



# **R.E.D. GROUP OF SCHOOLS**

## **Summer Holidays Homework**

**SESSION: 2024-25**

**Class: 11th**

**Subject: English**

**Text Book: Hornbill, Snapshots, BBC Compacta**

### **1. Syllabus Covered up to MAY END**

#### **Hornbill**

- Chapter No. 1            Reading Comprehension
- Chapter No. 1            The Portrait of a Lady
- Chapter No. 2            We are not afraid to die, if we can all be together
- Poem No. 1                A Photograph
- Chapter No. 3            Discovering Tut the Saga continue
- Advertisement
- Note Making

### **2. List of all new concepts taught up to MAY END (Grammar Topics)**

- Past Indefinite
- Nouns
- Past Continuous
- Pronouns
- Past Perfect
- Verbs
- Past Perfect Continuous
- Present Indefinite
- Adjectives
- Present Continuous
- Adverbs
- Present Perfect
- Present Perfect Continuous
- Conjunctions
- Future Indefinite
- Prepositions

### **3. Summer Holiday Homework:**

- **Reading & Speaking Homework:**
  - **Section-A:** Reading Homework
  - **Section-B:** Speaking Homework
  - **Section-C:** Pre-Reading Homework
- **Written Homework:**
  - **Section-D:** Chapter-wise Revision Assignment
  - **Section-E:** Grammar Revision Assignment
  - **Section-F:** Project Work

### **4. Tools required for doing Homework:**

- Text Book – Notebook – Scrap Book – Resources as per activity

### **5. Instruction/Guidelines for Reading & Speaking Homework:**

- **Section-A: Reading Homework**
  - Each student will read one fiction & one non-fiction book and write a book review by using the following steps: –
  - **Fiction :** Wings of Fire and A Train to Pakistan.
    - **Non-Fiction :** "The Diary of a Young Girl" by Anne Frank.
    - ✓ Draw creative page as front page
    - ✓ Identify and list the Main characters in the Book
    - ✓ Write the summary of the story as follows: —
      - ❖ Beginning
      - ❖ Middle
      - ❖ End
    - ✓ Write a paragraph on “If you were the author how will you end the story?”

○ **Section-B: Speaking Homework**

- Students will practice on one of the given topics as an extempore activity: –
  - Are Student Loan Exploitive
  - OR
  - Healthcare should be Universal
  - OR
  - Children should be Exposed to Technology

Students will prepare speaking activity video on any one of the above topics and share their video with English teachers on WhatsApp PS group. Video should be of 1 minute.

○ **Section – C: Pre-Reading Homework**

- Do the Pre-Reading of Chapter No.7 (The Adventure) and Ch-8 (Silk Road).
- Write all the difficult words & their meanings of above chapters in English N.B.

**6. Instruction/Guidelines for Written Homework:**

- **Section – C:** Do the given Chapter-wise Assignments on A4 sheet.
- **Section – E:** Do the given Grammar Assignment on A4 sheet.
- **Section – F:** Project work (Prepare a project on different kinds of advertisements)

**Classifieds and no classifieds)**

- **Prepare a student portfolio and include the following details: -**
  - Personal details
  - What I understand by portfolio
  - My goals/ Aim in life for future
  - My achievements till now
  - The areas I need to work to achieve my goal

**7. Marking scheme for English homework: –**

- **Section-A Reading HW**
  - Book Review **2 marks**
- **Section-B Speaking Homework**
  - Video shared by students on WhatsApp **4 marks**
- **Section-C Pre reading homework**
  - Difficult words & their meanings in N.B. **2 marks**
- **Section-D Chapter Wise Revision Assignments** **4 marks**
- **Section-E Grammar Revision Assignment** **4 marks**
- **Section-F Project work** **4 marks**

**Total marks of English H.W. 20 marks**

**8. Important Note:**

- All students must submit their vacation Homework of All Subjects for Assessment by teacher on 1st July 2024 by all means. Five marks will be deducted for per day of delay after 1st July 2024.



# R.E.D. Group of Schools

## Revision Assignment-1

Class: 11th

Ch. Name: The Portrait of a Lady

Subject: English

Ch. No.: 1

### Part-1 – Vocabulary skills

**Q.1. Write the meanings of the following key terms:**

- |                 |                    |
|-----------------|--------------------|
| (i) Seclusion   | (vi) Sentimental   |
| (ii) Serenity   | (vii) Frivolous    |
| (iii) Absurd    | (viii) Undignified |
| (iv) Fables     | (ix) Pallor        |
| (v) Contentment | (x) Customary      |

**Q.2. Write the Synonyms of the following words**

- (i) Scattered
- (ii) Contentment

**Q.3. Write the Antonyms of the following words**

- (i) Undignified
- (ii) Sentimental

**Q.4. Write the Homonyms of the following words**

- (i) Bank
- (ii) Sole

### Part-2 – Reading Skills

**Q.5. Read the following Passage from the Chapter & answer the questions.**

#### Passage

She hobbled about the house in spotless white with one hand resting on her waist to balance her stoop and the other telling the beads of her rosary. Her silver locks were scattered untidily over her pale, puckered face, and her lips constantly moved in inaudible prayer. Yes, she was beautiful. She was like the winter landscape in the mountains, an expanse of pure white serenity breathing peace and contentment.

#### Answer the following Questions from the passage: -

- (A) What does the narrator mean by ‘Silver locks’?
- (B) Which poetic device is employed in “Pale puckered face”?
- (C) What does the word ‘Hobble’ mean?

### Part-3 –Application skills of Subject Tools & Concepts

**Q.6. Answer the following Short Answer Type Questions**

1. What two activities does the grandmother do every day?
2. “In the evening a change came over her.” What change came over the grandmother?
3. How did the grandmother utilise her time in the city home?

**Q.7. Answer the following Long Answer Type Questions**

1. How does grandmother feel about English education and music lessons at school?
2. Give a sketch of the author’s grandmother according to the chapter “The Portrait of a Lady”.
3. What type of bond did the grandmother share with dogs and sparrows?

### Part-4 – Learning Homework

- **Learning Homework:** Learn Ch- 1 From Text Book (Hornbill).



# R.E.D. Group of Schools

## Revision Assignment-2

Class: 11th

Subject: English

Ch. Name: We Are Not Afraid to Die....

Ch. No.: 2

### Part-1 – Vocabulary skills

**Q.1. Write the meanings of the following key terms:**

- |                 |                  |
|-----------------|------------------|
| (i) Honing      | (vi) Tremendous  |
| (ii) Enormous   | (vii) Voyage     |
| (iii) Capsizing | (viii) Frightful |
| (iv) Omnious    | (ix) Respite     |
| (v) Smashed     | (x) Gigantic     |

**Q.2. Write the Synonyms of the following words**

- (i) Honing                      (ii) Smashed

**Q.3. Write the Antonyms of the following words**

- (i) Enormous                  (ii) Respite

**Q.4. Write the Homonyms of the following words**

- (i) Steel                        (ii) Stairs

### Part-2 – Reading Skills

**Q.5. Read the following Passage from the Chapter & answer the questions.**

#### Passage

Unexpectedly, my head popped out of the water. A few metres away, Wavewalker was near capsizing, her masts almost horizontal. Then a wave hurled her upright, my lifeline jerked taut, I grabbed the guard rails and sailed through the air into Wavewalker's main boom. Subsequent waves tossed me around the deck like a rag doll. My left ribs cracked; my mouth filled with blood and broken teeth. Somehow, I found the wheel, lined up the stern for the next wave and hung on.

#### Answer the following Questions from the passage: -

- (A) Who is "I" in the above lines?  
(B) What was the physical state of the narrator?  
(C) Who is "she" in the above lines?

### Part-3 –Application skills of Subject Tools & Concepts

**Q.6. Answer the following Short Answer Type Questions**

- A. Why did the narrator and their family embark on a sea journey?  
B. Describe the first leg of the narrator's journey.  
C. How did the narrator hurt himself?

**Q.7. Answer the following Long Answer Type Questions**

- A. What difference did you notice between the reactions of the adults and the children when faced with danger?  
B. How does the story suggest that optimism helps to endure "the direst stress"?  
C. How did the narrator and his companions save the boat from sinking?

### Part-4 – Learning Homework

- **Learning Homework:** Learn Ch- 2 From Text Book (Hornbill).



# R.E.D. Group of Schools

## Revision Assignment-3

Class: 11th

Subject: English

Ch. Name: Discovering Tut: The Saga Continues.....

Ch. No.: 3

### Part-1 – Vocabulary skills

**Q.1. Write the meanings of the following key terms:**

- |                 |                |
|-----------------|----------------|
| (i) Speculated  | (vi) Sensation |
| (ii) Misfortune | (vii) Cramped  |
| (iii) Ransacked | (viii) Eternal |
| (iv) Extreme    | (ix) Adorned   |
| (v) Antiquity   | (x) Murals     |

**Q.2. Write the Synonyms of the following words**

- (i) Adorned                      (ii) Misfortune

**Q.3. Write the Antonyms of the following words**

- (i) Eternal                      (ii) Adorned

**Q.4. Write the Homonyms of the following words**

- (i) Floor                      (ii) Accept

### Part-2 – Reading Skills

**Q.5. Read the following Passage from the Chapter & answer the questions.**

#### Passage

Carter—Howard Carter, that is — was the British archaeologist who in 1922 discovered Tut’s tomb after years of futile searching. Its contents, though hastily ransacked in antiquity, were surprisingly complete. They remain the richest royal collection ever found and have become part of the pharaoh’s legend. Stunning artefacts in gold, their eternal brilliance meant to guarantee resurrection, caused a sensation at the time of the discovery — and still get the most attention. But Tut was also buried with everyday things he’d want in the afterlife: board games, a bronze razor, linen undergarments, cases of food and wine.

#### Answer the following Questions from the passage: -

- (A) Who found King Tut’s mummy?  
(B) What was the mummy laden with?  
(C) Why were kings laden with riches?

### Part-3 –Application skills of Subject Tools & Concepts

**Q.6. Answer the following Short Answer Type Questions**

- A. Who was Howard Carter? What was his discovery?  
B. Why did King Tut’s mummy have to undergo CT scan?  
C. In 1968 what was the startling fact revealed by a professor of anatomy about king Tut?

**Q.7. Answer the following Long Answer Type Questions**

- A. “The mummy is in very bad condition because of what Carter did in the 1920s,” said Zahi Hawaas, the expert on Egyptian antiquity. How far is the statement true? Discuss.  
B. Who was King Tut? What do you know about him?  
C. Discuss the suitability of the title, ‘Discovering Tut: The Saga Continues’.

### Part-4 – Learning Homework

- **Learning Homework:** Learn Ch-3 From Text Book(Hornbill).



# R.E.D. Group of Schools

## Revision Assignment-4

Class: 11th

Subject: English Grammar

### Part-1 – Word Structure

#### Section-A (Part of Speech)

**Q.1. Define the following parts of speech and give one example.**

(a) Prepositions - \_\_\_\_\_

Example: \_\_\_\_\_

(b) Interjections- \_\_\_\_\_

Example: \_\_\_\_\_

**Q.2. Choose the correct option as per the given directions:**

A. Nafeesa is afraid \_\_\_\_\_ spiders.

i) From

iii) About

ii) In

iv) of

B. I am worried \_\_\_\_\_ the exam.

i) In

iii) On

ii) About

iv) of

C. He looks upset, I think he took the criticism \_\_\_\_\_ heart.

i) To

iii) In

ii) About

iv) of

D. I am envious \_\_\_\_\_ them.

i) of

iii) In

ii) About

iv) On

**Q.3. Fill in the blanks with correct parts of speech. (Pronouns and Adverbs)**

A. Shyam is my brother. \_\_\_\_ study in the same class

B. Between Ritu and me, \_\_ am the younger one.

C. The man repeated the same thing \_\_\_\_\_.

D. The mangoes are \_\_\_\_\_ripe.

**Q.4. Identify and correct the error in the following sentence:**

A. Many peoples attended the funeral of the great man.

B. The shepherd took the cattles to the field.

C. Sita could not understands what the teacher was saying.

D. Do you know the importance for clean water?

**Q.5. Change the underlined parts of speech to the following:**

A. Romesh is the driver (verb) of the bus that takes me to school.

B. Satish Kumar is a very strong (abstract noun) man.

C. Aarohi is a graceful (adverb) dancer.

D. Sujit sings (noun) in our school band.

### Part-2 – Sentence Structure

#### Section-B: Tense Structure

**Q.6. Define the following tense and give one example.**

(a) Simple present tense - \_\_\_\_\_

Example: \_\_\_\_\_

(b) Simple past tense - \_\_\_\_\_

Example: \_\_\_\_\_

**Q.7. Choose the correct option as per the given directions:**

1. I \_\_\_\_\_ working all afternoon and have just finished the assignment.  
A. have been            B. had been            C. shall be            D. am
2. Rohan \_\_\_\_\_ the movie before he read the review.  
A. watches            B. have watched            C. had watched            D. was watching
3. He \_\_\_\_\_ in the States but he still does not have a command over the English language.  
A. have been living    B. has been living    C. have lived            D. living
4. By the next month, we shall \_\_\_\_\_ the project.  
A. has completed    B. completing            C. completed            D. have completed

**Q.8. Fill in the blanks with the correct tense.**

- A. Shruti \_\_\_\_\_ to study now.
- B. James \_\_\_\_\_ to the market yesterday.
- C. At this time tomorrow, Jason \_\_\_\_\_ in Paris.
- D. When Diya got the call, she \_\_\_\_\_ in her office.

**Q.9. Identify and correct the error in the following sentences:**

- A. It is raining for two days.
- B. The baby is sleeping for three hours now.
- C. I have seen him yesterday.

