 (10) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             | /50              |

**Q#1: Chose the correct answer from the following.**  
**16= 16)**

(1 x

| Sr # | Questions  | A  | B                                  | C  | D   |
|------|--|--|------------------------------------|--|---|
| 1    | When the frequency of sound wave is increased then which of the following will be decreased  | Wavelength   | Period                             | Both a and b                                 | Amplitude                                 |
| 2    | A simple pendulum complete its 20 vibrations in 2 minutes its time period will be  | 2 min  | 120 Sec                            | 0.166 Sec                                    | 1 Sec                                     |
| 3    | A sound wave has frequency of 2 KHz and wavelength 35 cm and travels 1.5km it will take  | 2.1 Sec  | 3 Sec                              | 5 Sec  | 2.5 Sec                                   |
| 4    | The refractive index of water is   | 1.00   | 1.33                               | 1.66   | 2.42                                      |
| 5    | In the case of convex lens, if the object is on 'F', then image will be  | Beyond 2 F   | Between F and 2 F                  | At F   | No image formed                           |
| 6    | The value of constant 'K' in case of Coulomb's law   | $9 \times 10^9 \text{ N}^2 \text{ m}^2 \text{ C}^{-2}$ | $9 \times 10^9 \text{ N m C}^{-2}$ | $9 \times 10^9 \text{ N m}^2 \text{ C}^{-2}$ | $9 \times 10^9 \text{ N}^2 \text{ m C}^2$ |
| 7    | Two small charged spheres are separated by 3mm which of the following produce the greatest repulsive force                                 | +2q and +3q  | +5q and -4q                        | +2q and -2q                                  | All of these                              |
| 8    | A point charge of +2C is transferred from a point at potential 100 V to a point at potential 50 V. Energy supplied by charge will be       | 100 J  | 100 W                              | 100 k J                                      | 100 k W                                   |
| 9    | If the length of copper wire is 1m and diameter is 2mm, than resistance will be  | $5.4 \times 10^3 \Omega$                               | $5.4 \times 10^{-3} \Omega$        | $5.4 \times 10^{-3} \text{ m}\Omega$         | $5 \times 10^3 \text{ M}\Omega$           |
| 10   | If the price of one unit is Rs 12 and you use an energy saver of 50 W for 8 hours daily in your study room. Cost of one month bill will be | Rs.132   | Rs.144                             | Rs.150                                       | Rs.108                                    |
| 11   | The induced e.m.f depends upon   | Speed of coil and magnet                               | No. of turns                       | Power supplied                               | Both a & b                                |

|    |   |                |            |               |                   |
|----|---|----------------|------------|---------------|-------------------|
| 12 | A step down transformer has a turns of 1:100. An alternating supply of 20 V is connected across the primary coil. Its secondary voltage | 2000 V         | 1800 V     | 1500 V        | 2500 V            |
| 13 | What does the term e-mail stand for   | Emergency mail | Extra mail | External mail | Electronic mail   |
| 14 | When gamma radiations are emitted from nucleus, what will be effect of this decay on atomic number of nucleus                           | Increases      | Decreases  | Remains same  | Frictional change |
| 15 | In simple harmonic motion, the acceleration is directly proportional to   | Displacement   | Force      | Energy        | Time period       |
| 16 | The particle emitted from a hot metal surface are called  | Electrons      | Protons    | Positive ions | Negative ions     |

**Q.NO.2: Give short answers of the following.**

**3 x 8=24**

a). What is difference between simple and compound microscope?

---

---

---

b) Does the bend in wire effects its resistance?

---

---

---

---

c) What is meant by transverse and longitudinal waves?

---

---

---

---

d) A convex lens has focal length of 15 cm. At what distance should the object from lens be placed so that it forms an image at 10 cm from lens?

---

---

---

---

---

---

e) What is ripple tank? Also give the function of vibrator.

---

---

---

---

f) In which direction will a positively charged particle move in an electric field?

---

---

---

g) How much negative charge has been removed from a positive charged electroscope? If it has a charge of  $7.5 \times 10^{-11} \text{C}$ ?

