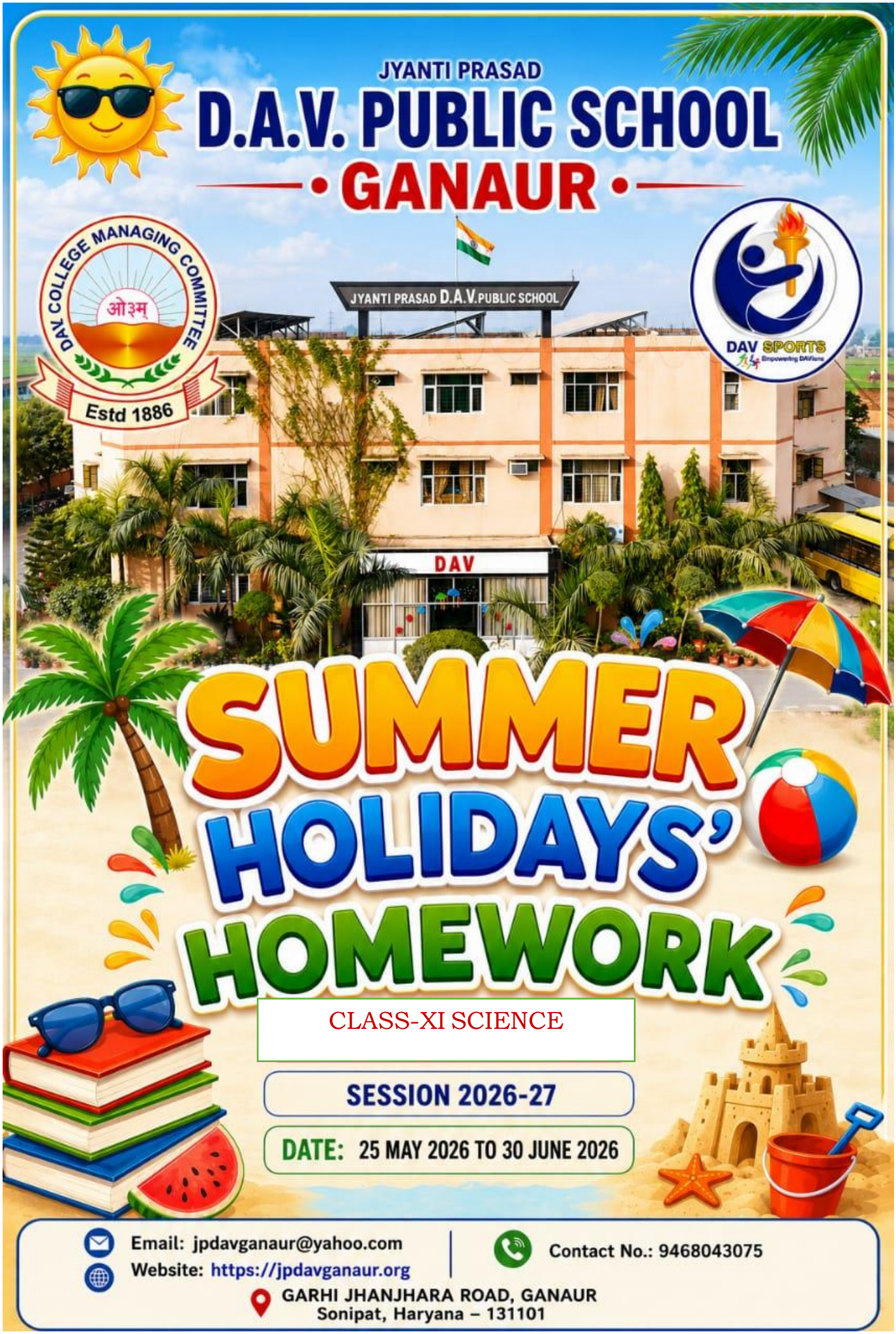
JYANTI PRASAD
D.A.V. PUBLIC SCHOOL
GANAUR
DAV COLLEGE MANAGING COMMITTEE
ओ३म्
Estd 1886
DAV SPORTS
JYANTI PRASAD D.A.V. PUBLIC SCHOOL
DAV
SUMMER HOLIDAYS' HOMEWORK
CLASS-XI SCIENCE
SESSION 2026-27
DATE: 25 MAY 2026 TO 30 JUNE 2026
Email: jpdavganaur@yahoo.com
Website: https://jpdavganaur.org
Contact No.: 9468043075
GARHI JHANJHARA ROAD, GANAUR
Sonipat, Haryana – 131101