**Q.10. Transform the given sentences as instructed:**

- A. She doesn't like sweets and chocolates. (interrogative)
- B. She is coming to attend the meeting in the evening. (negative interrogative)
- C. She has taken her breakfast in the morning. (simple past tense)
- D. I have not completed the assignment yet. (Past perfect)

**Q.11. Translate the given Hindi sentence into English-**

- A. मैंने खाना खा लिया था जब वह आया।
- B. उसने अपनी किताब पढ़ ली थी जब मैंने उसे बुलाया
- C. उन्होंने नई गाड़ी खरीदी है।

**Section-C: Voices**

**Q.12. Convert the given sentence as instructed**

- A. Shreya Ghoshal sings beautiful songs. (passive)
- B. The Sun sets in the West. (passive)
- C. The boy was being beaten by his teacher. (active)
- D. Bucky is helped by Steve. (active)
- E. The carpenter is building the desk. (active)
- F. The woodcutter cut down the tree. (passive)

**Section-D: Narration**

**Q.13. Convert the given sentence as instructed**

- A. Rahul told to me, "When are you leaving?"
- B. "Where do you live?" the stranger asked Aladdin.
- C. The teacher said to Shelly, "Why are you laughing?"
- D. Dhronacharya said to Arjun, "Shoot the bird's eye."
- E. "Call the first convict," said the jury.

**Part-3 – Creative Writing Skills**

**Section-E**

**Q.14. Questions based on speech writing:**

- A. As Mukul / Mahima of Alps Public School, write a speech to be delivered in school assembly highlighting the importance of cleanliness suggesting that the state of cleanliness reflects the character of its citizens. (150-200 words)
- B. You are Ali/Alia, Head girl / Head boy of your school. You are deeply disturbed by the rising cases of aggressive behaviour of students in your school. You decide to speak during the morning assembly about it. Write a speech on 'Indiscipline in Schools'. (150 – 200 words)

**Q.15. Question based on debate writing:**

- A. You are Mukul / Mahima of Alps Public School. Your school has organized a debate on “Social Media and It’s Effects” and you will be participating in your school. Prepare your views against or in favour of the motion.
- B. “Academic excellence is the only requirement for a successful career.” Write a debate either for or against the motion. (120 – 150 words)

# Summer Holidays Homework

SESSION: 2024-25

CLASS – 11<sup>th</sup>

Subject: Physics

Text Book: NCERT, S.L Arora

## 1. Syllabus Covered upto MAY END

- Chapter No.- 1 **Mathematical tool**
- Chapter No.- 2 **Unit and measurement**
- Chapter No.- 3 **Motion in straight line**
- Chapter No.- 4 **Motion in Plane**

## 2. List of all new concepts taught upto MAY END

- Concept of unit and dimensional formula
- Concept of scalar quantity, vector quantity and there algebra
- Concept of uniform motion and non uniform motion
- Motion of partical in a plane

## 3. Summer Holiday Homework:

### ○ **Reading Homework:**

- **Section-A:** Pre-Reading Homework

### ○ **Written Homework:**

- **Section-B:** Chapter-wise Revision Assignments
- **Section-C:** Creative Project/ Model
- **Section-D:** Experiment based activity.
- **Section-E:** Indian Scientists (Physics) and their contribution.

## 4. Tools required for doing Homework:

- Text Book
- Notebook
- A<sub>4</sub>Sheets
- Resources as per activity

## 5. Instruction/Guidelines for Reading Homework:

### ○ **Section-A : Pre-Reading Homework**

- Do the Pre-Reading of Chapter No. 5 and 6 .
- Write all the difficult words & their meanings of above chapters in Physics N.B.

## 6. Instruction/Guidelines for Written Homework:

- **Section-B :**Do the given Assignments on A4 Sheets.
- **Section-C :** Creative Project/ Models
  - Topic: Roll no 1 to 8 (To Make A Simple Newton's Cradle)
  - Topic: Roll no 9 to 16 (To make a balancing scale)
  - Topic: Roll no 17 to 24 (To make a Balloon hovercraft)

- Topic: Roll no 25 to 31 (To make a electro magnetic)
- **Section-D-Experiment based activity.**
  - One activity which can be performed at home with parental supervision.
    - **Name of the Activity:** To To Make A Simple Newton’s Cradle
    - **Material Required:** Jumbo Craft Sticks, (6) Marbles, String, Scissors, Glue, Tape, Pencil Hot Glue Gun/Glue
    - **Procedure:**
      - Glue (4) craft sticks together at the corners to make a square. Repeat with (4) more crafts sticks. Let dry. These will be the sides of the frame.
      - Cut string into (6) equal pieces approximately 8” longHot glue a marble to the center of one of the pieces of string. Repeat to end up with (6) separate marbles, each glued to the center of a string.
      - Make (6) marks along two craft sticks every ½”. Make sure the marks are centered on the sticks. Tape one end of the strings with marbles attached along one of the craft sticks at each mark. Set aside.
    - **Observations:** .....
    - **Conclusion:** .....
    - **Precautions:** .....

**II (Roll no 11 to 20) Topic: To make a balancing scale**

**Materials required:** two identical paper plates, string, pencil, tape, glue, a pair of scissors, and a cloth hanger. Punch three holes in both the paper plates. Make sure the holes are close to the outer boundary of the plates

**Steps to prepare:-**

- Out six pieces of string that are equal in length. The length of each string should be approximately equal to 2 ft.
- Attach one end of each string to the individual holes punched in the plates. Hold one of the paper plates and take the three strings attached to the holes grooved into it. Properly stretch the strings and tie them together in a single knot. Perform the same procedure with the other plate.

**III (Roll no 21 to 30 ) Topic :- To make a Balloon hovercraft**

**Material Required** :- CD/DVD, a bottle cap, a balloon, glue or tape, and a pair of scissors.

**Steps to prepare:-**

- Groove a small hole right in the middle of the bottle cap. The diameter of the hole should be approximately equal to the diameter of a regular plastic straw.
- Stick the bottle cap in the centre of the CD/DVD with the help of glue or tape. Inflate the balloon, pinch it from the opening side to hold the air inside, and fix it to the boundary of the bottle cap in such a way that the air present inside the balloon can escape through the hole in the bottle cap easily.

**IV (Roll no 31 to 40) Topic :- To make a electro magnetic**

**Material required:** battery, an iron nail, a switch, and insulated copper wire.

**Steps to prepare:-**Connect one terminal of the switch to one end of the copper wire. Connect a battery between the free ends of the wire and the switch. Now, if you push the switch and move the nail near ferromagnetic materials, the object gets attracted and stick to the nail.

Hot Glue Gun/Glue

○ **Section-E- Indian Scientists and their contribution (Any 1 Scientist).**

Research on any one Indian scientist (Physics) and prepare a project on A4 size sheets and a collage by using their pictures.

- **Point to be enquired:**

- Birth
- Education
- Branch in which they worked
- Achievements

**7. Marking scheme for Physics homework: –**

- **Section-A : Pre-Reading HW**
  - Difficult words & their meanings in N.B. **4 marks**
- **Section-B : Chapter wise Revision Assignments** **4 marks**
- **Section-C : Project/Model** **4 marks**
- **Section-D : Experiment Based Activity** **4 marks**
- **Section-E : Research on Indian Scientist (Physics)** **4 marks**

**Total marks of Physics H.W.**

**20 marks**

**8. Important Note:**

- **All students must submit their vacation Homework of All Subjects for Assessment by teacher on 1st July 2024 by all means. Five marks will be deducted for per day of delay after 1st July 2024.**



# R.E.D. Group of Schools

## Revision Assignment-1

Class: 11  
Ch.No.: 01

Subject: Physics

Ch. Name: Mathematical tools , unit and measurement.

For recapitulation & solving the assignment the students should refer to their text book of Physics

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

- |                    |                       |                       |                           |
|--------------------|-----------------------|-----------------------|---------------------------|
| (i) intercept      | (ii) slope            | (iii) differentiation | (iv) definite integration |
| (v) Ampere formula | (vi) parallax         | (vii) Angstrom        | (viii) Dimensional        |
|                    | (ix) Common potential | (x) Least count       |                           |

### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage

Measurement of any physical quantity involves comparison with a certain basic, arbitrarily chosen, internationally accepted reference standard called unit. The units for the fundamental or base quantities are called fundamental or base units. The units of all other physical quantities can be expressed in terms of fundamental units and are thus named as derived units. In SI system units of seven base quantities are taken as the fundamental units. The nature of a physical quantity is described by its dimensions. All the physical quantities can be expressed in terms of some combination of seven fundamental unit is. The dimensions of a physical quantity are thus the powers to which the base quantities are raised to represent that quantity

Answer the following Questions from the passage:-

Q1. Which of the following is not a fundamental unit ?

- (a) Current                      (b) meter                      (c) second                      (d) kilogram

Q2. Which one of the following is a dimensionless quantity?

- (a) Mass                      (b) Weight                      (c) Specific weight                      (d) Reynold's number

Q3. If the unit of force and length are doubled, the unit of energy will be

- (a) 1/2 times                      (b) 2 times                      (c) 4 times                      (d) 1/4 times

### Part-3 – Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/ Flow chart/Puzzle for the following Concepts

**Diagram:**

- a) Difference between fundamental and derived unit.  
b) Draw a graph for  $x^2 = ky$

Q.4. Solve the following Assertion-Reason/Statement based question

**Directions:** These questions consist of two statements, each printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses.

- (a) If both Assertion and Reason are correct and the Reason is a correct explanation of the Assertion.  
(b) If both Assertion and Reason are correct but Reason is not a correct explanation of the Assertion.  
(c) If the Assertion is correct but Reason is incorrect.  
(d) If both the Assertion and Reason are incorrect.

- Q1. Assertion:** Force cannot be added to pressure.  
**Reason:** Because their dimensions are different.
- Q2. Assertion:** Parallax method cannot be used for measuring distances of stars more than 100 light years away.  
**Reason:** Because parallax angle reduces so much that it cannot be measured accurately.
- Q3. Assertion:** Rate of flow of a liquid represents velocity of flow.  
**Reason:** The dimensions of rate of flow are  $[M^0L^1T^{-1}]$

**Q.5. Perform the following Lab. Activity at home and share the video of your activity to the Science PS Group and answer the following questions related to the activity**

**Activity**

**Name of the Activity:** To Make A Simple Newton's Cradle

**Material Required:** Jumbo Craft Sticks,(6) Marbles, String, Scissors, Glue, Tape, Pencil Hot Glue Gun/Glue

**Procedure:** Glue (4) craft sticks together at the corners to make a square. Repeat with (4) more craft sticks. Let dry. These will be the sides of the frame. Cut string into (6) equal pieces approximately 8'' long Hot glue a marble to the center of one of the pieces of string. Repeat to end up with (6) separate marbles, each glued to the center of a string.

Make (6) marks along two craft sticks every  $\frac{1}{2}$ '' . Make sure the marks are centered on the sticks. Tape one end of the strings with marbles attached along one of the craft sticks a teach mark. Set aside.

- (a) What do you mean by conservation principle?  
 (b) Define momentum?

**Q.6. Answer the following Short Answer Type Questions**

**Differentiate the following:-**

- i) mass and weight  
 ii) definite integration and indefinite integration  
 iii) slope and intercept  
 iv) derivative and integration

**Q.7. Answer the following Long Answer Type Questions**

1.) By the use of dimensional analysis show that following equation are dimensionally correct

(a)  $v^2 - u^2 = 2aS$

(b) work done =  $\frac{1}{2}(mv^2) + mgh$

(c) time period =  $2\pi(L/g)^{1/2}$

2.) Find the values of:

(i)  $\sin(270^\circ)$

(ii)  $\cos(120^\circ)$

(iii)  $\tan(150^\circ)$

3. Find slope & intercept to following equations:-

(i)  $10y + 5x = 15,$

(ii)  $-y + 4x = 2$

4.) Solve the following integration

(i)  $\int_1^2 (x+2)^2 dx$

(ii)  $\int_1^2 e^{3x} dx$

(iii)  $\int_0^2 e^3 dx$

(vi)  $\int_0^\pi \sin 3x dx$

(v)  $\int (x^3 + 3x^3 + 2) dx$

5.) Derive graphically  $S=ut+1/2at^2$

#### **Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch-2 complete.



# R.E.D. Group of Schools

## Revision Assignment-2

Class: XI

Ch.No.: 2

Subject: Physics

Ch. Name: Unit and dimension

For recapitulation & solving the assignment the students should refer to their text book of Physics

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

- |                        |                           |                          |
|------------------------|---------------------------|--------------------------|
| (i) One Parsec         | (ii) One Light year       | (iii) Derived unit.      |
| (iv) Fundamental units | (v) Electromagnetic force | (vi) Gravitational force |
| (vii) Dimension        | (viii) Unit               | (ix) Scaler quantity     |
| (x) Vector quantity    |                           |                          |

### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage

Before learning the dimensional formula, let us recall what is dimension. Dimension in maths is a measure of the length, width, or height extended in a particular direction. By dimension definition, it is a measure of a point or line extended in one direction. Every shape around us has some dimensions. The concept of dimension in maths does not have any specific dimensional formula. Dimension of any physical quantity is the power to which the fundamental units are raised to obtain one unit of that quantity. Let us learn about the dimensional formula with a few examples in the end.

(i) Answer the following Questions from the passage:-

(A)  $[ML^{-1}T^{-2}]$  is the dimensional formula of

- |                           |                             |
|---------------------------|-----------------------------|
| (a) force                 | (b) coefficient of friction |
| (c) modulus of elasticity | (d) energy                  |

(B) The dimensional formula of coefficient of viscosity is

- |                  |                         |                       |                   |
|------------------|-------------------------|-----------------------|-------------------|
| (a) $[MLT^{-1}]$ | (b) $[M^{-1}L^2T^{-2}]$ | (c) $[ML^{-1}T^{-1}]$ | (d) none of these |
|------------------|-------------------------|-----------------------|-------------------|

(C) Plane angle and solid angle have

- |                                |                               |
|--------------------------------|-------------------------------|
| (a) Unit but no dimensions     | (b) Dimensions but no units   |
| (c) No units and no dimensions | (d) both units and dimensions |

### Part-3 – Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/ Flow chart/Puzzle for the following Concepts

**Diagram:**

- a) Draw a table of dimensional formula of any 10 physical quantities.  
b) Complete the Puzzle:

Fundamental Quantity:

Length						
--------	--	--	--	--	--	--

Q.4. Solve the following Assertion-Reason/Statement based question

- (i) (a) Both Assertion and reason are true and reason is correct explanation of assertion  
(b) Both Assertion and reason are true but reason is not a correct explanation of assertion.  
(c) If assertion is true but reason is false.  
(d) If both assertion and reason are false
- i) **Assertion :** Dimensional constants are the quantities whose value are constant.  
**Reason :** Dimensional constants are dimensionless.
- ii) **Assertion :** When we change the unit of measurement of a quantity, its numerical value changes.  
**Reason :** Smaller the unit of measurement smaller is its numerical value.