---

---

---

h) What is AND gate? Draw its truth table and diagram.

---

---

---

**Q.NO.3 a). What is difference between fission and fusion reactions? Give one equation for each reaction. (05)**

---

---

---

---

b). State and explain electrostatic law.

(05)

CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL  
4<sup>th</sup> lateral Entry Paper

PAPER: BIOLOGY

TOTAL MARKS: 50

Q No. 1 Pick the most correct option.

(12)

- (i) **Micro organism used for the production of formic acid is.**  
(a) Aspergillus (b) Saccharomysis (c) Bacillus (d) All of these
- (ii) **We eat onion, our tropic Level is:**  
(a) Primary consumer (b) Secondary consumer (c) Decomposer (d) None of these
- (iii) **Cascuta sucks nutrients from vascular system of plants by:**  
(a) Roots (b) Osmosis (c) Haustoria (d) All of these
- (iv) **Mechanism of organic evolution was proposed by:**  
(a) Lemark (b) Chales Darwin (c) Every (d) None of these
- (v) **Human blood variation is the type of:**  
(a) Incomplete dominance (b) Recessive (c) Co dominance (d) All of these
- (vi) **Mendal law of independent assortment is also called.**  
(a) Monohybrid cross (b) Dihybrid (c) Test cross (d) All of These
- (vii) **Watson and Crick proposed their model of DNA**  
(a) 1949 (b) 1951 (c) 1953 (d) None of these
- (viii) **Bag of skin covering testis is called**  
(a) Cowpers (b) Vas deferens (c) Scrotum (d) None of these
- (ix) **Example of epigeal germination is,**  
(a) Bean (b) Pea (c) Maize (d) None of these
- (x) **Single leaf of calyx is also called**  
(a) Sepal (b) Petal (c) Corolla (d) None of these
- (xi) **Fleshy Underground storage leaves are called.**  
(a) Bulbs (b) Corms (c) Rhizome (d) All of these
- (xii) **Binary fission is simply called.**  
(a) Fission (b) Fragmentation (c) Mitosis (d) Both a, & b,

Q No.2 Give short and brief answers:

6 × 3= 18

1. What is meant by axial skeleton?

2. Write the function of meninges.

3. What is feedback mechanism?



4. How short sightedness is treated?

---

---

---

5. Draw structure of nephron?

---

---

---

6. Define transpiration.

---

---

---

**QNo.3** Discuss Gametogenesis with diagram while differentiating between spermatogenesis and Oogenesis.  
(10)

---

---

---

---

---

---

**QNo.4** What was the proposed model of DNA by Watson and Crick? (10)

---

---

**PAPER: CHEMISTRY**

**TOTAL MARKS: 50**

**Q No.1 Fill in the blanks with suitable words.**

- (i) 1Mole of glucose has \_\_\_\_\_ atoms of carbon, \_\_\_\_\_ of oxygen and \_\_\_\_\_ of hydrogen.
- (ii) Blonde hair contain compounds of \_\_\_\_\_
- (iii)  $K_4 [Fe (CN)_6]$  is an example of \_\_\_\_\_ Salts?
- (iv) \_\_\_\_\_ Base is used in alkaline batteries.