GENERAL INSTRUCTIONS

1. Complete the holiday homework neatly and sincerely.
2. Use a separate notebook/file as instructed by the subject teacher.
3. Write your name, class, section, and roll number clearly on every notebook/project.
4. Maintain proper handwriting and presentation.
5. Do the work independently. Parents may guide, but students should complete the work themselves.
6. Submit the homework on the reopening day after summer vacation.
7. Revise the syllabus covered in class regularly during the holidays.
8. Read newspapers, storybooks, and other informative materials daily to improve language skills.
9. Practice writing, reading, and learning tables/formulas every day.
10. Avoid excessive use of mobile phones, television, and video games.
11. Spend quality time with family and follow a healthy daily routine.
12. Keep your surroundings clean and follow good habits.
13. Participate in creative activities such as drawing, craft, yoga, gardening, or music.
14. Learn something new during the holidays and make productive use of your time.
15. Complete all projects and activities as per the given instructions.
16. Students are advised to stay safe and take care during the summer season.
17. Drink plenty of water and avoid going out in extreme heat unnecessarily.
18. Holiday homework will be assessed after the vacation.

ENGLISH

1.Read the following carefully and make a question bank containing at least 100 questions to be used in '**Interclass Quiz Competition'.**

Hornbill:

Lesson 1-The portrait of a Lady

Lesson 2- We Are Not Afraid to Die..

Poem 1- A Photograph

Snapshot:

Lesson 1- The Summer of Beautiful White Horse

2. Read lesson 'The Ailing Planet…'

and frame notes covering the whole detail given in the lesson.

3. Prepare yourselves for an Inter-class Debate Competition on the topic **'Technology:Boon or Bane'** to be held in July (tentative).

4. Prepare a poster on ' **Child Labour**' on a chart.

5. Watch the movie 'Yashoda' and write an elaborated review of it. Also draw a pen Portrait of main characters.

6. Draft an audio visual advertisement for the promotion of any of your favourite things. You may work in a group of maximum 5.

The best one will be awarded.

7. Make a catchy detailed project on the The life and works of

The Father of English Poetry:

Geoffrey Chaucer (1-5)

William Shakespeare (6-10)

William Wordsworth. (11-15)

T S Elliot (16-20)

John Milton (21-25)

Shashi Tharoor (25-30)

Note:

- Questions 1-3 are to be done in the Holidays Homework notebook.
- Questions 5 & 7 are to be done on A4 assignment sheets in a presentable way. (Use good quality of Assignment sheets and files)

PHYSICS

A. Do practice of NCERT questions (Back Exercise and intext)

B .ASSIGNMENT (Chapter 1,2,3)

1.x=x0e-bxt, x and x0 are distance,t is time. Find out dimensions of b.

2. In a new system of units,the unit of mass =10g, the unit of length 1cm and unit of time is 50 second. Express an energy of 100 J in this new system of units.

3. The coefficient of viscosity depends on mass (m), effective diameter (d) and mean speed (v) of gas molecules. Derive formula for Coefficient of viscosity dimensionally.

4. A boat moving with an initial velocity v0 experience an acceleration is given by a =-kv^3 and obtain an expression for instantaneous velocity.

5. The power delivered by a force F=2i+3j+4k to an object moving with a velocity v=3i+2j equals to a.5W. b.10W. c.12W. d. 32 W

6. State parallelogram law of vector addition. Derive an expression for its magnitude and direction for resultant of two given vectors.

7. A ball of mass m is thrown vertically upward. Another ball of mass 2 m is thrown at an angle Q with the vertical. Both of them stay in air for the same time interval. What is the ratio of maximum height attained by the two balls.

8.A Car is moving towards east with the velocity of 40 km/h.To its driver a bus appears to move towards north with a velocity of 40√3 km/h. Find the magnitude of velocity and direction of motion with respect to stationary observe.

9. Q=$2t^3+3t^2+6$ Find angular velocity of the particle at t = 2 second.

10. r=(ati -bt^2j+ ck)m. Find the velocity and acceleration of particle.

C. Make a project on any topic mentioned below

1.Application of Newton 's law in our daily life

2. Application of projectile motion in our daily life

3. Importance of unit in our day to day life.

D.Complete your lab manual

List of practicals

Section -A

1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.

2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.