**Q.5. Perform the following Lab. Activity at home and share the video of your activity to the Science PS Group and answer the following questions related to the activity**

**Activity:**

To find the diameter of a wire using screw gauge

- (a) What is least count of screw gauge ?
- (b) What are the Applications of Screw Gauge ?

**Q.6. Answer the following Short Answer Type Questions**

- Q1 (i) In what way is the knowledge of the dimensions of a physical quantity useful?  
(ii) Write limitations of Dimensions analyses?
- Q2. (i) How is a dimensional formula different from a differential equation?  
(ii) Write dimensions of work, force and pressure?
- Q3. (i) Distinguish between the dimensions and unit of a physical quantity.  
(ii) Write SI unit of Acceleration, force and energy?

**Q.7. Answer the following Long Answer Type Questions**

**Q1. .** By the use of dimensional analysis show that following equation are dimensionally correct

(a)  $v^2 - u^2 = 2aS$

(b) work done =  $\frac{1}{2} (mv^2) + mgh$

(c) time period =  $2\pi(L/g)^{1/2}$

**Q2.** Define one astronomical unit.

**Q3.** Write the relationship between numerical value of a quantity and the size of the unit.

#### **Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch- 2 Complete.



# R.E.D. Group of Schools

## Revision Assignment-3

Class: XII

Subject: Physics

Ch.No.: 3

Ch. Name: : Motion in straight line

For recapitulation & solving the assignment the students should refer to their text book of Physics

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

- |                  |                     |                   |
|------------------|---------------------|-------------------|
| (i) Uniform      | (ii) Kinematics     | (iii) Rectilinear |
| (iv) Projectile  | (v) Acceleration    | (vi) Curved       |
| (vii) Trajectory | (viii) Displacement | (ix) Speed        |
| (x) Distance     |                     |                   |

### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage :

If an object moving along the straight line covers equal distances in equal intervals of time, it is said to be in uniform motion along a straight line. Distance and displacement are two quantities that seem to mean the same but are different with different meanings and definitions. Distance is the measure of actual path length travelled by object. It is scalar quantity having SI unit of metre while displacement refers to the shortest distance between initial and final position of object. It is vector quantity. The magnitude of the displacement for a course of motion may be zero but the corresponding path length is not zero.

(i) Answer the following Questions from the passage:-

- (A) Can path length be zero for motion of body from one point to other point?  
(a) Yes                      (b) No                      (c) Sometimes possible                      (D) none of these
- (B) The area under velocity time graph gives  
(a) Displacement over given time interval                      (b) Acceleration  
(c) Velocity                      (d) None of these
- (C) Equation of motions are applicable to motion with  
(a) uniform acceleration                      (b) non uniform acceleration  
(c) constant velocity                      (d) none of these

### Part-3 – Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/ Flow chart/Puzzle for the following Concepts

#### **Diagram:**

- a) VT Graph for Uniform Motion  
b) ST Graph for Accelerated Motion

Q.4. Solve the following Assertion-Reason/Statement based question

- (i) (a) Both Assertion and reason are true and reason is correct explanation of assertion  
(b) Both Assertion and reason are true but reason is not a correct explanation of assertion.  
(c) If assertion is true but reason is false.  
(d) If both assertion and reason are false
- i) **Assertion :** The magnitude of the displacement for a course of motion may be zero.  
**Reason :** The path length for the corresponding course of motion is zero.
- ii) **Assertion :** The speedometer of an automobile measure the average speed of the automobile.  
**Reason :** Average velocity is equal to total displacement per total time taken.

Q.5. Perform the following Lab. Activity at home and share the video of your activity to the Science PS Group and answer the following questions related to the activity

#### **Activity:**

To measure the length of a wire using Vernier Calliper.

- (a) What is least count of a Vernier Calliper?  
(b) What are the Applications of Vernier Calliper ?

**Q.6. Answer the following Short Answer Type Questions**

1. A particle starts from rest with a uniform acceleration. Its displacement  $x$  after  $t$  seconds is given in meters by the relation  $x = 5 + 6t + 7t^2$   
Calculate the magnitude of its (i) initial velocity (ii) velocity at  $t = 3$  s (iii) uniform acceleration and (iv) displacement at  $t = 5$  s
2. The mass of a body is 2.5 kg. It is in motion and its velocity  $v$  after time  $t$  is  $v = \frac{t^3}{3} + \frac{t^2}{3} + 1$   
Calculate the force acting on the body at the time  $t = 3$  s.
3. A 400m long railway train, is going from New Delhi railway station to Kanpur. Can we consider a railway train as a point object?

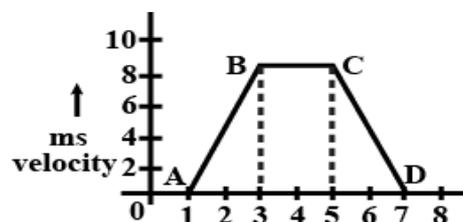
**Q.7. Answer the following Long Answer Type Questions**

**Q1.** Position of particle is given by  $X = 18t + 5t^3$ . Calculate:

- (a) Instantaneous velocity at  $t = 2$  sec
- (b) Average velocity between 1 second and 3 sec
- (c) Instantaneous acceleration at  $t = 2$  sec

**Q2.** The velocity of the bullet becomes one third after it penetrates 4 cm in a wooden block. Assuming that bullet is facing a constant resistance during its motion in the block. The bullet stops completely after travelling at  $(4 + x)$  cm inside the block. What is the value of  $x$  ?

**Q3.** For the velocity time graph shown in the figure below, the distance covered by the body in the last two seconds of its motion is what fraction of the total distance travelled by it in all the seven seconds?



**Q4.** A ball thrown vertically upwards with speed ' $u$ ' from the top of a tower reaches the ground in 9 s. Another ball is thrown vertically downwards from the same position with speed ' $u$ ', takes 4 s to reach the ground. Calculate the value of ' $u$ '. (Take  $g = 10 \text{ms}^{-2}$ )

**Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch- 3 Complete.



# R.E.D. Group of Schools

## Revision Assignment-4

Class: XII

Ch.No.: 4

Subject: Physics

Ch. Name: Motion in Plane

For recapitulation & solving the assignment the students should refer to their text book of Physics

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

(i) projectile motion

(ii) trajectory

(iii) path

(iv) Acceleration

(v) Range

(vi) Height

(vii) Time of flight

(viii) Time of Ascent

(ix) Time of descent

(x) circular motion

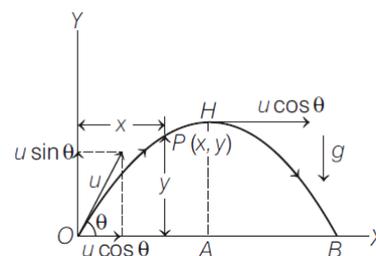
### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage :

Projectile motion is a form of motion in which an object or particle is thrown with some initial velocity near the earth's surface and it moves along a curved path under the action of gravity alone. The path followed by a projectile is called its trajectory, which is shown below. When a projectile is projected obliquely, then its trajectory is as shown in the figure below.

Here velocity  $u$  is resolved into two components, we get (a)  $u \cos\theta$  along OX and (b)  $u \sin\theta$  along OY .



(i) Answer the following Questions from the passage:-

(A) The example of such type of motion is

(a) motion of car on a banked road

(b) motion of boat in sea

(c) a javelin thrown by an athlete

(d) motion of ball thrown vertically upward

(B) The acceleration of the object in horizontal direction is

(a) constant

(b) decreasing

(c) increasing

(d) zero

(C) A cricket ball is thrown at a speed of 28 m/s in a direction  $30^\circ$  with the horizontal. The time taken by the ball to return to the same level will be

(a) 2.0 s

(b) 3.0 s

(c) 4.0 s

(d) 2.9 s

### Part-3 – Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/ Flow chart/Puzzle for the following Concepts

#### Diagram:

a) Horizontal projectile motion

b) Angular projectile motion

Q.4. Solve the following Assertion-Reason/Statement based question

- (i) (a) Both Assertion and reason are true and reason is correct explanation of assertion  
(b) Both Assertion and reason are true but reason is not a correct explanation of assertion.  
(c) If assertion is true but reason is false.  
(d) If both assertion and reason are false

i) **Assertion :** In the motion of projectile the horizontal component of velocity remains constant

**Reason :** The force on the projectile is gravitational force which acts only in vertically downward direction

ii) **Assertion :** If net force on a rigid body is zero, it is either at rest or moving with a constant linear velocity . Nothing else can happen.

**Reason :** Constant velocity means linear acceleration is zero.

Q.5. Perform the following Lab. Activity at home and share the video of your activity to the Science PS

**Group and answer the following questions related to the activity**

**Activity**

Tie a stone with a 15 cm long thread and move it in a circular path. Suppose thread breaks at any moment. Then answer the following questions

- (a) What will be path of stone
- (b) Define centripetal acceleration and find out its direction.

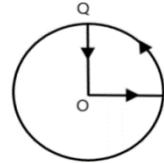
**Q.6. Answer the following Short Answer Type Questions**

1. A particle is moving in x-y plane on a straight line its x and y coordinates are given as  $x = (2t^2+4)$  m and  $Y = (23x+8)$  m and t is in second. The acceleration of the particle will be ?
2. Under what conditions will the vectors  $A=$  and be perpendicular to each other? Find the value of  $|b|$ ?
3. If then find magnitude of vector .

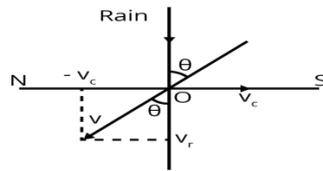
**Q.7. Answer the following Long Answer Type Questions**

**Q1.** A cyclist starts from the centre O of a circular park of radius 1km1, reaches the edge P of the park, then cycles along the circumference, and returns to the centre along QO as shown in Fig. 4.21. If the round trip takes 10min, what is the

- (a) Net displacement?
- (b) Average Velocity ?
- (c) Average speed of the cyclist ?



- Q2.** A bullet fired at an angle of  $30^\circ$  with the horizontal hits the ground 3.0 km away. By adjusting its angle of projection, can one hope to hit a target 5.0 km away? Assume the muzzle speed to be fixed, and neglect air resistance
- Q3.** Rain is falling vertically with a speed of 30m/sA woman rides a bicycle with a speed of 10m/sin the north to south direction. What is the direction in which she should hold her umbrella?



**Q4.** A person observes a birds on a tree 39.6 m high and at a distance of 35.2 m. With what velocity the person should throw an arrow at an angle of  $45^\circ$  so that it may hit the bird?

**Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch- 4 complete.

# Summer Holidays Homework

SESSION: 2024-25

CLASS – 11<sup>th</sup>

Subject: Maths

Text Book: Elements

## 1. Syllabus Covered upto MAY END

- Chapter No.- 1 : Sets
- Chapter No.- 2 : Relations and Functions
- Chapter No.- 3 : Trigonometric Functions

## 2. List of all new concepts taught upto MAY END

- Concepts of a Sets
- Types of Sets, Operations on Sets
- Practical applications of Set Operations
- Cartesian product of Set, Types of Relations, Function as a special kind of relation
- Domain and Range of Function
- Measure of an angle
- Signs of trigonometric Functions, Trigonometric functions of allied angles
- Graph of a trigonometric Functions
- Transformation of a product into sum or difference

## 3. Summer Holiday Homework:

- Reading Homework:
  - Section - A: Pre-Reading Homework
- Written Homework:
  - Section-B: Chapter-wise Revision Assignment
  - Section-C- Lab Practicals
  - Section-D- Indian Mathematicians and their contributions
  - Section-E: Creative Project/ Model

## 4. Tools required for doing Homework:

- Text Book
- Notebook
- A4Sheets

## 5. Instruction/Guidelines for Reading Homework:

- Section – A: Pre-Reading Homework
  - Do the Pre-Reading of Chapter No. 4 and 5.
  - Write all the difficult words & their meanings of above chapters in Maths N.B.

## 6. Instruction/Guidelines for Written Homework

- **Section-B:** Do the given Assignments on A4 Sheets.
- **Section-C:** Lab Practicals
  - Make the following lab activities in lab manual
    - Set Operations Using Venn Diagrams
    - Distinguish a Relation and a Function
    - Graphs of  $\sin x$ ,  $\sin 2x$ ,  $\sin x$  and  $\sin x/2$
- **Section-D- Indian Mathematicians and their contribution (Any 2 Mathematicians).**  
Inquire for the Indian mathematicians and prepare a project on A4 size sheets and a collage by using their pictures.
  - Mathematicians for Research:
    - Mathematician 1
    - Mathematician 2

- **Point to be enquired:**
  - Birth
  - Education
  - Branch in which they worked
  - Achievements

○ **Section – E: Creative Project/ Models**

Topic	Roll .No
1. Set , Types and Operations	1 to 8
2. A Relation and a Function	9 to 16
3. Distinguish a Relation and a Function	17 to 24
4. Formulas of trigonometric Functions	25 to 32
5. Graphs of $\sin x$ , $\cos x$ and $\tan x$	33 to 40

7. **Marking scheme for Maths homework: –**

- **Section-A : Pre-Reading HW**
  - Difficult words & their meanings in N.B. **4 marks**
- **Section-B : Chapter wise Revision Assignments** **4 marks**
- **Section-C : Lab Practical** **4 marks**
- **Section-D : Mathematician for Research** **4 marks**
- **Section-E : Project/Model** **4 marks**

**Total marks of Maths H.W. 20 marks**

8. **Important Note:**

- **All students must submit their vacation Homework of All Subjects for Assessment by teacher on 1st July 2024 by all means. Five marks will be deducted for per day of delay after 1st July 2024.**



- (a) A is true and R is false
- (b) A is false but R is true
- (c) Both A and R are true and R is the correct explanation of A
- (d) Both A and R are true but R is not the correct explanation of A

**Q.7. Solve the following Puzzle/Sudoku Puzzle**

- a) If  $X = \{8^n - 7n - 1; n \in N\}$  and  $Y = \{49n - 49; n \in N\}$ . Then prove that  $X \subset Y$ .