**Q No. 2 Tick or circle on the correct option.**

- (xiii)  $-NH_2$  is the functional group of  
(b) Esters (b) Amines (c) Alkyl halides (d) Alcohols
- (xiv) Which one of the following is a Lewis base?  
(b)  $BF_3$  (b)  $H^+$  (c)  $NH_3$  (d) NaCl
- (xv) Which one of the following is insoluble in water?  
(b) Octane (b) KCl (c)  $Na_2SO_4$  (d) NaCl
- (xvi) Night blindness is because of deficiency of  
(b) Vitamin A (b) Vitamin E (c) Vitamin C (d) Vitamin D
- (xvii) For a reaction between  $PCl_3$  and  $Cl_2$  to form  $PCl_5$ , the units of  $k_c$  are  
(b)  $Moldm^{-3}$  (b)  $Mol^{-1}dm^{-3}$  (c)  $Mol^{-1}dm^3$  (d)  $Moldm^3$
- (xviii) Matte is a mixture of  
(b) FeS and CuS (b)  $Cu_2O$  and FeO (c)  $Cu_2S$  and FeS (d) None
- (xix) Specific heat Capacity of water is  
(b)  $4.2 KJg^{-1}K^{-1}$  (b)  $4.2 Jg^{-1}K^{-1}$  (c)  $2.4 KJg^{-1}K^{-1}$  (d)  $2.4 Jg^{-1}K^{-1}$
- (xx) The end product of oxidation of acetylene is  
(b) Oxalic acid (b) Glycol (c) Goxal (d) None of these
- (xxi) Which one of the following is a triglyceride?  
(b) Carbohydrates (b) Proteins (c) Lipids (d) Vitamins
- (xxii) Azone is beneficial for us as it

(b) Absorb IR radiations

(b) Absorb UV radiations

(c) Absorb  $\text{CFC}_3$

(d) Absorb air Pollutants

**Q No.3 Write the short answers of the following questions.**

(i) How slag is formed during smelting process?

---

---

(ii) Write the names of components of a nucleotide.

---

---

(iii) Write a reaction of oxidation of alkenes with potassium permagnate.

---

---

(iv) Why  $\text{CO}_2$  is responsible for warming of atmosphere?

---

---

---

(v) If a reaction has large value of  $K_C$ , will it go to completion and why?

---

---

(vi) What are the limitations of Bronsted – Lowery Concept?

---

---

---

(vii) What is the Source of geraniol? What functional groups are present in this group?

---

---

(viii) How alkynes are prepared by dehydrohalogenation of vicinal dihalides?

---

---

(ix) What is the difference between reducing Sugar and non reducing Sugar?

---

---

---

---

(x) What is flue gas?

---

---

---

---

(xi) How the detergents make the water unfit for aquatic life?

---

---

---

---

(xii) Why only  $\text{NaHCO}_3$  precipitates, when  $\text{CO}_2$  is passed through the ammonical brine?

---

---

---

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**

**Time: 45 min**

**Total Marks: 50**

**Candidate's Name:** \_\_\_\_\_

**F/Name:** \_\_\_\_\_

**English**

**Q. No.1 (a) Write synonym and Urdu meaning of the following words. (10)**

|      | <u>Words</u> | <u>Synonyms</u> | <u>Meaning in Urdu</u> |
|------|--------------|-----------------|------------------------|
| i.   | Diverse      |                 |                        |
| ii.  | Mellow       |                 |                        |
| iii. | Chastened    |                 |                        |
| iv.  | Chivalry     |                 |                        |
| v.   | Reeled       |                 |                        |

**(b) Define the following grammar concepts with one example. (10)**

- (1) Present participle (2) Gerund

---

---

---

---

**Q.No.2 (a) Change narration of the following sentences. (5)**

- i. He said, "Let us go for a walk".  
ii. The boy said, "What do you want to do"?  
iii. He said, "I failed in the exam".  
iv. The teacher said, "Did you do your home task yesterday"?  
v. She said to him, "Do not run fast".

**(b) Change voice of the following sentences. (5)**

- i. What do you want me to do.?  
ii. Had you left Karachi before writing this letter?  
iii. Who will propose to solve this problem?  
iv. I asked you not to go there.  
v. Call the next witness.

**Q No. 3 (a) Translate the following sentences into English. (10)**

- 1 - میری کار خراب ہو گئی ہے۔  
2 - وہ گاڑی پر نہ چڑھ سکے۔  
3 - سڑک مرمت کیلئے بند ہے۔  
4 - وہ تو فرشتہ صفت انسان ہے۔  
5 - میں کس کا یقین کروں۔

(b) Translate the following paragraph into Urdu.

