Dr.Virendra Swarup Education Centre,Jajmau.Kanpur
Summer Vacations Homework (2026 – 2027)
Class ; XI

ENGLISH

The following has to be done in your English language registers
Writing:1.You are the HR manager of Oxford Software services.You require software engineers familiar with ERP software oracle with maximum 5 years experience.Draft a suitable advertisement.
2.Design a poster in not more than 50 words on Reduce,Reuse, Recycle
Grammar exercises
1.Fill in the blanks with the correct form of the words:
a.He …….. (beat) the thief if he catches the man.
b.She might catch the bus if she……..(run) fast.
c.They would have won if they ……..(play) well.
d.If you …….. (inform) me I would have reached the station.
e.If she ……..(not work) hard, she will fail.
f.Unless they ……..(request) me, I would not go.
g.If you …….. (help) me, I would have completed this job.
h.If I …….. (be) a bird I would fly to you.
i.In case you …….. (see) Avish, give him this book.
j.Unless she …….. (mend) her ways, she will suffer.
2.Fill in the blanks in the following passages with the appropriate tense forms of the verbs given in brackets:

1.My younger brother, Tinu, (a) ……. (fall) off his bicycle yesterday. He (b) …….. (hurt) his right ankle and (c) …….. (be) in bed since then. The doctor (d) …….. just (examine) him and (e) ……..(advise) him complete rest for a week. He hopes that Tinu (f) …….. (recover) soon.

2.The match (a) ……..(begin) before we reached the stadium. There (b)…….. (be) a great rush at the gate. People (c) …….. (argue) with the security guards. Entering the stadium (d)…….. (prove) a tedious job. I (e)…….. (be) able to forget this nasty experience in the years to come. I (f) ……..(decide) never to watch an event in an overcrowded place.

3.When I (a)…….. (look) at the Palace in the morning sunlight, I was amazed. It (b) …….. (seem) an architectural wonder. I (c) …….. (watch) it from different angles and (d) …….. (take) snaps. Perhaps my movements (e) …….. (make) the guards suspicious. They at once (f) …….. (catch) hold of my camera and spoke rudely to me.

4.It is estimated that India (a) …….. (make) rapid strides in science in the coming years. For that we (b) …….. (need) good science teachers, labs and equipment. Unfortunately, the existing scenario (c) …….. (not present) an encouraging sight. The nation (d) …….. (lack) administrators with a vision. Scientists (e) …….. (be) more interested in foreign assignments than research at home. Students too (f) …….. not (lag) behind.
you ever

5.(a) ……. (hear) of paperless office? You (b) …….. certainly (say), “no”. Well, very soon the old favourite of pen-pushers (c) …….. (make) an unceremonious exit.

You (d) …….. already (see) it happening in the banks. Where (e) …….. (be) those bulky ledgers? A smart computer (f) …….. (replace) them quietly.

3.Correct the following sentences using proper tense forms.
a.I am liking it very much.
b.She is knowing you very well.
c.Mohit is seeing the bus coming.
d.It rains now, we can't go out.
e.Water vapour is condensing to form clouds.
f.Madhu is always writing beautiful poems.
g.The poem is going round the earth.
h.These students prepare for their exams these days.
i.Why do you work so hard today?
j.My uncle has arrived from Mumbai last night.

Project Work

TOPIC OF THE PROJECT:

"The Address" by Marga Minco provides a poignant depiction of the psychological toll of World War 2 on individuals. Analyze the psychological impact of war on the protagonist, focusing on themes of loss, survivor's guilt, and the struggle for identity. Evaluate how these psychological aspects are portrayed in the story and their relevance to broader experiences of individuals affected by the war.

PROJECT GUIDELINES:

* Cover Page: Include the project title, school details, and student information.
* Contents/Index: Provide a table of contents for easy navigation.
* Statement of Purpose/Objectives/Goals: Clearly outline the purpose and objectives of the project.
* Introduction: Introduce the topic of the project and its significance.
* Project Work (800-1000 words): This section can be divided into sub-topics as needed to cover all aspects of the project. Consider including:
  * Character analysis
  * Setting exploration
  * Symbolism in the novel
  * Themes analysis
  * Plot summary and analysis
  * Historical context
  * Author study
  * Comparison with other works
  * Critical review
  * Creative project
* Conclusion: Summarize the key findings and insights from the project.
* Relevant Photographs: Include photographs that capture positive learning experiences related to the project.
* List of Resources/Bibliography: Provide a list of all the resources used in the project, including books, articles, websites, and any other reference cited.
* The project must be done on comment sheets and art sheets, total no:15