**Sudoku**

- b) If P be the set of all positive prime integers and E be the set of all positive even integers, then find  $P \cap E$ .

**Q.8. Solve the following Real Life descriptive 3 word problems: -**

- a) In a school there are 20 teachers who teach Mathematics or Physics. Of these, 12 teach mathematics and 4 teach both Physics and Mathematics. How many teach Physics?
- b) In a class of 35 students, 24 like to play cricket and 16 like to play football. Also, each student likes to play at least one of the two games. How many students like to play both cricket and football?
- c) In a group of people, 50 speak both English and Hindi and 30 people speak English but not Hindi. All the people speak at least one of the two languages. How many people speak English?

**Q.9. Answer the following Short Answer Type Questions**

- a) If A and B are finite sets such that  $A \subset B$ , then  $n(A \cup B) =$  \_\_\_\_\_.
- b) The symmetric difference of  $A = \{1,2,3\}$  and  $B = \{3,4,5\}$  is \_\_\_\_\_.
- c) Find the cardinal number of the set  $A = \{1,2,2,1,3\}$ .
- d) If A and B are two sets such that  $n(A) = 115$ ,  $n(B) = 326$ ,  $n(A - B) = 47$ , then write  $n(A \cup B)$ .
- e) If X and Y are two sets such that X has 21 elements, Y has 32 elements and  $X \cap Y$  has 11 elements, how many elements does  $X \cup Y$  have?

**Q.10. Answer the following Long Answer Type Questions**

- a) Given that  $E = \{2,4,6,8,10\}$ . If n represents any member of E, then write the following sets containing all numbers represented by.
  - $n + 1$
  - $n^2$
- b) Two finite sets A and B have m and k elements respectively. If the ratio of cardinal number of power set of
  - a. A to cardinal number of power set of B is 64 : 1 and  $n(A) + n(B) = 12$ , then find the values of m and k.
  - c) If A = set of all rational numbers and  $B = \{x : x^2 - 4x + 2 = 0\}$ , then write down  $A \cap B$ ,  $A - B$  and  $B - A$ .
  - d) A and B are two sets such that  $n(A - B) = 14 + x$ ,  $n(B - A) = 3x$  and  $n(A \cap B) = x$ . If  $n(A) = n(B)$ , find
    - a. (i) the value of x
    - (ii)  $n(A \cup B)$
  - e) If A and B be two sets containing 3 and 8 elements respectively, then find the minimum and the maximum number of elements in  $A \cup B$ .

**Part-4 – Homework**

- **Learning Homework:** Do practice of complete chapter & learn definitions and formulas.



# R.E.D. Group of Schools

## Revision Assignment-2

Class: 11th

Ch.No.: 02

Subject: Maths

Ch. Name : Relation & Function

For recapitulation & solving the assignment the students should refer to their Maths Textbook.

### Part-1 – Vocabulary skills

**Q.1. Define the following key terms:**

- |                       |                       |                          |
|-----------------------|-----------------------|--------------------------|
| (i) Identity Relation | (ii) Void Relation    | (iii) Universal Relation |
| (iv) Logarithms       | (v) Exponential       | (vi) Polynomial          |
| (vii) Signum Function | (viii) Power Function | (ix) Constant Function   |
| (x) Roster Form       |                       |                          |

**Q.2. Write the Formula/Sign/Symbol of the following terms:**

- Domain and Range of a Relation
- Number of Functions from Set A to Set B

### Part-2 – Reading skills

**Q.3. Read the following Passage from the Chapter & answer the questions.**

**Passage:** Gauri Shankar and Ravi are the students of class XI of RED School. Their mathematics teacher told them to collect the name of 5 students of class 9 and 4 students of class 8 for a project. They collected the names and write them in the form of sets as following:

$A = \{\text{Hari, Shyam, Madhuri, Ritika, Reena}\}$

$B = \{\text{Abhipsa, Satabrata, Sai, Parteek}\}$

Since discussion of relation and function was going on in their classes, they decided to explore these sets for various type of relation and functions.

Using the information answer the following

---

**Answer the following Questions from the passage:-**

- How many elements exist in set A and set B
- How many elements lie in  $n(A \times B)$
- How many relation exist from set A to set B

### Part-3 – Application skills of Subject Tools & Concepts

**Q.4. Solve these 3 mental math questions: -**

- How many elements lie in the empty relation?
- If  $n(A)=3$  and  $n(B)=2$  then find the total number of relations between set A and set B.
- If  $A = \{1, 2, 3\}$ ,  $B = \{4, 5\}$ . Show that  $A \times B \neq B \times A$ .

**Q.5. Do the following questions on the basis of reasoning skills:**

- If  $3x + 8 > 2$ , x is an integer, then solution set is
  - $\{x : x > -2, x \text{ is an integer}\}$
  - $(-2, \infty)$
  - $\{-2, -1, 0, 1, 2, \dots\}$
  - Z, the set of integer
- If  $A = \{1, 2, 4\}$ ,  $B = \{2, 4, 5\}$ ,  $C = \{2, 5\}$ , then  $(A - B) \times (B - C)$  is
  - $\{(1, 2), (1, 5), (2, 5)\}$
  - $\{(1, 4)\}$
  - $(1, 4)$
  - none of these

**Q.6. Solve the following Assertion-Reason/Statement based question**

- (i) **Assertion:** The relation R given by  $R = \{(1,3),(4,2),(2,4),(2,3),(3,1)\}$  on a set  $A = \{1,2,3,4\}$  is not symmetric  
**Reason:** For symmetric relation  $R=R^{-1}$   
 (a) A is true but R is false  
 (b) A is false and R is true  
 (c) Both A and R are true and R is the correct explanation of A  
 (d) Both A and R are true but R is not the correct explanation of A
- (ii) **Assertion:** If  $(x+1, y-2) = (3,1)$   
**Reason:** Two ordered pairs are equal, if their corresponding elements are equal  
 (a) A is true and R is false  
 (b) A is false but R is true  
 (c) Both A and R are true and R is the correct explanation of A  
 (d) Both A and R are true but R is not the correct explanation of A

**Q.7. Solve the following Puzzle/Sudoku**

**Puzzle**

- a) If R is a relation on the set  $A = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$  given by  $x R y \Leftrightarrow y = 3x$ , then find R.

**Sudoku**

- b) Let  $A = \{1, 2, 3\}$ ,  $B = \{1, 3, 5\}$ . If relation R from A to B is given by  $R = \{(1, 3), (2, 5), (3, 3)\}$ . Then find  $R^{-1}$ .

**Q.8. Solve the following Real Life descriptive 3 word problems: -**

- a) Define the sum and difference of the identity function and the reciprocal function?  
 b) Define the product of the identity function and the modulus function.  
 c) Let  $A = \{1,2,3,5\}$  and  $B = \{2,4\}$ , list the elements of R, if  $R = \{(x,y): x - y \text{ is odd}\}$ . Write R in roster form.

**Q.9. Answer the following Short Answer Type Questions**

- a) If  $f(x) = \frac{x^2 - 3x + 1}{x - 1}$ , find  $f(-2) + f\left(\frac{1}{3}\right)$ .  
 b) Find the domain and range of the real function f defined by  $f(x) = \frac{x - 2}{2 - x}$   
 c) If the set A has p elements, B has q elements, then find the number of elements in  $A \times B$ .  
 d) R is a relation from  $\{11, 12, 13\}$  to  $\{8, 10, 12\}$  defined by  $y = x - 3$ . Then find,  $R^{-1}$ .  
 e) Let R be a relation on N defined by  $x + 2y = 8$ . Then find the domain of R.

**Q.10. Answer the following Long Answer Type Questions**

- a) If R is the relation "is greater than" from  $A = \{1,2,3,4,6\}$  and  $B = \{1,3,4\}$ , write R as a set of ordered pairs. Also find inverse of R  
 b) Find the domain of the function  $f(x) = \sqrt{9 - x^2}$   
 c) Find the domain for which the function  $f(x) = 2x^2 - 1$  and  $g(x) = 1 - 3x$  are equal.  
 d) Let  $A = \{x, y, z\}$  and  $B = \{1, 2\}$ . Find the number of relations from A into B.  
 e) The Cartesian product  $A \times A$  has 9 elements among which some elements are found  $(-1, 0)$  and  $(0, 1)$ . Find the set A and remaining elements of  $A \times A$ .

**Part-4 – Homework**

- **Learning Homework:** Do practice of complete chapter & learn definitions and formulas.



# R.E.D. Group of Schools

## Revision Assignment-3

Class: 11th

Ch.No.: 03

Subject: Maths

Ch. Name : Trigonometric Functions

For recapitulation & solving the assignment the students should refer to their Maths Textbook.

### Part-1 – Vocabulary skills

**Q.1. Define the following key terms:**

- |                          |                    |                   |
|--------------------------|--------------------|-------------------|
| (i) Trigonometry         | (ii) Magnitude     | (iii) Quadrant    |
| (iv) Radian              | (v) Constant angle | (vi) Measurements |
| (vii) Linear             | (viii) Angular     | (ix) Degrees      |
| (x) Trigonometric ratios |                    |                   |

**Q.2. Write the Formula/Sign/Symbol of the following terms:**

- Fundamental Trigonometric Identities
- Signs of Trigonometric Functions

### Part-2 – Reading skills

**Q.3. Read the following Passage from the Chapter & answer the questions.**

**Passage:** The sum or difference of trigonometric functions can be transformed into a product of trigonometric functions by using the following formulas:

a)  $\sin C + \sin D = 2 \sin \frac{C+D}{2} \cos \frac{C-D}{2}$

b)  $\sin C - \sin D = 2 \cos \frac{C+D}{2} \sin \frac{C-D}{2}$

c)  $\cos C + \cos D = 2 \cos \frac{C+D}{2} \cos \frac{C-D}{2}$

d)  $\cos C - \cos D = 2 \sin \frac{C+D}{2} \sin \frac{D-C}{2}$

**Based on the given information answer the following Questions :-**

- The value  $\sin 80^\circ - \sin 20^\circ$  is.
- The value of  $\cos 15^\circ - \sin 15^\circ$ .
- $\cos 51^\circ + \cos 81^\circ - \cos 21^\circ$  is equal to.

### Part-3 – Application skills of Subject Tools & Concepts

**Q.4. Solve these 3 mental math questions: -**

- What is the maximum and minimum value of  $\sin x$ .
- Find the value of  $\cos(-1710)$ .
- Which trigonometric function are positive in the third quadrant.

**Q.5. Do the following questions on the basis of reasoning skills:**

- In a triangle ABC, the sides are 6 cm, 10 cm and 14 cm the obtuse angle of triangle will be:  
(a)  $120^\circ$                       (b)  $110^\circ$                       (c)  $130^\circ$                       (d)  $150^\circ$
- Two sides of a triangle are  $\sqrt{3}-1$  and  $\sqrt{3}+1$  units and their included angle is  $60^\circ$  then third side will be :  
(a) 7                                  (b) 6                                  (c)  $\sqrt{6}$                                   (d) 8

**Q.6. Solve the following Assertion-Reason/Statement based question**

- (i) Assertion (A) : Sine function is negative in third and fourth quadrant.  
Reason (R) :  $\sin x$  lies between  $-1$  and  $1$ .  
(a) A is true but R is false  
(b) A is false and R is true  
(c) Both A and R are true and R is the correct explanation of A  
(d) Both A and R are true but R is not the correct explanation of A
- (ii) Assertion (A) : The degree measure of angle  $\frac{\pi}{8}$  is  $22^\circ$ .  
Reason (R) :  $\pi$  radians =  $180^\circ$ .  
(a) A is true and R is false  
(b) A is false but R is true  
(c) Both A and R are true and R is the correct explanation of A  
(d) Both A and R are true but R is not the correct explanation of A

**Q.7. Solve the following Puzzle/Sudoku**  
**Puzzle**

a) Prove that  $\tan^2 \theta - \sin^2 \theta = \tan^2 \theta \sin^2 \theta$ .

**Sudoku**

b) Prove that  $\sec^4 \theta - \sec^2 \theta = \tan^4 \theta + \tan^2 \theta$

**Q.8. Solve the following Real Life descriptive 3 word problems: -**

- a) In a school there are 20 teachers who teach Mathematics or Physics. Of these, 12 teach mathematics and 4 teach both Physics and Mathematics. How many teach Physics?  
b) In a class of 35 students, 24 like to play cricket and 16 like to play football. Also, each student likes to play at least one of the two games. How many students like to play both cricket and football?  
c) In a group of people, 50 speak both English and Hindi and 30 people speak English but not Hindi. All the people speak at least one of the two languages. How many people speak English?

**Q.9. Answer the following Short Answer Type Questions**

- a) If A and B are finite sets such that  $A \subset B$ , then  $n(A \cup B) = \underline{\hspace{2cm}}$ .  
b) The symmetric difference of  $A = \{1,2,3\}$  and  $B = \{3,4,5\}$  is  $\underline{\hspace{2cm}}$ .  
c) Find the cardinal number of the set  $A = \{1,2,2,1,3\}$ .  
d) If A and B are two sets such that  $n(A) = 115$ ,  $n(B) = 326$ ,  $n(A - B) = 47$ , then write  $n(A \cup B)$ .  
e) If X and Y are two sets such that X has 21 elements, Y has 32 elements and  $X \cap Y$  has 11 elements, how many elements does  $X \cup Y$  have?