(10)

Early rising is a good habit as it gives us an early start of our days work. We gain time while the late risers are asleep. The early risers have an advantage also. They enjoy good and sound health. Those who are out of bed early, have plenty of time to do their work carefully, steadily and completely. They do not have to put off anything to the next day. The early riser is always happy, fresh and smart. He enjoys his work while those who get up late do it unwillingly. Early rising is, therefore, a key to success in life.

---

---

---

---

CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL  
4<sup>th</sup> lateral Entry Paper Math

Time: 45 min

Total Marks: 50

Candidate's Name: \_\_\_\_\_

F/Name: \_\_\_\_\_

**Q. No.1 Fill in the blanks with a suitable word.**

- i) The name of the method to derive a quadratic formula is .....
- ii) The sum of all cube roots of unity is .....
- iii) Every set is the subset of .....
- iv) A system of equation having a common solution is called a system of .....
- v) The solution of the equation  $2x + 3y = 15$  &  $2x + 3y = 19$  is .....
- vi) The sum of acute angles in a right angle triangle is equals to .....
- vii) If number of elements in set A is 4 and set B is 2 then number of binary relation in  $A \times B$  is .....
- viii) The y – coordinate of every point is ..... on x – axis
- ix)  $\pi$  is the ratio of circumference to the .....
- x) Two intersection circles are not .....

**Q.No.2 Choose the most correct option.**

- i) An equation of the type  $x^4 + x^3 + x^2 + x + 1 = 0$  called a/an
  - (a) Exponential equation
  - (b) Radical equation
  - (c) Reciprocal equation
  - (d) None of these
- ii) The roots of the equation  $x^2 + 8x + 16 = 0$  are .....
  - (a) Imaginary
  - (b) Real and equal
  - (c) Irrational
  - (d) None of these
- iii)  $(x, y)$  .....  $(y, x)$  (where  $x$  is the domain and  $y$  is the range)
  - (a)  $\neq$
  - (b)  $\geq$
  - (c)  $\leq$
  - (d)  $=$
- iv) A quadratic equation with roots 3 & 4 is .....
  - (a)  $x^2 - s + px = 0$
  - (b)  $x^2 - sx + p = 0$
  - (c)  $x^2 sx - p = 0$
  - (d) None of these
- v)  $(1 - w + w^2)^6 =$  .....
  - (a) 68
  - (b) 66
  - (c) 64
  - (d) 62
- vi) The relation  $\{(1, 2), (2, 3), (3, 3), (3, 4)\}$  is .....
  - (a) Onto function
  - (b) into function
  - (c) not a function
  - (d) 1 – 1 function
- vii) If  $f: A \rightarrow B$  and range of  $f = B$ , then  $f$  is an ..... function
  - (a) 1 – 1 function
  - (b) into function
  - (c) onto function
  - (d) None of these
- viii) Zero is a/an ..... number
  - (a) Odd
  - (b) Even
  - (c) Prime
  - (d) None of these
- ix) 1 is a/an ..... number
  - (a) Even
  - (b) Prime
  - (c) Odd
  - (d) None of these
- x) ..... is the middle most observation in an arranged data set.
  - (a) Mode
  - (b) Mean
  - (c) Median
  - (d) None of these

**Q.No.3. What is a bijective function explain with examples.**

**Q.No.4.** The surface area  $S$  of the sphere varies directly as the square of radius  $r$ , and  $S = 16\pi$  when  $r = 2$ , find  $r$  when  $S = 36\pi$

**Q.No.5.** A tree casts a 40 meter shadow when the angle of elevation of the sun is  $25^\circ$ . Find the height of the tree.