3. Using a simple pendulum, plot its graph and use it to find the effective length of second's pendulum.

4..To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination θ by plotting graph between force and Sinθ.

Activities

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.

2. To determine mass of a given body using a metre scale by principle of moments.

3. To study the variation in range of a projectile with angle of projection.

Section -B

1.To find the force constant of a helical spring by plotting a graph between load and extension.

2. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.

3. To study the relation between frequency and length of a given wire under constant tension using sonometer.

Activities

1. To observe change of state and plot a cooling curve for molten wax.

2. To observe and explain the effect of heating on a bi-metallic strip.
3.To study the factors affecting the rate of loss of heat of a liquid.

CHEMISTRY

1.Prepare a chart on

- Periodic table (Roll no 1-10)
- Comparison of different models of atom (Roll no -11-18)
- Laws of chemical combination (Roll no-19to27)

2.**Prepare Lab Manual** in accordance with instructions given in class (as per prescribed syllabus)

3.Collect data and submit a **Report** on Newly discovered Elements

Using flash cards to be displayed on class board.

It must contain the following-

(uses, atomic no. mass no. electronic configuration)

4.Prepare an investigatory project on

- **Environmental chemistry**
  OR
- **Chemistry in Everyday life**

5. Solve **the Assignments** based on chapter 1,2and 3 on A4 sized sheets.

ASSIGNMENT NO 1

1. Electrons are emitted with zero velocity from a metal surface when it is exposed to radiation of wavelength 6800 Å. Calculate threshold frequency (vo) and work function (Wo) of the metal.

2. What is the wavelength of light emitted when the electron in a hydrogen atom undergoes

transition from an energy level with n = 4 to an energy level with n = 7 ?

3. How much energy is required to ionise a H atom if the electron occupies n = 5 orbit? Compare your answer with the ionization enthalpy of H atom (energy required to remove the electron from n

=1 orbit).

4. (i) The energy associated with the first orbit in the hydrogen atom is-2.18 x 10-18 Jatom¹. What

is the energy associated with the fifth orbit? (ii) Calculate the radius of Bohr's fifth orbit for hydrogen atom.

5. What is the energy in joules, required to shift the electron of the hydrogen atom from the first Bohr orbit to the fifth Bohr orbit and what is the wavelength of the light emitted when the electron returns to the ground state? The ground state electron energy is - 2.18 * 10 ^ - 11 ergs.

6.The electron energy in hydrogen atom is given by En = (-2.18 x 10-18)/n² J. Calculate the energy required to remove an electron completely from the n = 2 orbit. What is the longest wavelength of light in cm that can be used to cause this transition?

7. What transition in the hydrogen spectrum would have the same wavelength as the Balmer

8. An element with mass number 81 contains 31.7% more neutrons as compared to protons.

Assign the atomic symbol.

10. A commercially available sample of H2SO4 is 15% H2SO4 by wt. (density = 1.10g/mL). Calculate molarity, molality and mole fraction of H2SO4 in the given solution.

11. When a proton of frequency 1 x 10^{15}/s was allowed to hit a metal surface, an electron

having 1.988 X 10-19 J of kinetic energy was emitted. Calculate the threshold frequency of the metal. Show that an electron will not be emitted if a photon of wavelength 600 nm hits the metal surface.

12.Calculate the number of atoms in each of the following (i) 52 moles of Ar (ii) 52 u of He (iii) 52 g of He.

13.A piece of aluminium weighing 2.7g was heated with 100ml of 25% by mass H_2SO_4 (density=

1.18 g/cm^3). After complete dissolution of metal, the solution is diluted further by adding water to 500mL. What is the molarity of free H_2SO_4 in the resulting solution?

14. Calcium carbonate reacts with aqueous HCI to give CaCl2 and CO2 according to the reaction, CaCO3 (s) + 2 HCl (aq) → CaCl2 (aq) + CO2 (g) + H2O(1) What mass of CaCO3 is required to react completely with 25 mL of 0.75 M HCI?

15. Chlorine is prepared in the laboratory by treating manganese dioxide (MnO2) with aqueous hydrochloric acid according to the reaction 4 HCl (aq) + MnO2 (s) → 2H2O (l) + MnCl2 (aq) + Cl2 (g) How many grams of HCI react with 5.0 g of manganese dioxide?