**Q.10. Answer the following Long Answer Type Questions**

- a) Two finite sets A and B have m and k elements respectively. If the ratio of cardinal number of power set of  
b) A to cardinal number of power set of B is  $64 : 1$  and  $n(A) + n(B) = 12$ , then find the values of m and k.  
c) If A = set of all rational numbers and  $B = \{x : x^2 - 4x + 2 = 0\}$ , then write down  $A \cap B$ ,  $A - B$  and  $B - A$ .  
d) Prove that :  $\sin(n+1)x \sin(n+2)x + \cos(n+1)x \cos(n+2)x = \cos x$ .  
e) If A and B be two sets containing 3 and 8 elements respectively, then find the minimum and the maximum number of elements in  $A \cup B$ .

**Part-4 – Homework**

- **Learning Homework:** Do practice of complete chapter & learn definitions and formulas.



# R.E.D. Group of Schools

## Revision Assignment-4

Class: 11th

Subject: Maths

Ch.No.: 03

Ch. Name : Trigonometric Functions

For recapitulation & solving the assignment the students should refer to their Maths Textbook.

### Part-1 – Vocabulary skills

**Q.1. Define the following key terms:**

- |                  |                |              |
|------------------|----------------|--------------|
| (i) Tangent      | (ii) Cosec     | (iii) Sine   |
| (iv) Multiplying | (v) Quadrant   | (vi) Cosine  |
| (vii) Linear     | (viii) Angular | (ix) Degrees |
| (x) Difference   |                |              |

**Q.2. Write the Formula/Sign/Symbol of the following terms:**

- Transformation of a sum or difference into a product.
- Transformation of a Product into a sum or difference.

### Part-2 – Reading skills

**Q.3. Read the following Passage from the Chapter & answer the questions.**

**Passage:** The formulae which express the trigonometric functions of the sum and difference of two real numbers (or angles) are given below:

- $\cos(A + B) = \cos A \cos B - \sin A \sin B$
- $\cos(A - B) = \cos A \cos B + \sin A \sin B$
- $\sin(A + B) = \sin A \cos B + \cos A \sin B$
- $\sin(A - B) = \sin A \cos B - \cos A \sin B$

**Based on the above information answer the following Questions:-**

- If  $\sin A = \frac{3}{5}$ ,  $0 < A < \frac{\pi}{2}$  and  $\cos B = -\frac{12}{13}$ ,  $\pi < B < \frac{3\pi}{2}$ , then find the value of  $\cos(A + B)$ .
- $\sin A = \frac{3}{5}$ ,  $0 < A < \frac{\pi}{2}$  and  $\cos B = -\frac{12}{13}$ ,  $\pi < B < \frac{3\pi}{2}$ , then find the value of  $(A - B)$ .
- Evaluate  $\sin \frac{\pi}{4} \cos \frac{\pi}{12} + \cos \frac{\pi}{4} \sin \frac{\pi}{12}$ .

### Part-3 – Application skills of Subject Tools & Concepts

**Q.4. Solve these 3 mental math questions: -**

- In which quadrant do  $1190^\circ$  angle lie?
- Find the radian measures corresponding to  $25^\circ$  measures:
- Find the degree measures corresponding to  $(-4)^c$  radian measures.

**Q.5. Do the following questions on the basis of reasoning skills:**

- The quadrant in which  $\theta = -1930^\circ$  lies is  
(a) I (b) II (c) III (d) IV
- The degree measure of  $\left(\frac{7\pi}{12}\right)$  radians is  
(a)  $105^\circ$  (b)  $120^\circ$  (c)  $135^\circ$  (d)  $150^\circ$

**Q.6. Solve the following Assertion-Reason/Statement based question**

(i) Assertion (A) : The radian measure of angle  $105^\circ$  is  $\frac{7\pi}{12}$ .

Reason (R) : Radian measure = Degree measure  $\times \frac{\pi}{180}$ .

(a) A is true but R is false

(b) A is false and R is true

(c) Both A and R are true and R is the correct explanation of A

(d) Both A and R are true but R is not the correct explanation of A

(ii) Assertion (A) : If two equal arcs of different circles subtend angles of  $60^\circ$  and  $75^\circ$  at the center respectively, then the ratio of their radii is  $5 : 4$ .

Reason (R) : IN a circle of radius  $r$ , an arc of length  $l$  subtends an angle of  $\frac{l}{r}$  radians at the center.

(a) A is true and R is false

(b) A is false but R is true

(c) Both A and R are true and R is the correct explanation of A

(d) Both A and R are true but R is not the correct explanation of A

**Q.7. Solve the following Puzzle/Sudoku**

**Puzzle**

a) Express the angular measurement of the angle of a regular octagon in degrees and radians.

**Sudoku**

b) Express both in degrees and radians, the angles of a triangle whose angles are to each other as  $1 : 2 : 3$ .

**Q.8. Solve the following Real Life descriptive 3 word problems: -**

a) In a right angles triangle, the difference between two acute angles is  $\frac{\pi}{18}$  in radian measure. Express the angles in degrees.

b) The angles of a triangle are in A.P. The number of degrees in the least is to the number of radians in the greatest as  $60 : \pi$ . Find the angles in degrees.

c) Find the degrees the angle subtended at the centre of a circle of diameter 50 cm by an arc of length 11 cm.

**Q.9. Answer the following Short Answer Type Questions**

a) Find the angle in radians through which a pendulum swings if its length is 75 cm and the tip describes an arc of length 21 cm.

b) The minute hand of a watch is 1.5 cm long. How far does its tip move in 40 minutes?

c) A cow is tied to a post by a rope. If the cow moves along a circular path keeping the rope always tight and describe 44 meters when it has traced out  $72^\circ$  at the center, find the length of the rope.

d) In a circle of diameter 40 cm, the length of a chord is 20 cm. Find the length of minor arc of the chord.

e) Find the angle between the minute hand of a clock and the hour hand when the time is 7 : 20 A.M.

**Q.10. Answer the following Long Answer Type Questions**

a) Find the distance from the eye at which coin of diameter 2 cm should be held so as just to conceal the full moon whose angular diameter is  $31'$ .

b) A circular wire of radius 3 cm is cut and bent so as to lie along the circumference of a hoop whose radius is 40 cm. Find in degree the angle which is subtended at the center of the hoop.

c) Meerut is 64 km from Delhi. Find the angle (in degrees) subtended at the center of the earth by the arc joining these two towns. The earth is regarded as a sphere of 6336 km radius.

d) The larger hand of a clock is 42 cm. long. How many centimeters does its extremity move in 20 minutes.

e) Find in degrees and radians the angle between the hour hand and the minute-hand of a clock when the time is half past three.

**Part-4 – Homework**

- **Learning Homework:** Do practice of complete chapter & learn definitions and formulas.



# R.E.D. Group of Schools

## Revision Assignment-5

Class: 11th

Ch.No.: 03

Subject: Maths

Ch. Name : Trigonometric Functions

For recapitulation & solving the assignment the students should refer to their Maths Textbook.

### Part-1 – Vocabulary skills

Q.1. Define the following key terms:

- |                          |                        |                               |
|--------------------------|------------------------|-------------------------------|
| (i) Difference           | (ii) Allied angle      | (iii) Trigonometric functions |
| (iv) Quadratic           | (v) Arc                | (vi) Perimeter                |
| (vii) Sector of a circle | (viii) n-sided polygon | (ix) Trapezium                |
| (x) Cyclic quadrilateral |                        |                               |

Q.2. Write the Formula / Symbol of the following terms:

- a)  $\sin 2x =$   
b)  $\cos 2x =$

### Part-2 – Reading skills

Q.3. Read the following Passage from the Chapter & answer the questions.

**Passage:** A mathematics teacher is discussing the trigonometric functions of multiples of numbers (angles) in his class. He writes the following formulae on the black board.

- i.  $\sin 2A = 2 \sin A \cos A$   
ii.  $\cos 2A = \cos^2 A - \sin^2 A = 2\cos^2 A - 1 = 1 - 2\sin^2 A$ .  
iii.  $\tan 2A = \frac{2 \tan A}{1 - \tan^2 A}$   
iv.  $\sin 2A = \frac{2 \tan A}{1 + \tan^2 A}$   
v.  $\cos 2A = \frac{1 - \tan^2 A}{1 + \tan^2 A}$   
vi.  $\tan 3A = \frac{3 \tan A - \tan^3 A}{1 - 3 \tan^2 A}$   
vii.  $\sin 3A = 3 \sin A - 4 \sin^3 A$   
viii.  $\cos 3A = 4 \cos^3 A - 3 \cos A$

**Based on the above information answer the following Questions:-**

- (A) If  $\sin x = \frac{3}{5}$  where  $0 < x < \frac{\pi}{2}$ , then the value of  $\sin 2x$  is.  
(B) If  $\tan x = -\frac{4}{3}$  and  $x$  lies in second quadrant, then  $\cos \frac{x}{2}$  is equal to .  
(C) The value of  $\tan \frac{\pi}{8}$  is.

### Part-3 – Application skills of Subject Tools & Concepts

Q.4. Solve these 3 mental math questions: -

- a) Prove that:  $\sin^4 x + \cos^4 x = 1 - 2\sin^2 x \cos^2 x$ .  
b) Prove that:  $\sqrt{\sec^2 x + \cos^2 x} = \tan x + \cot x$ .  
c) Prove that:  $\frac{\sin x}{1 + \cos x} + \frac{1 + \cos x}{\sin x} = 2 \cos x$ .

**Q.5. Do the following questions on the basis of reasoning skills:**

- i) The quadrant in which  $\theta = -1930^\circ$  lies is  
(a) I (b) II (c) III (d) IV
- ii) The degree measure of  $\left(\frac{7\pi}{12}\right)$  radians is  
(a)  $105^\circ$  (b)  $120^\circ$  (c)  $135^\circ$  (d)  $150^\circ$

**Q.6. Solve the following Assertion-Reason/Statement based question**

- (i) Assertion (A) : The value of  $2 \cos \frac{\pi}{13} \cos \frac{9\pi}{13} + \cos \frac{3\pi}{13} + \cos \frac{5\pi}{13}$  is 0.

Reason (R) :  $2 \cos A \cos B = \cos (A+B) + \cos (A-B)$ .

- (a) A is true but R is false  
(b) A is false and R is true  
(c) Both A and R are true and R is the correct explanation of A  
(d) Both A and R are true but R is not the correct explanation of A

- (ii) Assertion (A) : The value of  $\cos 75^\circ = \frac{\sqrt{6} - \sqrt{2}}{4}$ .

Reason (R) :  $\cos 75^\circ = \cos (45^\circ + 30^\circ) = \cos 30^\circ \sin 45^\circ - \sin 30^\circ \cos 45^\circ$ .

- (a) A is true and R is false  
(b) A is false but R is true  
(c) Both A and R are true and R is the correct explanation of A  
(d) Both A and R are true but R is not the correct explanation of A

**Q.7. Solve the following Puzzle/Sudoku**

**Puzzle**

- a) Prove that  $2 \sec^2 x - \sec^4 x - 2 \operatorname{cosec}^2 x + \operatorname{cosec}^4 x = \frac{1 - \tan^8 x}{\tan^4 x}$ .

**Sudoku**

- b) If  $\tan^2 x = 1 - k^2$ , show that  $\sec x + \tan^3 x \operatorname{cosec} x = \pm(2 - k^2)^{3/2}$

**Q.8. Solve the following Real Life descriptive 3 word problems: -**

- a) If  $a \cos x + b \sin x = m$  and  $a \sin x - b \cos x = n$ , show that  $a^2 + b^2 = m^2 + n^2$ .  
b) If  $\tan x + \sin x = m$  and  $\tan x - \sin x = n$ , show that  $(m^2 - n^2)^2 = 16mn$ .  
c) If  $\sec x + \tan x = m$ , obtain the values of  $\sec x$ ,  $\tan x$ , and  $\sin x$  in terms of  $m$ .

**Q.9. Answer the following Short Answer Type Questions**

- a) If  $\sec \alpha = x + \frac{1}{4x}$ , Prove that  $\sec \alpha + \tan \alpha = 2x$  or  $\frac{1}{2x}$ .  
b) If  $\sin x + \sin^2 x = 1$ ; show that  $\cos^4 x + \cos^2 x = 1$ .  
c) If  $\cos x + \sin x = \sqrt{2} \cos x$ ; show that  $\cos x - \sin x = \sqrt{2} \sin x$ .  
d) Prove that  $\tan x + \cot x$  can never be equal to  $\frac{3}{2}$ .  
e) Prove that  $\sec^2 x + \cos^2 x$  can never be less than 2.

**Q.10. Answer the following Long Answer Type Questions**

- a) If  $\cos x = \frac{1}{2} \left( a + \frac{1}{a} \right)$ ; show that  $\cos 2x = \frac{1}{2} \left( a^2 + \frac{1}{a^2} \right)$ .

- b) If  $\tan \alpha = \frac{a}{b}$ , prove that  $b \cos 2\alpha + a \sin 2\alpha = b$ .
- c) If  $\tan(x+y) = \frac{3}{4}$  and  $\tan(x-y) = \frac{8}{15}$ ; then show that  $\tan 2x = \frac{77}{36}$ .
- d) If  $2 \cos \theta = x + \frac{1}{x}$ , Prove that  $2 \cos 3\theta = \left(x^3 + \frac{1}{x^3}\right)$ .
- e) If  $2 \sin \theta = x + \frac{1}{x}$ , Prove that  $\sin 3\theta + \frac{1}{2} \left(x^3 + \frac{1}{x^3}\right) = 0$ .

#### **Part-4 – Homework**

- **Learning Homework:** Do practice of complete chapter & learn definitions and formulas.