**Q.No.6.** Explain with examples that every relation is not a function.

**Q.No.7.** Solve the equation  

$$\frac{x}{x-3} + 4 \left( \frac{x-3}{x} \right) = 4$$

**PAPER PHYSICS**  
**OBJECTIVE TYPE**

| Q No.1 (16) | Q No.2 (24) | Q No.3 (10) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             |                  |

**NOTE:** - You have four choices for each objective type question as A, B, C and D. Encircle the correct option.  
 Cutting or encircling two or more options will result in zero mark. (1x16  
 =16)

| Q.1 | Questions            | A   | B   | C   | D   |
|-----|----------------------|-----|-----|-----|-----|
| 1   | The unit of e.m.f is | N/C | N C | C J | J/C |

|    |  |   |   |                                       |                                       |
|----|--|---|---|---------------------------------------|---------------------------------------|
| 2  | _____ of a D.C motor reverses the direction of current through the coil in every half-cycle  | Brushes                                 | Commutator                              | Split rings                           | Armature                              |
| 3  | If $X = A+B$ then $X = 0$ when   | $A=0, B=0$                              | $A =1, B=1$                             | $A =0, B =1$                          | $A =1, B =0$                          |
| 4  | One of the following is not a processing   | Arranging                               | Manipulating                            | Calculating                           | Gathering                             |
| 5  | In computer terminology, information means   | Any data                                | Large data                              | Raw data                              | Processed data                        |
| 6  | The number of neutrons in tritium ( ${}_1\text{H}^3$ ) are   | 1                                       | 2                                       | 3                                     | 0                                     |
| 7  | The equation of Hook's law is given by   | $k = F \times$                          | $F = -k \times$                         | $F = k / \times$                      | $F = \times / k$                      |
| 8  | The equation for time period of a spring mass system is  | $T = 2\pi\sqrt{m/k}$                    | $T = 2\pi\sqrt{k/m}$                    | $T = 2\pi\sqrt{g/l}$                  | $T = 2\pi\sqrt{l/g}$                  |
| 9  | The intensity level of rusting of leaves is  | 0dB                                     | 30 dB                                   | 10 dB                                 | 40 dB                                 |
| 10 | The refractive index of water is   | 2.42                                    | 1.00                                    | 2.21                                  | 1.33                                  |
| 11 | The equation of electric intensity is  | $E = F/q$                               | $E = q / F$                             | $E = q F$                             | All of these                          |
| 12 | 5 joule of work is needed to shift 10 C of charge from one place to other. The potential difference between the two places will be | 0.5 V                                   | 2V                                      | 5 V                                   | 10 V                                  |
| 13 | The distance between center of curvature and pole of a mirror is equal to  | f                                       | 2f                                      | $\frac{1}{2}f$                        | $\frac{1}{4}f$                        |
| 14 | Sound level in bell is given by  | $10\log_{10} \frac{1}{10} \text{ bell}$ | $10\log_{10} \frac{10}{1} \text{ bell}$ | $\log_{10} \frac{10}{1} \text{ bell}$ | $\log_{10} \frac{1}{10} \text{ bell}$ |
| 15 | The time period of simple pendulum is  | $T = 2\pi\sqrt{m/k}$                    | $T = 2\pi\sqrt{k/m}$                    | $T = 2\pi\sqrt{g/l}$                  | $T = 2\pi\sqrt{l/g}$                  |
| 16 | Speed of sound in a liquid is _____ times greater than in gases  | 3                                       | 4                                       | 15                                    | 5                                     |

### SUBJECTIVE TYPE

2. Attempt all parts from the followings:

(3 x 8=24)

I. Define pitch of sound. Also write the factors on which it depends.

---



---



---

II. Draw a ray diagram for an image when object is placed beyond 2F by using a convex lens.

---



---

III. What is difference between transverse and longitudinal waves? Give one example for each.

IV. Define Electric Field intensity. Also write its formula and S.I unit.

V. What is difference between Alternating current generator and a transformer?

VI. Define NAND Gate. Also draw its symbol and truth table.

VII. Write the names of components of Computer Based Information System.

VIII. Write any three Hazards of Radiations on the human beings.

**Q No.3 Attempt all parts from the following.**  
(2 x 5 = 10)

(a). Define Nuclear Transmutations. Also discuss Alpha, Beta and Gamma decays with one example.

(b). By applying a potential difference of 10 V across a conductor a current of 1.5 A passes through it. How much energy would be obtained from the current in 2 minutes?