Assignment no 2

1. Define

i) Photoelectric effect

ii) Black body radiation

2. Differentiate

i) Absorption and Emission spectrum

i) Orbit and orbital

3. Which is more stable i) Mn2+ or Mn3+ii) Fe2+ or Fe3+? Give reason.

4. Among the following pairs of orbitals which orbital will experience the larger effective nuclear charge? (i) 2s and 3s, (ii) 4d and 4f, (iii) 3d and 3p.

5. Based on Bohr Bury rules arrange the following orbital's in the increasing order of energy.

(i) 5f, 4d, 7s, 7p (ii) 5p, 4d, 5d, 4f, 6s

6. Discuss the similarities and differences (t each) between a 1s and a 2s orbital.

7. a) How many electrons in an atom may have the

following quantum number?

(i) n = 4 ms = +1/2 (ii) n = 3,1 = 0

b) What are the atomic numbers of elements whose outermost electrons are represented by

(i) $3s^1$ (ii) $2p^3$ (iii) 3d6

8. What are the possible values of I and m for a) n=3 b) n=5

9. List the quantum numbers of

a) unpaired electrons in F, Ni2+ b) valence electrons in P, Ca

10. Electrons are emitted with zero velocity from a metal surface when it is exposed to radiation of wavelength 6800Ao. Calculate the threshold frequency and work function of the metal.

ASSIGNMENT :3

1. Assign the position of the element having outer electronic configuration (i)$3s^2 3p^4$ (ii)4f7 5d26s2

2. Which of the following species has the largest and the smallest size Mg, Al, Al^{3+}

3. Arrange the given ions in order of decreasing radii Li, Be,B giving the reason..

4. Why is the second ionisation enthalpy always higher than the first ianisation enthalpy?

5. Why is the first ionisation enthalpy of N exceptionally higher?

6. Give the order of the first ionisation enthalpies of Na, Mg, Al and Si. Explain your choice.

7. Noble gases have larger size than halogens. Explain.

8. Write the IUPAC name and symbol for the element having 119 as the mass number. On the basis of the periodic table, predict the eletronic configuration of this element and also the formula of its most stable chloride and oxide.

9. The formation of F^- (g) from F(g) is exothermic whereas that of O is endothermic. Explain,

10. First and second ionisation enthalpies (IE, and IE_2) in kJ mol for a few elements are given. below:

Element	IE_1	IE_2
A	419	3051
B	1251	2297
C	2372	5250
D	738	1451

Which of the above elements is likely to be

(a) a reactive metal

(b) a reactive non-metal

(c) a noble gas

(d) a metal that forms a stable oxide of the formula MO?

11. Why is F is more reactive than Cl?

12. Negative electron gain enthalpy of fluorine is less than that of chlorine. Why?

13. Which element has the electronic configuration (Ar) 3d6?

14. Answer the following questions about the elements with the electronic configurations below:

A=3p64s2 B=3p63d104s24p5

(a) Is element A metal, metalloid or non-metal?

(b) Is element B metal, metalloid or non-metal?

(c) Which element has the highest ionization enthalpy?

(d) Which element has the electron gain enthalpy? (e) Which element should be smaller of the two?

15. Follow the periodic trends and give a brief explanation for each answer:

(a) Which has the highest first ionization enthalpy: B, Al, C and Si?

MATHEMATICS

Ch. 1 - Sets
Ex. - 1.4 (all questions)
Ex. - 1.5 (all questions)
Ex. - 1.6 (Shared by Teacher in group)

Ch. 2 - Relations and Functions
Ex. 2.1 - Q.No. 3, 4, 5, 9, 10
Ex. 2.2 - Q.No. 1, 3, 5, 8, 9
Ex. 2.3 - Q.No. 1, 2, 5
Misc. Ex. - All Questions
(Note - Do practice of all functions with diagrams)

Ch. 4 - Complex Numbers
Misc. Ex. - All questions

Ch. 5 - Linear Inequalities
Ex. - 5.1 - All Questions
Misc. Ex. - All Questions

Note - Do holiday homework in a Separate New A4 plain paper Register.

BIOLOGY

Chapters Covered:
1. The Living World | 2. Biological Classification
3. Plant Kingdom | 4. Animal Kingdom (Invertebrates)

Section A: Concept-Based Work

1. *Chapter Summary* (In your own words):

- The Living World: Focus on taxonomic categories and the universal rules of nomenclature.

- Biological Classification: Study of the Five Kingdom system and features of Monera, Protista, and Fungi.
- Plant Kingdom: Classification of Algae, Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms.
- Animal Kingdom: Basis of classification and features of Non-chordate phyla.