# R.E.D. GROUP OF SCHOOLS

## Summer Holidays Homework

SESSION: 2024-25

CLASS – 11th

Subject: Chemistry

Text Book: NCERT Book

### 1. Syllabus Covered up to MAY END

- Chapter No. 1 Some basic concepts of chemistry
- Chapter No. 2 Structure of Atom
- Chapter No. 3 Classification of Elements and periodicity in properties

### 2. List of all new concepts taught up to MAY END

- Mole concept
- Concentration Terms
- Stoichiometry and limiting reagent
- Bohr's Model of atom
- Hydrogen Spectrum
- Quantum numbers
- Electronic configurations
- Mendeleev's Periodic table
- Modern periodic table

### 3. Summer Holiday Homework:

- **Section-A- Reading Homework:** Learning and Pre-reading homework.
- **Section-B- Written Homework:** Chapter wise Revision assignment
- **Section-C- Creative Project/ Working model/ Inquiry based project.**
- **Section-D- Experiment based activity.**
- **Section-E- Indian Scientists (Chemistry) and their contribution.**

### 4. Tools required for doing Homework:

- NCERT Book, Pradeep book
- Notebook
- A4 Sheets
- Resources as per activity

### 5. Instruction/Guidelines for reading Homework:

#### Section-A- Pre reading homework:

- Do the pre reading of chapter number –4 (Chemical Bonding) & Ch. No. – 6 (Thermodynamics)
- Write all the difficult words & their meanings of above chapters in Chemistry N.B.

### 6. Instruction/Guidelines for written Homework:

#### Section-B- Do the given assignments

#### Section-C- Creative Project/ Working model

##### Topic 1: Shape of s- orbitals

- Materials Required: A4 sheets, folder, NCERT Book, notes and help book
- **Steps to prepare:** Understand the concept and explain it on A4 sheets.

##### Topic 2: Shape of p- orbitals

- **Materials Required: A4 sheets, folder, NCERT Book, notes and help book**
- **Steps to prepare:** Understand the concept and explain it on A4 sheets.

##### Topic 3: Electronic configuration of elements with atomic no. 21 to 30

- **Materials Required:** A4 sheets, folder, NCERT Book, notes and help book.
- **Steps to prepare:** Understand the concept and explain it on A4 sheets.

##### Topic 4: Shape of d- orbitals

- **Materials Required:** A4 sheets, folder, NCERT Book, notes and help book

**Steps to prepare:** Understand the concept and explain it on A4 sheets.

○ **Section-D-Experiment based activity.**

**Name of the Activity:** To observe how eggshell is protected by tooth paste and learn how tooth reacts to acids and stain

**Material Required:** egg, toothpaste, coca cola and vinegar.

**Procedure:** Take four eggs and wash it carefully

coat two plain eggs with good amount of toothpaste evenly. And the rest two eggs remain as it is. That means we are not coating these eggs with any other material.

Pick one plain egg and one toothpaste coated egg and drop them in coke filled glasses respectively wait for 24 hours to see the outcomes

**Observations:** Egg shell is the rich source of calcium carbonate where as Coca-Cola is acidic in nature. When the plain egg dropped in the coke, the acidic contents immediately start reacting with calcium carbonate and forms stains.

On the other hand, the eggs coated with toothpaste, when dropped in the coke and the fluoride in toothpaste build a protective layer between the eggshells and acidic

**Conclusion:** fluoride in toothpaste makes the eggshell stronger and protects it from reacting to acidic contents of coke

**Precautions:** Wash the egg carefully so that it does not break

○ **Section-E- Indian scientist and their contribution (Any one scientist)**

Research on any one scientist (Chemistry) & prepare a project on A4 size sheet and a collage by using their pictures.

**Point to be enquired -**

- (i) Birth
- (ii) Education
- (iii) Branch in which they worked
- (iv) Achievements

**7. Marking scheme for Chemistry homework: –**

- **Section-A : Pre-Reading HW**
  - Difficult words & their meanings in N.B. **4 marks**
- **Section-B : Chapter wise Revision Assignments** **4 marks**
- **Section-C : Project/Model** **4 marks**
- **Section-D : Experiment Based Activity** **4 marks**
- **Section-E : Research on Indian Scientist (Chemistry)** **4 marks**

**Total marks of Chemistry H.W.**

**20 marks**

**8. Important Note:**

- **All students must submit their vacation Homework of All Subjects for Assessment by teacher on 1st July 2024 by all means. Five marks will be deducted for per day of delay after 1st July 2024.**



# R.E.D. Group of Schools

## Revision Assignment-1

Class: 11<sup>th</sup>

Subject: Chemistry

Ch. Name: Some Basic Concepts of Chemistry

Ch. No.: 1

**Q.1 Define the following key terms.**

- |                       |                   |                       |                   |
|-----------------------|-------------------|-----------------------|-------------------|
| i) Mole               | ii) Avogadro's no | iii) gram atomic mass | iv) Mole fraction |
| v) limiting reagent   | vi) strength      | vii) Normality        | viii) Molarity    |
| ix) Empirical formula | x) Normality      |                       |                   |

### Part - II

#### Reading Skills

**Q.2 Read the following Activity and Answer the following Questions.**

#### **Activity**

$6.02214179 \times 10^{23}$ , a fundamental constant named Avogadro's number (NA) or the Avogadro constant in honor of Italian scientist Amedeo Avogadro. This constant is properly reported with an explicit unit of "per mole," a conveniently rounded version being  $6.022 \times 10^{23}/\text{mol}$ . Consistent with its definition as an amount unit, 1 mole of any element contains the same number of atoms as 1 mole of any other element. The masses of 1 mole of different elements, however, are different, since the masses of the individual atoms are drastically different. The molar mass of an element (or compound) is the mass in grams of 1 mole of that substance, a property expressed in units of grams per mole (g/mol).

**1. The mass of oxygen gas which occupies 5.6 liters at STP could be**

- (a) gram atomic mass of oxygen
- (b) one fourth of the gram atomic mass of oxygen
- (c) double the gram atomic mass of oxygen
- (d) half of the gram atomic mass of oxygen

**2. What is the mass of one molecule of yellow phosphorus?**

**(Atomic mass of phosphorus = 30)**

- |                                |                                |
|--------------------------------|--------------------------------|
| (a) $1.993 \times 10^{-22}$ mg | (b) $1.993 \times 10^{-19}$ mg |
| (c) $4.983 \times 10^{-20}$ mg | (d) $4.983 \times 10^{-23}$ mg |

**3. Which of the following contains same number of carbon atoms as are in 6.0 g of carbon (C-12)?**

- |                    |                   |
|--------------------|-------------------|
| (a) 6.0 g Ethane   | (b) 8.0 g Methane |
| (c) 21.0 g Propane | (d) 28.0 g CO     |

**4. Any charged particle is called:**

- |          |              |
|----------|--------------|
| (a) Atom | (b) Molecule |
| (c) Ion  | (d) Mixture  |

### Part - III

#### (Application skill of subject tools & Concepts)

**Q.3 Draw the Diagram/ Flow chart for the following Concepts**

- a) Draw the diagram of periodic table having atomic no. and atomic mass of element.
- b) Draw the flow chart of laws of chemical combination.

**Q.4 Solve the following Assertion /Reasoning based questions**

**In the following questions a statement of assertion (A) followed by a statement of reason (R) is given. Choose the correct answer out of the following choices.**

- Assertion and reason both are true, reason is correct explanation of assertion.
- Assertion and reason both are true but reason is not the correct explanation of assertion.
- Assertion is true, reason is false.
- Assertion is false, reason is true.

(i) **Assertion:** The empirical mass of ethane is half of its molecular mass.

**Reason:** The empirical mass of ethane is half of its molecular mass.

(ii) **Assertion:** One atomic mass unit is defined as one twelfth of the mass of one carbon-12 atom.

**Reason:** Carbon-12 isotope is the most abundant isotope of carbon and has been chosen as standard.

**Q.5 Perform the following lab activity at home and share the video of your activity to the science P.S. Group & answer the following questions related to the activity:**

- (i) To prepare M/20 solution of NaCl solution.
- (ii) To prepare M/20 solution of sucrose.

**Q.6 Answer the following Short Answer questions**

1. The empirical formula and molecular mass of a compound are  $\text{CH}_2\text{O}$  and 180 g respectively. What will be the molecular formula of the compound?
2. What will be the molarity of a solution, which contains 5.85 g of  $\text{NaCl(s)}$  per 500 mL?
3. What is the mass percent of carbon in carbon dioxide?
4. One mole of oxygen gas at STP is equal to \_\_\_\_.
5. What will be the mass of one atom of C-12 in grams?

**Q.7 Answer the following Long Answer questions**

1. **In three moles of ethane ( $\text{C}_2\text{H}_6$ ), calculate the following:**

- (i) Number of moles of carbon atoms.
- (ii) Number of moles of hydrogen atoms.
- (iii) Number of molecules of ethane.

2. Calcium carbonate reacts with aqueous  $\text{HCl}$  to give  $\text{CaCl}_2$  and  $\text{CO}_2$  according to the reaction,  
 $\text{CaCO}_3(\text{s}) + 2\text{HCl}(\text{aq}) \rightarrow \text{CaCl}_2(\text{aq}) + \text{CO}_2(\text{g}) + \text{H}_2\text{O}(\text{l})$

What mass of  $\text{CaCO}_3$  is required to react completely with 25 mL of 0.75 M  $\text{HCl}$ ?

3. Calculate the mass percent of calcium, phosphorus and oxygen in calcium phosphate  $\text{Ca}_3(\text{PO}_4)_2$ .
4. If 4 g of  $\text{NaOH}$  dissolves in 36 g of  $\text{H}_2\text{O}$ , calculate the mole fraction of each component in the solution. Also, determine the molarity of solution (specific gravity of solution is  $1\text{ g mL}^{-1}$ ).
5. Define the law of multiple proportions. Explain it with two examples. How does this law point to the existence of atoms?

**Part – IV**

**Learning Homework**

Learn chapter – 1 Some Basic Concept of Chemistry from from textbook, notebook.



# R.E.D. Group of Schools

## Revision Assignment-2

Class: 11<sup>th</sup>

Subject: Chemistry

Ch. Name: Structure of Atom

Ch. No.: 2

**Q.1 Define the following key terms.**

- |              |                           |                 |                |
|--------------|---------------------------|-----------------|----------------|
| i) Electron  | ii) Electromagnetic waves | iii) wavelength | iv) Amplitude  |
| v) frequency | vi) quantum no.           | vii) Black body | viii) Isotopes |
| ix) Isobars  | x) photoelectric effect   |                 |                |

### Part – II

#### Reading Skills

**Q.2 Read the following Activity and Answer the following Questions.**

#### **Activity**

Electron moves around the nucleus in circular orbitals in fixed energy paths. As far as electron moves in these orbits neither energy is absorbed nor liberated. But when electron move from lower energy level to higher energy level energy is absorbed while when it comes back from higher energy level to lower energy level energy is liberated in the form of photon & a spectral line is formed. Corresponding to different possible transitions different lines are formed which form the particular series viz. Lyman, balmer, paschen, bracket, pfund, Humphery etc. Suppose e<sup>-</sup> in hydrogen atom is present in 10th excited state, then answer the following questions based on paragraph:

- (i) **If electron present in 10th excited state liberate one visible quanta then next quanta liberated will correspond to following transition –**  
(A)  $10 \rightarrow 2$                       (B)  $11 \rightarrow 2$                       (C)  $11 \rightarrow 1$                       (D)  $2 \rightarrow 1$
- (ii) **Total number of spectral lines which can be obtained during the transition to ground level –**  
(A) 45                                      (B) 55                                      (C) 66                                      (D) 36
- (iii) **Minimum value of wavelength that can be obtained during the transition – (Where R is Rydberg constant.)**  
(A)  $121/120R$                       (B)  $11/10R$                       (C)  $100/99R$                       (D)  $10/9R$
- (iv) **The wave-numbers decrease from**  
(A) Lyman to Pfund series                      (B) Pfund to Lyman series  
(C) Balmer series to Brackett series                      (D) none of above

### Part – III

#### (Application skill of subject tools & Concepts)

**Q.3 Draw the Diagram/ Flow chart for the following Concepts**

- a) Draw the diagram of hydrogen spectra.  
b) Draw the diagram of shapes of p- orbital.

**Q.4 Solve the following Assertion /Reasoning based questions**

In the following questions a statement of assertion (A) followed by a statement of reason (R) is given. Choose the correct answer out of the following choices.

- Assertion and reason both are true, reason is correct explanation of assertion.
- Assertion and reason both are true but reason is not the correct explanation of assertion.
- Assertion is true, reason is false.
- Assertion is false, reason is true.

(i) **Assertion:** All isotopes of a given element show the same type of chemical behaviour.

**Reason:** The chemical properties of an atom are controlled by the number of electrons in the atom.

(ii) **Assertion:** The position of an electron can be determined exactly with the help of an electron microscope.

**Reason:** The product of uncertainty in the measurement of its momentum and the uncertainty in the measurement of the position cannot be less than a finite limit.

**Q.5 Perform the following lab activity at home and share the video of your activity to the science P.S. Group & answer the following questions related to the activity:**

- (i) SOLAR SYSTEM SIMULATION: Exploring atomic structure with orbits and marbles
- (ii) Atomic Artistry: Creating atom models with play-doh.

**Q.6 Answer the following Short Answer questions**

1. How many spherical nodes are present in 3p orbital?
2. Explain Hund's rule of maximum multiplicity.
3. In which region does the spectral lines of hydrogen atom lies?
4. Write the difference between ground state and excited state.
5. What is value of Planck's constant in SI unit?

**Q.7 Answer the following Long Answer questions**

- i) We don't see a car moving as a wave on the road. Why?
- ii) Why is the energy of 1s electron lower than 2s electron?
- iii) what are quantum no? Explain them with examples.
- iv) what are degenerate orbitals? Name some of them.
- v) Out of electron and proton which will have higher velocity to produce matter waves of same Wavelength? Explain.

#### **Part – IV**

#### **Learning Homework**

- Learn chapter – 2 Structure of atom from textbook, notebook.