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**  
**4<sup>th</sup> lateral Entry Paper Math**

| Q No.1 (10) | Q No.2 (10) | Q No.3 (30) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             |                  |

**Q. No.1 Fill in the blanks with a suitable word.**

(1 × 10 = 10)

- The name of the method to derive a quadratic formula is .....
- The sum of all cube roots of unity is .....
- Every set is the subset of .....
- A system of equation having a common solution is called a system of .....
- The solution of the equation  $2x + 3y = 15$  &  $2x + 3y = 19$  is .....
- The sum of acute angles in a right angle triangle is equals to .....
- If number of elements in set A is 4 and set B is 2 then number of binary relation in  $A \times B$  is .....

- viii) The  $y$  – coordinate of every point is ..... on  $x$  – axis  
 ix)  $\pi$  is the ratio of circumference to the .....  
 x) Two intersection circles are not .....

**Q.No.2 Choose the most correct option.**

**(1 × 10 = 10)**

- i) An equation of the type  $x^4 + x^3 + x^2 + x + 1 = 0$  called a/an  
 (a) Exponential equation (b) Radical equation (c) Reciprocal equation  
 (d) None of these
- ii) The roots of the equation  $x^2 + 8x + 16 = 0$  are .....  
 (b) Imaginary (b) Real and equal (c) Irrational (d) None of these
- iii)  $(x, y)$  .....  $(y, x)$  (where  $x$  is the domain and  $y$  is the range)  
 (b)  $\neq$  (b)  $\geq$  (c)  $\leq$  (d)  $=$
- iv) A quadratic equation with roots 3 & 4 is .....  
 (b)  $x^2 - s + px = 0$  (b)  $x^2 - sx + p = 0$  (c)  $x^2 - sx - p = 0$   
 (d) None of these
- v)  $(1 - w + w^2)^6 = \dots\dots\dots$   
 (a) 68 (b) 66 (c) 64 (d) 62
- vi) The relation  $\{(1, 2), (2, 3), (3, 3), (3, 4)\}$  is .....  
 (a) Onto function (b) into function (c) not a function (d) 1 – 1 function
- vii) If  $f: A \rightarrow B$  and range of  $f = B$ , then  $f$  is an ..... function  
 (b) 1 – 1 function (b) into function (c) onto function (d) None of these
- viii) Zero is a/an ..... number  
 (b) Odd (b) Even (c) Prime (d) None of these
- ix) 1 is a/an ..... number  
 (a) Even (b) Prime (c) Odd (d) None of these
- x) ..... is the middle most observation in an arranged data set.  
 (a) Mode (b) Mean (c) Median (d) None of these

**Q.No.3 Attempt the following questions.**

**(5 × 6 = 30)**

- (i) **What is a bijective function explain with examples.**

- (ii) **The surface area  $S$  of the sphere varies directly as the square of radius  $r$ , and  $S = 16\pi$  when  $r = 2$ , find  $r$  when  $S = 36\pi$**



(iii) A tree casts a 40 meter shadow when the angle of elevation of the sun is  $25^\circ$ . Find the height of the tree.

(iv) Explain with examples that every relation is not a function.

(v) Solve the equation  
 $\frac{x}{x-3} + 4\left(\frac{x-3}{x}\right) = 4$

CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL

| Q No.1 (20) | Q No.2 (10) | Q No.3 (20) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             |                  |

Paper English

Q. No.1 (a) Write synonym and Urdu meaning of the following words. (10)

|       | <u>Words</u> | <u>Synonyms</u> | <u>Meaning in Urdu</u> |
|-------|--------------|-----------------|------------------------|
| vi.   | Diverse      |                 |                        |
| vii.  | Mellow       |                 |                        |
| viii. | Chastened    |                 |                        |
| ix.   | Chivalry     |                 |                        |
| x.    | Reeled       |                 |                        |

(b) Define the following grammar concepts with one example. (10)

(1) Present participle (2) Gerund

---

---

---

---

**Q.No.2 (a) Change narration of the following sentences.****(5)**

- vi. He said, "Let us go for a walk".  
vii. The boy said, "What do you want to do"?  
viii. He said, "I failed in the exam".  
ix. The teacher said, "Did you do your home task yesterday"?  
x. She said to him, "Do not run fast".