HINDI

रचनात्मक कार्य

1. "नर हो न निराश करो मन को" तथा "असफलता जीवन प्रक्रिया का स्वाभाविक अंग है"दोनों विषय पर 200 शद्बों में रचनात्मक लेख लिखें (कार्य व्याकरण रजिस्टर में होगा)

परियोजना कार्य

1. "नमक का दारोगा" पाठ को आधार बनाकर सत्य की विजय विषय पर चित्रात्मक परियोजना तैयार करें।

अथवा

2. हिंदी साहित्य के रत्न कबीर दास, प्रेमचंद,मीराबाई में से किसी एक का साहित्यिक जीवन परिचय देते हुए सुंदर चित्रात्मक परियोजना तैयार करें

BIOLOGY

1.Prepare a project file on any topic from your NCERT Biology book.

●The file should contain 10–12 pages.

●Include relevant diagrams/pictures wherever required.

●Write neatly and organize the content properly with headings and subheadings.

2.Complete the NCERT Exemplar questions of the chapters:

●The Living World
●Biological Classification

COMPUTER SCIENCE

- **Boolean Logic**

a) Construct the logic diagram for:

1. $Y=(A \oplus B)\cdot C$ 2. $Y=(A+B+C)\cdot D$ 3. $Y=AB+BC+AC$

$Y=((A+B)\cdot(C+D))'$

- Data Representation

b) Convert the following Decimal fractions into Binary fractions:

1. 12.625_{10}
2. 45.375_{10}

c) Convert the following Hexadecimal numbers into Decimal and Binary:

1. $2AF_{16}$
2. $7D9_{16}$
3. $F0B_{16}$

- **Algorithm & Flowchart**

d) Write an algorithm and draw a flowchart to check whether a number is Even or Odd.

e) Write an algorithm and draw a flowchart to calculate Simple Interest.

Formula

$SI=(P\times R\times T)/100$

☾ **Python Fundamental**

Write a Python program to swap two variables.

Write a Python program to calculate Simple Interest.

Formula

MATHS

Do these activities in your math lab manual

Activity 1: sets

To find the number of subsets of a given set and verify that the total numbers of subsets is 2^n if a set has n numbers of elements.

Activity 2: Relations and functions

To differentiate between a relation and a function by an activity method.

Activity 3: Relations and functions

To differentiate between a relation and a function by an activity method.

Activity 4: Linear inequality

To verify that the graph of a given inequality: $2x + 3y - 6 < 0$ of the form: $ax + by + c < 0$, $a, b > 0$, $c < 0$ represents only one of the two half.

Solve all the exercise of chapter sets , Relations and functions and Linear inequality from ncert book in your fair notebook.

CHEMISTRY

1.Solve all the numerical problems from chapter 1- Some Basic Concepts of Chemistry(NCERT) in your classwork notebook.

2. Prepare an investigatory project file on any one of the following topics

a. Chemistry in Medicines

b. Chemistry in the Kitchen

c,Adulteration in common food items

d.Artificial Sweeteners and their Chemistry

e. Chemistry of Cosmetics

1. State the principle of homogeneity of dimensions. State the limitations of dimensions.
2. Discuss the main type of errors in a physical measurement.
3. Name two Physical quantities which have same dimensions and different units and two physical quantities having different dimensions and same unit.
4. Do the significant figures change if the physical quantity is measured in different system of unit? Give example
5. A ball is thrown vertically upwards with a velocity of 20 m/s from the top of a building. The height of a point from where the ball is thrown is 25m above the ground.
    - How high the ball will rise?
    - How long will it be in air before it hits the ground?
6. Discuss the motion of object under free fall. Neglect air resistance.