# R.E.D. Group of Schools

## Revision Assignment-3

Class: 11<sup>th</sup>

Subject: Chemistry

Ch. Name: Classification of elements and periodicity in properties

Ch. No.: 3

**Q.1 Define the following key terms.**

- |                      |                           |                      |
|----------------------|---------------------------|----------------------|
| a) Atomic Radii      | b) Electron Gain Enthalpy | c) Ionic Radii       |
| d) Metalloid         | e) Periodicity            | f) Covalent          |
| g) Ionisation Energy | h) Significant            | i) Electronegativity |
| j) Isoelectronic     |                           |                      |

### Part – II

#### Reading Skills

**Q.2 Read the following Activity and Answer the following Questions.**

#### **Activity**

In the modern periodic table, elements are arranged in order of increasing atomic numbers which is related to the electronic configuration. Depending upon the type of orbitals receiving the last electron, the elements in the periodic table have been divided into four blocks, viz, s, p, d and f. The modern periodic table consist of 7 periods and 18 groups. Each period begins with the filling of a new energy shell. In accordance with the Aufbau principle, the seven periods (1 to 7) have 2, 8, 8, 18, 18, 32 and 32 elements respectively. The seventh period is still incomplete. To avoid the periodic table being too long, the two series of f-block elements, called lanthanoids and actinoids are placed at the bottom of the main body of the periodic table.

- (i) The last element of the p-block in 6<sup>th</sup> period is represented by the outermost electronic configuration.
- |                                 |                                 |
|---------------------------------|---------------------------------|
| (a) $7s^2 7p^6$                 | (b) $5f^{14} 6d^{10} 7s^2 7p^6$ |
| (c) $4f^{14} 5d^{10} 6s^2 6p^6$ | (d) $4f^{14} 5d^{10} 6s^2 6p^4$ |
- (ii) Which of the elements whose atomic numbers are given below, cannot be accommodated in the present set up of the long form of the periodic table?
- |         |         |         |         |
|---------|---------|---------|---------|
| (a) 107 | (b) 118 | (c) 126 | (d) 102 |
|---------|---------|---------|---------|
- (iii) The electronic configuration of the element which is just above the element with atomic number 43 in the same group is \_\_\_\_\_.
- |  |   |
|--|---|
| (a) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 3s^2$ | (b) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^5 4s^3 4p^6$ |
| (c) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^6 4s^2$ | (d) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^7 4s^2$      |
- (iv) The elements with atomic numbers 35, 53 and 85 are all \_\_\_\_\_
- |                 |              |                  |                  |
|-----------------|--------------|------------------|------------------|
| (a) noble gases | (b) halogens | (c) heavy metals | (d) light metals |
|-----------------|--------------|------------------|------------------|

### Part - III

#### (Application skill of subject tools & Concepts)

**Q.3 Draw the Diagram/ Flow chart for the following Concepts**

- a) Draw the diagram of periodic table having atomic no. and atomic mass of element.  
b) Draw the flow chart of ionic radii of 2<sup>nd</sup> period element.

**Q.4 Solve the following Assertion /Reasoning based questions**

In the following questions a statement of assertion (A) followed by a statement of reason (R) is given. Choose the correct answer out of the following choices.

- Assertion and reason both are true, reason is correct explanation of assertion.
- Assertion and reason both are true but reason is not the correct explanation of assertion.
- Assertion is true, reason is false.
- Assertion is false, reason is true.

- (i) **Assertion:** The first ionization enthalpy of Be is greater than that of B.  
**Reason:** 2 p-orbital is lower in energy than 2 s-orbital.
- (ii) **Assertion:** Electron gain enthalpy of oxygen is less –ve than that of fluorine but more –ve than that of nitrogen.  
**Reason:** Ionization enthalpy is as follows:  $N > O > F$ .

**Q.5 Perform the following lab activity at home and share the video of your activity to the science P.S. Group & answer the following questions related to the activity:**

- (i) To find d block elements from house.  
(ii) to find ionization energy order of d block elements present in home.

**Q.6 Answer the following Short Answer questions**

- (i) The ionization potential of Na is 5.1 eV. The value of electron gain enthalpy of  $\text{Na}^+$  will be?  
(ii) How much energy in joules much be needed to convert all the atoms of sodium to sodium ions present in 2.3 mg of sodium vapours? Ionization enthalpy of sodium is  $495 \text{ kJ mol}^{-1}$  (At. mass of Na = 23).  
(iii) Would you expect the first ionization enthalpies for two isotopes of the same element to be the same or different? Justify your answer.  
(iv) How would you react to the statement that the electronegativity of N on Pauling scale is 3.0 in all the nitrogen compounds?  
(v) What are the various factors due to which the ionization enthalpy of the main group elements tends to decrease down a group?

**Q.7 Answer the following Long Answer questions**

- (a) Which of the following pairs of elements would have a more negative electron gain enthalpy?  
O or F & F or Cl  
(b) Among the second period elements the actual ionization enthalpies are in the order  $\text{Li} < \text{B} < \text{Be} < \text{C} < \text{O} < \text{N} < \text{F} < \text{Ne}$ . Explain why?  
(c) How would you explain the fact that the first ionization enthalpy of sodium is lower than that of magnesium but its second ionization enthalpy is higher than that of magnesium?  
(d) Define ionization energy and its variation along period.  
(e) Define electron gain enthalpy and its variation along the group.

#### Part – IV

#### Learning Homework

- Learn chapter – 3 Classification of elements and periodicity in properties from textbook, notebook.

# Summer Holidays Homework

SESSION: 2024-25

CLASS – 11<sup>th</sup>

Subject: Computer Science

Text Book: Computer Science with Python

## 1. Syllabus Covered upto MAY END

- Chapter No.-1 Computer System Overview
- Chapter No.-2 Data Representation
- Chapter No -3 Boolean Logic
- Chapter No- 4 Introduction to Problem Solving
- Chapter No- 5 Getting started with Python
- Chapter No- 6 Python Fundamentals

## 2. List of all new concepts taught upto MAY END

- Computer system and Basic Computer Organisation
- Cache Memory
- Mobile System Organisation
- Types of Software
- Digital number system and Number conversions
- Character and String representation
- Logical Operations and Basic Logic gates
- Principle of Duality and Basic Theorems of Boolean Algebra
- DeMorgan's Theorem
- Problem solving cycle and designing algorithm
- Python Pluses and Minuses
- Working in Python
- Python Character set, variables, assignments and operators
- Simple input and output

## 3. Summer Holiday Homework:

- **Reading Homework:**
  - **Section - A:** Pre-Reading of Ch 7 & Ch-8
- **Written Homework:**
  - **Section – B:** Chapter-wise Revision Assignments
  - **Section – C:** Creative Project/ Model

## 4. Tools required for doing Homework:

- Text Book
- Notebook
- A4Sheets
- Resources as per project

## 5. Instruction/Guidelines for Reading Homework:

- **Section–A : Pre-Reading Homework**
  - Do the Pre-Reading of Chapter No.7 and 8
  - Write all the difficult words & their meanings of above chapters in Computer Science N.B.

## 6. Instruction/Guidelines for Written Homework:

- **Section–B :** Do the given Assignments on A4 sheets.
- **Section–C : Creative Project/ Models**

- Topic: Roll no 1 to 8
  - \* WAP to input two numbers and swap them
  - \*WAP to input a number and print its cube
  - \* WAP to find the average of three numbers
  - \* WAP that generate the following output- 5  
10  
9
- Topic: Roll no 9 to 16
  - \*WAP to find area of a triangle
  - \* WAP to print table of any given number
  - \*WAP to swap two numbers using a third variable.
  - \* WAP that accept radius of a circle and find its area.

**7. Marking scheme for Computer Science homework: –**

- **Section-A : Pre-Reading HW**
  - Difficult words & their meanings in N.B. **6 marks**
- **Section-B : Chapter wise Revision Assignments** **7 marks**
- **Section-C : Creative Project/Working Model** **7 marks**

**Total marks of Computer Science H.W. 20 marks**

**8. Important Note:**

- **All students must submit their vacation Homework of All Subjects for Assessment by teacher on 1st July 2024 by all means. Five marks will be deducted for per day of delay after 1st July 2024.**



# R.E.D. Group of Schools

## Revision Assignment-1

Class: 11<sup>th</sup>

Ch. No. 1

Subject: Computer Science

Ch. Name: Computer system overview

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

(i) RAM

(ii) ROM

(iii) Memory

(iv) Input Unit

(v) Output unit

(vi) Cache Memory

(vii) Software

(viii) Hardware

(ix) Operating System

(x) Utilities

### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage

Utilities are those helpful programs that ensure the smooth functioning of the computer. Utility programs or simply Utilities are meant to assist your computer.

1. Text editor- This utility program is used for creating, editing text files.

2. Backup Utility- This utility program facilitates the backing –up of disk. Back-up means duplicating the disk information so that in case of any damage, this backed up data may be used.

3. Compression Utility- This utility program facilitates compression of files. Large files can be compressed so that they take less storage area.

4. Disk Defragmentor- A file is fragmented when it becomes too large for your computer to store in a single location on a disk. Fragmented files slow down a computer.

#### Answer the following Questions from the passage:-

(A) Why we use disk defragmentor?

(B) What is backup?

(C) What is utility software?

### Part-3 –Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/Picture/ Flow chart /Puzzles for the following Concepts

#### **Diagram/Picture:**

a) Draw diagram of IPO cycle

b) Basic computer organization

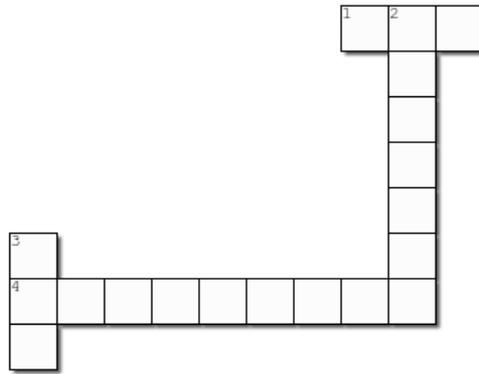
#### **Flowchart:**

a) None

#### **Puzzle:**

a)

Complete the crossword puzzle below



Created using the Crossword Maker on TheTeachersCorner.net

**Across**

- 1. brain of computer
- 4. converts the program written in assembly language into machine language

**Down**

- 2. hardware device
- 3. it is volatile

**Q.4. Solve the following Assertion-Reason/Statement based question**

(i) **Assertion.** A computer can deliver performance only through an efficient combination of hardware and software.

**Reason.** While hardware refers to the physical electronics equipment, software are the recorded programs that govern the hardware to perform tasks in a computer.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

(ii) **Assertion :** An operating system is a system software.

**Reason :** The software that controls internal computer operations, is called system software.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

**Q.5. Write the Shortcut Key of following terms/abbreviations:**

- (i) To Paste the text
- (ii) Undo

**Q.6. Answer the following Short Answer Type Questions**

- 1. What are two categories of system software?
- 2. Distinguish between internal and external memory
- 3. How does display subsystem of a mobile system work?
- 4. What is the utility of disk defragmenter software?
- 5. What role does the input unit play in a computer?

**Q.7. Answer the following Long Answer Type Questions**

- 1. What is the function of CPU in a computer system? What are its subunits?
- 2. Distinguish between CPU and ALU.
- 3. What is an operating system? What is its role?
- 4. What role does memory play in the functioning of computer system?
- 5. Define byte and kilobyte.

**Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch-1 From Text Book/Notebook.



# R.E.D. Group of Schools

## Revision Assignment-2

Class: 11<sup>th</sup>  
Ch. No. 2

Subject: Computer Science  
Ch. Name: Data Representation

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

- |                               |                         |                            |
|-------------------------------|-------------------------|----------------------------|
| (i) UTF-8                     | (ii) ASCII              | (iii) Unicode              |
| (iv) Binary number system     | (v) Octal number system | (vi) Decimal number system |
| (vii) Number system           | (viii) UTF32            | (ix) Encoding schemes      |
| (x) Hexadecimal number system |                         |                            |

### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage

The decimal number system (also called denary number system) is composed of 10 numerals or symbols. These 10 symbols are 0,1,2,3,4,5,6,7,8,9, using these symbols as digits of a number, we can express any quantity. The decimal system is a positional –value system in which the value of a digit depends on its position. For example, consider the decimal number 729. We know that the digit 7 actually represents 7 hundreds, the 2 represents 2 tens and the 9 represents 9 units. In essence, the 7 carries the most weight of three digits, it is referred to as the most significant digit (MSD). The 9 carries the least weight and is called the least significant digit (LSD).

Answer the following Questions from the passage:-

- (A) What is the base of decimal number system?
- (B) In number 456, which digit represent MSD and LSD?
- (C) What is another name of decimal number system?

### Part-3 –Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/Picture/ Flow chart /Puzzles for the following Concepts

**Diagram/Picture:**

- a) None
- b) None

**Flowchart:**

- a) None

**Puzzle:**

- a) None

Q.4. Solve the following Assertion-Reason/Statement based question

(i) Assertion : ‘BED’ is a legal hexadecimal value while ‘BEDS’ is not.

Reason : Hexadecimal number system does not recognise as 0-9 ,A-F.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

(ii) Assertion : The decimal number system has base 10.

Reason : The decimal number system is composed of 10 unique symbols.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

Q.5. Write the Shortcut Key of following terms/abbreviations:

- (i) ASCII
- (ii) ISCII

**Q.6. Answer the following Short Answer Type Questions**

1. What are the bases of decimal, octal, binary and hexadecimal systems ?
2. What is the use of encoding schemes ?
3. What all encoding schemes does Unicode use to represent characters ?
4. What do you understand by code point ?
5. What is the most significant bit and the least significant bit in a binary code ?