**(b) Change voice of the following sentences.****(5)**

- vi. What do you want me to do?  
vii. Had you left Karachi before writing this letter?  
viii. Who will propose to solve this problem?  
ix. I asked you not to go there.  
x. Call the next witness.

**Q No. 3 (a) Translate the following sentences into English.****(10)**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1 - میری کار خراب ہو گئی ہے۔

2 - وہ گاڑی پر نہ چڑھ سکے۔

3 - سڑک مرمت کیلئے بند ہے۔

4 - وہ تو فرشتہ صفت انسان ہے۔

5 - میں کس کا یقین کروں۔

**(b) Translate the following paragraph into Urdu.****(10)**

Early rising is a good habit as it gives us an early start of our days work. We gain time while the late risers are asleep. The early risers have an advantage also. They enjoy good and sound health. Those who are out of bed early, have plenty of time to do their work carefully, steadily and completely. They do not have to put off anything to the next day. The early riser is always happy, fresh and smart. He enjoys his work while those who get up late do it unwillingly. Early rising is, therefore, a key to success in life.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL****Paper Chemistry**

| Q No.1 (04) | Q No.2 (10) | Q No.3 (36) | Total Marks (50) |
|-------------|-------------|-------------|------------------|
|             |             |             |                  |

**Q No.1 Fill in the blanks with suitable words.****(1 × 4 = 4)**

- (v) 1Mole of glucose has \_\_\_\_\_ atoms of carbon, \_\_\_\_\_ of oxygen and \_\_\_\_\_ of hydrogen.  
(vi) Blonde hair contain compounds of \_\_\_\_\_  
(vii)  $K_4[Fe(CN)_6]$  is an example of \_\_\_\_\_ Salts?  
(viii) \_\_\_\_\_ Base is used in alkaline batteries.

**Q No. 2 Tick or circle on the correct option.****(1 × 10 = 10)**

- (xxiii) —NH<sub>2</sub> is the functional group of  
(c) Esters (b) Amines (c) Alkyl halides (d) Alcohols
- (xxiv) Which one of the following is a Lewis base?  
(c) BF<sub>3</sub> (b) H<sup>+</sup> (c)  $\overset{+}{N}H_3$  (d) NaCl
- (xxv) Which one of the following is insoluble in water?  
(c) Octane (b) KCl (c) Na<sub>2</sub>SO<sub>4</sub> (d) NaCl
- (xxvi) Night blindness is because of deficiency of  
(c) Vitamin A (b) Vitamin E (c) Vitamin C (d) Vitamin D
- (xxvii) For a reaction between PCl<sub>3</sub> and Cl<sub>2</sub> to form PCl<sub>5</sub>, the units of K<sub>c</sub> are  
(c) Mol dm<sup>-3</sup> (b) Mol<sup>-1</sup> dm<sup>3</sup> (c) Mol<sup>-1</sup> dm<sup>3</sup> (d) Mol dm<sup>3</sup>
- (xxviii) Matte is a mixture of  
(c) FeS and CuS (b) Cu<sub>2</sub>O and FeO (c) Cu<sub>2</sub>S and FeS (d) None
- (xxix) Specific heat Capacity of water is  
(c) 4.2 KJg<sup>-1</sup> K<sup>-1</sup> (b) 4.2 Jg<sup>-1</sup> K<sup>-1</sup> (c) 2.4 KJg<sup>-1</sup> K<sup>-1</sup> (d) 2.4 Jg<sup>-1</sup> K<sup>-1</sup>
- (xxx) The end product of oxidation of acetylene is  
(c) Oxalic acid (b) Glycol (c) Glyoxal (d) None of these
- (xxxi) Which one of the following is a triglyceride?  
(c) Carbohydrates (b) Proteins (c) Lipids (d) Vitamins
- (xxxii) Azone is beneficial for us as it  
(c) Absorb IR radiations (b) Absorb UV radiations (c) Absorb CFC<sub>s</sub> (d) Absorb air pollutants