7. Plot the graph of following under free fall 🎬 Variation of acceleration with time.
    - Velocity with time
    - Distance with time.
8. The period of oscillation of simple pendulum is $T = 2\pi \sqrt{l/g}$ where 'l' is the length of pendulum and 'g ' is acceleration due to gravity. Show dimensionally that the above formula is incorrect. Also rectify the formula dimensionally.
9. Give any four rules to determine the significant figures with example.
10. The mass of the object is measured to be 4.237g and its volume is measured to be 2.51 cm3. Then find the density of a substance with correct significant figure.
11. What do you mean by least count of an instrument?
12. What is Vernier Callipers? Sate it's principle, least count, zero error and it's type.
13. What is Screw Gauge? State it's least count, pitch of screw gauge, working and zero error.
14. What do you mean by backlash error?
15. If force(F), velocity(V) and time (T) are chosen as fundamental quantities then what will be the dimensions of mass, time , surface tension, universal Gravitational constant.
16. 1. A particle is moving in a circle of diameter 5m. Calculate the distance covered and the displacement when it competes 3 revolutions.
17. A body thrown vertically upwards reaches a maximum height 'h'. It then returns to ground. Calculate (a) the distance travelled and the displacement.
18. A body travels a distance of 15m from A to B and then moves a distance of 20m at right angles to AB. Calculate the total distance travelled and the displacement.
19. An object is moving in a circle of radius 'r'. Calculate the distance and displacement
    (i) when it completes half the circle
    (ii) when it completes one full circle.
20. An object travels 16m in 4s and then another 16m in 2s. What is the average speed of the object?
21. Vishnu swims in a 90m long pool. He covers 180m in one minute by swimming from one end to the other and back along the same straight path. Find the average speed and average velocity of Vishnu.
22. In along distance race, the athletics were expected to take four rounds of the track such that the line of finish was same as the line of start. Suppose the length of the track was 200m.
    (a) What is the total distance to be covered by the athletics?
    (b) What is the displacement of the athletics when they touch the finish line?
    (c) Is the motion of the athletics uniform or non-uniform?
    (d) Is the displacement of an athletic and the distance covered by him at the end of the race equal?
23. Starting from a stationary position, Bhuvan paddles his bicycle to attain a velocity of 6m/s in 30s. Then he applies brakes such that the velocity of bicycle comes down to 4m/s in the next 5s. Calculate the acceleration of the bicycle in both the cases.
24. Amit is moving in his car with a velocity of 45km/hr. How much distance will he cover (a) in one minute and (b) in one second.
25. The odometer of a car reads 2000 km at the start of a trip and 2400km at the end of the trip. If the trip took 8 hr, calculate the average speed of the car in km/hr and m/s.
26. An electric train is moving with a velocity of 120km/hr. How much distance will it move in 30s?

27. A body is moving with a velocity of 15m/s. If the motion is uniform, what will be the velocity after 10s?
28. A train travels some distance with a speed of 30km/hr and returns with a speed of 45km/hr. Calculate the average speed of the train.
29. A train 100m long moving on a straight level track passes a pole in 5s. Find
    (a) the speed of the train
    (b) the time it will take to cross a bridge 500m long.
30. A car travels along a straight line for first half time with speed 40km/hr and the second half time with speed 60km/hr. Find the average speed of the car.
31. A body starts rolling over a horizontal surface with an initial velocity of 0.5m/s. Due to friction, its velocity decreases at the rate of 0.05m/s2. How much time will it take for the body to stop?
32. A car traveling at 36km/hr speeds upto 70km/hr in 5 seconds. What is its acceleration? If the same car stops in 20s, what is the retardation?
33. A scooter acquires a velocity of 36km/hr in 10seconds just after the start. It takes 20 seconds to stop. Calculate the acceleration in the two cases.
34. On a 120km track, a train travels the first 30 km at a uniform speed of 30 km/hr. How fast must the train travel the next 90 km so as to average 60 km/hr for the entire trip?
35. A train travels at 60 km/hr for 0.52 hr; at 30 km/hr for the next 0.24 hr and at 70 km/hr for the next 0.71 hr. What is the average speed of the train?

36. A ball is thrown vertically upwards with a velocity of $20ms^{-1}$from the top of a multistory building. The height of the point from where the ball is thrown is 25.0m from the ground. (a) How high will the ball rise? And (b) how long will it be before the ball hits the ground? Take g= $10ms^{-2}$.

37. Discuss the motion of an object under free fall. Neglect air resistance.

    Plot the graphs of the following for a body under free fall.

    a. Variation of acceleration with time.
    b. Velocity and with time.
    c. Distance with time

38. Show that “The distances traversed, during equal intervals of time, by a body falling from rest, stand to one another in the same ratio as the odd numbers beginning with unity (namely, 1:3:5:7). Or State and prove Galileo’s law of odd numbers for the distances covered by an object during equal intervals of time.

39. Plot the position-time graph of the following.

    a. Two objects moving with equal velocities
    b. Two objects with unequal velocities, showing the time of meeting.

c. Two objects with velocities in opposite directions, showing the time of meeting.

40. Two parallel rail tracks run north-south. Train A move north with speed of 54kmh^{-1} and train B moves with a speed of 90 km h^{-1}. What is the Velocity of B with respect to A?

- Velocity of ground with respect to B? and
- Velocity of a monkey running on the roof of the train A against its motion (with a 18 km h^{-1}with respect to the train A) as observed by a man standing on the groun

41. Give the dimensional formula and SI unit of measurement of the following quant

a. Instantaneous acceleration

b. Average velocity

c. Displacement