**Q.7. Answer the following Long Answer Type Questions**

1. Convert the following binary to octal- a) 111010 b) 110110101
2. Convert the following decimal to octal- a)19 b) 161
3. Convert the following decimal to hexadecimal-a) 132 b)122
4. Convert the following octal to decimal - a)123 b)605.12
5. Convert the following hexadecimal to binary a) A6 b) 7AB4

**Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch-2 From Text Book/Notebook.



# R.E.D. Group of Schools

## Revision Assignment-3

Class: 11<sup>th</sup>  
Ch. No. 3 & 4

Subject: Computer Science  
Ch. Name: Boolean Logic &  
Introduction to problem solving

### Part-1 – for Vocabulary skills

Q.1. Define the following Key Terms:

- |                       |                       |                 |
|-----------------------|-----------------------|-----------------|
| (i) Logic gates       | (ii) Flowchart        | (iii) Algorithm |
| (iv) Truth Table      | (v) Decomposition     | (vi) Debugging  |
| (vii) Boolean algebra | (viii) Logic circuits | (ix) Fallacy    |
| (x) Dry run           |                       |                 |

### Part-2 – Reading skills

Q.2. Read the following Passage from the Chapter & answer the questions.

#### Passage

Pseudocode is an informal language that helps programmers describe steps of a program's solution without using any programming language syntax. Pseudocode is a "text-based" detail (algorithm) design tool. A pseudocode creates an outline or a rough draft of a program that gives the idea of how the algorithm works and how the control flows from one step to another. In Pseudocode, usually instructions are written in upper-case, variables in lowercase and messages in sentence case.

Answer the following Questions from the passage:-

- (A) What is Pseudocode?
- (B) In which programming language we can write Pseudocode?
- (C) Variables are written in which case?

### Part-3 – Application skills of Subject Tools & Concepts

Q.3. Draw the Diagram/Picture/ Flow chart /Puzzles for the following Concepts

#### **Diagram/Picture:**

- a) Design a logic circuit draw its diagram for the boolean expression –  $A+BC +D'$
- b) Prove that  $X.(X+Y)=X$  by truth table method.

#### **Flowchart:**

- a) Draw a flowchart for calculating grade from marks percentage.

#### **Puzzle:**

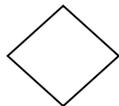
- a) Identify the flowchart symbols name –



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

Q.4. Solve the following Assertion-Reason/Statement based question

(i) **Assertion** : The operation performed by a NOT gate is logical multiplication.

**Reason** : The NOT gate is inverter that inverts the state of input signal.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

**(ii) Assertion :** An algorithm is the logical sequence of precise steps that solve a given problem.

**Reason :** An algorithm must have finite number of precise steps ,which must be effective and end in a reasonable amount of time.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

**Q.5. Write the Shortcut Key of following terms/abbreviations:**

- (i) To print the document
- (ii) To select all

**Q.6. Answer the following Short Answer Type Questions**

1. Name the person who developed Boolean logic?
2. What is logic gate? Name the three basic logic gates.
3. What is the other name of NOT gate?
4. What is dry run? How is it useful?
5. What is done during coding phase?

**Q.7. Answer the following Long Answer Type Questions**

1. What is tautology and fallacy?
2. What are the phases of problem solving cycle?
3. State the purpose of reducing the switching functions to the minimal form.
4. Mention the steps you would follow while writing a program.
5. Write an algorithm to find the square of a number.

#### **Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch-3 & 4 From Text Book/Notebook.



# R.E.D. Group of Schools

## Revision Assignment-4

Class: 11<sup>th</sup>  
Ch. No. 5 & 6

Subject: Computer Science  
Ch. Name: Getting started with  
Python & Python fundamental

### Part-1 – for Vocabulary skills

**Q.1. Define the following Key Terms:**

- |                             |                       |                     |
|-----------------------------|-----------------------|---------------------|
| (i) Cross-platform software | (ii) Interactive mode | (iii) Keywords      |
| (iv) Identifiers            | (v) Literals          | (vi) Expression     |
| (vii) In-line comment       | (viii) Statement      | (ix) Case sensitive |
| (x) Functions               |                       |                     |

### Part-2 – Reading skills

**Q.2. Read the following Passage from the Chapter & answer the questions.**

#### Passage

Python programming language was developed by Guido Van Rossum in February 1991. Python is based on or influenced with two programming languages: ABC language and Modula-3. Python is an easy to learn yet powerful object oriented programming language. It is a very high level programming language yet as powerful as many other middle-level not so high-level languages like C, C++, Java etc.

Python is an interpreted language, that is all the commands you write are interpreted and executed one by one.

**Answer the following Questions from the passage:-**

- (A) When Python was released.
- (B) Which two languages contributed to Python as a programming language?
- (C) In how many different ways can you work in Python?

### Part-3 – Application skills of Subject Tools & Concepts

**Q.3. Draw the Diagram/Picture/ Flow chart /Puzzles for the following Concepts**

**Diagram/Picture:**

- a) None
- b) None

**Flowchart:**

- a) None

**Puzzle:**

- a) None

**Q.4. Solve the following Assertion-Reason/Statement based question**

**(i) Assertion :** Python supports dynamic typing of variables.

**Reason :** A variable can hold values of different types at different times, in a program.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

**(ii) Assertion :** In Python, blocks are represented through indentation.

**Reason :** Blocks in Python are the compound statements.

- a) Both A and R are true and R is the correct explanation of A
- b) Both A and R are true and R is not the correct explanation of A
- c) A is true but R is false
- d) A is false but R is true

**Q.5. Write the Shortcut Key of following terms/abbreviations:**

- (i) IDLE
- (ii) GUI

**Q.6. Answer the following Short Answer Type Questions**

1. Name the person who developed Python.
2. What is the use of trace table?
3. What are conditional? When they are required in a program?
4. How would you create multi-line comments?
5. What is a block or suite in Python? How is indentation related to it?

**Q.7. Answer the following Long Answer Type Questions**

1. What factors guide the choice of identifiers in programs?
2. What happens when you try to access the value of an undefined variable?
3. What are the advantages of Pseudocode?
4. What is meant by floating –point literal in Python? How many ways can a floating literal be represented into?
5. What is meant by token?

**Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch-5 & 6 From Text Book/Notebook.

# Summer Holidays Homework

SESSION: 2024-25

CLASS – 11th

Subject: Physical education

Text Book: Phy.edu.

## 1. Syllabus Covered upto MAY END

- Chapter No.- 1 Changing trends and career in phy.edu.
- Chapter No.- 2 Olympic value education
- Chapter No.- 3 Yoga
- Chapter No.- 4 Phy.edu. and sports for CWSN

## 2. List of all new concepts taught upto MAY END

- Meaning and importance of Wellness, Health, and Physical fitness.
- Components/Dimensions of wellness, Health and physical fitness.
- Traditional sports and regional games for promoting wellness.

## 3. Summer Holiday Homework:

- **Reading Homework:**
  - **Section – A:** Pre-Reading of Next Two Chapters
- **Written Homework:**
  - **Section – B:** Chapter-wise Revision Assignments
  - **Section – C:** Current Affairs Project
  - **Section – D:** Creative Project/ Working Model
  - **Section – E:** Chart Work

## 4. Tools required for doing Homework:

- Text Book
- Notebook
- A4Sheets
- Resources as per activity

## 5. Instruction/Guidelines for Reading Homework:

- **Section – A: Pre-Reading Homework**
  - Do the Pre-Reading of Chapter No. 05 and 06
  - Write all the difficult words & their meanings of above chapters in Physical Edu. N.B.

## 6. Instruction/Guidelines for Written Homework

- **Section – B:** Do the given Assignments on A4 Sheet.
- **Section – C: Current Affairs Project:**
  - Collecting current news of five National, five International and five Sports of Month June
- **Section – D: Creative Project/ Models**
  - Topic: Roll no 1 to 12 (Hawk - Eye System)
  - Topic: Roll no 13 to 24 (Olympic Flag)
  - Topic: Roll no 25 to 36 (Kapal Bhati)
- **Section – E: Chart Work**
  - Topic: Roll no 1 to 12 (Organic Aspect of Development)
  - Topic: Roll no 13 to 24 (Career options in physical education)
  - Topic: Roll no 25 to 36 (Olympic value Education)

## 7. Marking scheme for Physical Education Homework: –

- **Section-A : Pre-Reading HW**
  - Difficult words & their meanings in N.B. **4 marks**

- **Section-B : Chapter wise Revision Assignments**      **4 marks**
- **Section-C : Project on Current Affairs**      **4 marks**
- **Section-D : Creative Project/Working Model**      **4 marks**
- **Section-E : Chart**      **4 marks**

**Total marks of Physical Education H.W.**      **20 marks**

**8. Important Note:**

**All students must submit their vacation Homework of All Subjects for Assessment by teacher on 1st July 2024 by all means. Five marks will be deducted for per day of delay after 1st July 2024.**



# R.E.D. Group of Schools

## Revision Assignment-1

Class: 11th

Subject: Phy. Edu.

Ch. No.: 1 to 2

Ch. Name: Changing trends and career

in physical education, Olympic value education

### Part-1 – for Vocabulary skills

**Q.1. Define the following Key Terms:**

- |                    |                    |                    |
|--------------------|--------------------|--------------------|
| (i) Gymnasium      | (ii) Neuromuscular | (iii) Coordination |
| (iv) Technological | (v) Excellence     | (vi) Honoured      |
| (vii) Interlocked  |                    |                    |

### Part-2 – Reading skills

**Q.2. Read the following Passage from the Chapter & answer the questions.**

**Passage** Olympic value education aims to instill in individuals the core values upheld by the Olympic Movement: excellence, friendship, respect, and fair play. Through the study and promotion of these values, individuals learn not only to excel in their respective fields but also to uphold integrity, camaraderie, and sportsmanship. By embracing these values, participants can contribute positively to their communities and foster a culture of peace and understanding through sport."

### Answer the following Questions from the passage:-

- (A) What is aim of Olympic value education?
- (B) write the names of Olympic values?
- (C) Through the study and promotion of Olympic values the individuals learn?

### Part-3 – Application skills of Subject Tools & Concepts

**Q.3. Solve the following questions based on Maps or Diagram or Graphs given below**  
**Diagram:**

- a) Olympic Flame
- b) Olympic flag

**Q.4. Solve the following Assertion-Reason/Statement based question**

(i) **Assertion (A): The main objective of physical education is physical development.**

**Reason (R): Physical education is related to several physical activities.**

- a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of the Assertion (A).
- b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).
- c) Assertion (A) is true, but Reason (R) is false.
- d) Assertion (A) is false, but Reason (R) is true.

(ii) **Assertion (A): Olympism tells us that sports is a universal human right.**

**Reason (R): We all should be free to practice it.**

- e) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of the Assertion (A).
- f) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).
- g) Assertion (A) is true, but Reason (R) is false.
- h) Assertion (A) is false, but Reason (R) is true.

**Q.5. Analyze the given picture & describe it in your own words**

**Picture :-**



**Q.6. Answer the following Short Answer Type Questions**

- a) Explain the role of latest Equipment in games?
- b) Explain the Olympic Motto?
- c) What are the values of olympism?
- d) Enlist various careers in the fields of physical education?
- e) Why different playing surfaces are being used for different games?

**Q.7. Answer the following Long Answer Type Questions**

- a) Explain all the objectives of physical education?
- b) Explain the values of Olympic games?
- c) What is the importance of five rings in Olympic flag?
- d) Describe the Olympic oath?

**Part-4 – Learning Homework**

- **Learning Homework:** Learn Ch- 01 to 02 From Text Book/Notebook.



# R.E.D. Group of Schools

## Revision Assignment-2

Class: 11th

Ch. No.: 3,4

education and sports for CWSN

Subject: Phy. Edu.

Ch. Name: Yoga, Physical

### Part-1 – for Vocabulary skills

**Q.1. Define the following Key Terms:**

(i) Intellectual

(ii) Disorder

(iii) Disability

(iv) Posture

(v) Spiritual

(vi) Anxiety

(vii) Originate

### Part-2 – Reading skills

**Q.2. Read the following Passage from the Chapter & answer the questions.**

**Passage Currency with the people:** Yoga is a practice that originated in ancient India and has evolved over thousands of years. It encompasses physical postures, breathing exercises, meditation, and ethical principles aimed at promoting physical, mental, and spiritual well-being. Through regular practice, individuals can improve flexibility, strength, balance, and mental clarity. Yoga is not just a form of exercise but a holistic lifestyle that encourages self-awareness, mindfulness, and inner peace. Its benefits extend beyond the physical realm to promote harmony within oneself and with the surrounding world."

### Answer the following Questions from the passage:-

1. Yoga encourages \_\_\_\_\_ in an individual?

2. Yoga helps to improve?

3. Yoga is originated from?

### Part-3 – Application skills of Subject Tools & Concepts

**Q.3. Solve the following Assertion-Reason/Statement based question**

(i) **Assertion (A):** Stress and anxiety can be reduced by regular practice of yoga.

**Reason (R):** Practising breathing techniques drives away insomnia to a large extent.

i) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of the Assertion (A).

j) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).

k) Assertion (A) is true, but Reason (R) is false.

l) Assertion (A) is false, but Reason (R) is true.

(ii) **Assertion (A):** Physical education is recognized as an indispensable portion of the school curriculum because of its many faceted benefits.

**Reason (R):** It helps students attain physical, emotional, mental, and social powers.

m) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of the Assertion (A).

n) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).

o) Assertion (A) is true, but Reason (R) is false.

p) Assertion (A) is false, but Reason (R) is true.

**Q.4. Analyze the given picture & describe it in your own words**

**Picture :-**



**Q.5. Answer the following Short Answer Type Questions**

- a) What is the meaning of yoga?
- b) What are the eight limbs of yoga?
- c) What are the causes of physical disability?
- d) Briefly write any four principal of adaptive physical education?
- e) What is disability? Give an example

**Q.6. Answer the following Long Answer Type Questions**

- a) Explain the role of any four professionals for CWSN?
- b) Make a table on the types of disability, its causes and its nature?
- c) Explain how yoga helps in stress management?
- d) Write in details on YAMA and NIYAMA?

**Part-4 – Learning Homework**

**Learning Homework:** Learn Ch- 03 and 04 From Text Book/Notebook.