**Q No.3 Write the short answers of the following questions.****(3 × 12 = 36)**

- (xiii) How slag is formed during smelting process?  
\_\_\_\_\_  
\_\_\_\_\_
- (xiv) Write the names of components of a nucleotide.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xv) Write a reaction of oxidation of alkenes with potassium permanganate.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xvi) Why CO<sub>2</sub> is responsible for warming of atmosphere?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xvii) If a reaction has large value of K<sub>c</sub>, will it go to completion and why?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xviii) What are the limitations of Bronsted – Lowry Concept?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xix) What is the Source of geraniol? What functional groups are present in this group?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xx) How alkynes are prepared by dehydrohalogenation of vicinal dihalides?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- (xxi) What is the difference between reducing Sugar and non reducing Sugar?  
\_\_\_\_\_  
\_\_\_\_\_

(xxii) What is flue gas?

(xxiii) How the detergents make the water unfit for aquatic life?

(xxiv) Why only  $\text{NaHCO}_3$  precipitates, when  $\text{CO}_2$  is passed through the ammonical brine?

**CADET COLLEGE CHOA SAIDEN SHAH CHAKWAL**

**Paper Biology**

| Q No.1 (12) | Q No.2 (18) | Q No.3 (36) | Q No.4 (10) | Total Marks (50) |
|-------------|-------------|-------------|-------------|------------------|
|             |             |             |             |                  |

**Q No. 1 Pick the most correct option.**

**(1 × 12 = 12)**

- (i) **Micro organism used for the production of formic acid is.**  
(d) Aspergillus (b) Saccharomysis (c) Bacillus (d) All of these
- (ii) **We eat onion, our tropic Level is:**  
(d) Primary consumer (b) Secondary consumer (c) Decomposer (d) None of these
- (iii) **Cascuta sucks nutrients from vascular system of plants by:**  
(d) Roots (b) Osmosis (c) Haustoria (d) All of these
- (iv) **Mechanism of organic evolution was proposed by:**  
(d) Lamark (b) Chales Darwin (c) Every (d) None of these
- (v) **Human blood variation is the type of:**  
(d) Incomplete dominance (b) Recessive (c) Co dominance (d) All of these
- (vi) **Mendal law of independent assortment is also called.**  
(d) Monohybrid cross (b) Dihybrid (c) Test cross (d) All of These
- (vii) **Watson and Crick proposed their model of DNA**  
(d) 1949 (b) 1951 (c) 1953 (d) None of these
- (viii) **Bag of skin covering testis is called**  
(d) Cowpers (b) Vas deferens (c) Scrotum (d) None of these
- (ix) **Example of epigeal germination is,**  
(d) Bean (b) Pea (c) Maize (d) None of these
- (x) **Single leaf of calyx is also called**  
(d) Sepal (b) Petal (c) Corolla (d) None of these
- (xxxiii) **Fleshy Underground storage leaves are called.**  
(b) Bulbs (b) Corms (c) Rhizome (d) All of these
- (xxxi v) **Binary fission is simply called.**

(b) Fission                      (b) Fragmentation                      (c) Mitosis                      (d) Both a, & b,  
**Q No.2 Give short and brief answers:**                      **(6 × 3 = 18)**

7. What is meant by axial skeleton?

---

---

---

---

8. Write the function of meninges.

---

---

---

---

9. What is feedback mechanism?

---

---

---

---

10. How short sightedness is treated?

---

---

---

---

11. Draw structure of nephron?

---

---

---

---

12. Define transpiration.

---

---

---

---

**QNo.3** Discuss Gametogenesis with diagram while differentiating between spermatogenesis and Oogenesis.  
(10)

**QNo.4** What was the proposed model of DNA by Watson and Crick? (10)

---

---

---