Section B: Creative Work

2. Classification Master Chart: Create a comprehensive, color-coded mind map that classifies the Animal Kingdom (Non-chordates) up to Phylum level. Highlight one unique diagnostic feature (e.g., water canal system, cnidoblasts, or water vascular system) for each phylum.

Section C: Practical / Assignment

3. Practical: Prepare your practical record and complete all practicals in it.

4. Assignment: Complete the given assignment in your homework notebook.

1. What do you understand by the term 'Systematics'? How does it differ from Taxonomy?
2. Describe the general structure of a Virus. Why are viruses considered to be on the borderline of living and non-living?
3. Why are Bryophytes referred to as the 'Amphibians of the Plant Kingdom'?
4. Describe the 'diatomaceous earth' formation and mention its industrial uses.
5. Differentiate between 'Diploblastic' and 'Triploblastic' levels of organization with examples.
6. Explain the significance of the Coelom. Distinguish between Acoelomates, Pseudocoelomates, and Eucoelomates.
7. Mention the distinguishing characteristics of cyanobacteria.
8. Explain the following terms: i) Metagenesis ii) Flame cells iii) Radula iv)Heterospory v) Gemmae.
9. What are hydrocolloids? Give two examples of algae that yield them.
10. Compare the 'Water Canal System' of Porifera with the 'Water Vascular System' of Echinodermata.
11. Write down the scientific names of the following: Wheat, Tiger, Frog, Earthworm, Cockroach, Rose, China rose, Lizard, Onion, Potato.

INFORMATICS PRACTICES

Part I: Chapter 1 — Computer System (6 Questions)

- **Question 1 :** *Data Volatility Flow* — Explores the step-by-step transition of input metrics from volatile primary memory (RAM) to safe permanent secondary storage blocks when unexpected power outages occur.
- **Question 2 :** *The Impact of Chip Scaling* — Investigates the evolution from vacuum tubes up to modern VLSI/SLSI microprocessors packing millions of components, analyzing its physical impact on raw processing speeds and heat efficiency constraints.
- **Question 3 :** *Cache Memory Architecture* — Evaluates why engineers are structurally and financially unable to omit slower RAM chips completely, despite Cache memory being vastly faster.
- **Question 4 :** *Device Drivers vs. System Utilities* — Formulates an engineering diagnostic scenario contrasting what happens when a device driver is missing versus a diagnostic system utility.
- **Question 5 :** *OS Boundary Enforcement* — Investigates how an operating system functions behind the scenes as a resource manager to prevent multi-tasked background applications from overwriting each other's memory sectors.

- **Question 6 :** *Software Optimization Categorization* — Analyzes a specialized business ecosystem to justify why custom-built customized software must be used instead of standard general-purpose application tools.

Part II: Chapter 2 — Emerging Trends (6 Questions)

- **Question 7 :** *The Turing Simulation & NLP* — Examines how Natural Language Processing models map translation frameworks (speech-to-text / text-to-speech) across languages explicitly noted in the textbook (such as Hindi and English) to pass conversational simulations.
- **Question 8 :** *Virtual Reality vs. Augmented Reality* — Compares human sensory interactions inside immersive training systems, detailing when a driving simulator requires full VR versus an AR overlay platform.
- **Question 9 :** *The Velocity Vector in Big Data* — Analyzes processing challenges that arise when massive data streams (like regional traffic monitoring or live digital cash transfer data grids) hit storage networks faster than they can be parsed.
- **Question 10 :** *IoT Schematic Frameworks* — Asks students to design a conceptual blueprint tracking an automated smart home security network, labeling its Sensor components, internet-based transport layer, and output interface.
- **Question 11 :** *Cloud Service Delivery Decisions* — Places students in a consultant role to weigh IaaS, PaaS, and SaaS, deciding which model best handles code execution environments without requiring server upkeep.
- **Question 12 :** *Blockchain Cryptographic Immutability* — Evaluates how a decentralized ledger securely links blocks chronologically, preventing malicious tamper-points compared to central database clusters.

PHYSICAL EDUCATION

Theory Assignments :-

Complete the following units in your Physical Education notebook:

UNIT – 1: Changing Trends & Career in Physical Education

UNIT – 2: Olympic Value Education

Practical Assignments:-

Prepare the following topics in your practical file :

- Labelled diagrams of the track/field and equipment for your chosen game.
- Record of the SAI Khelo India Physical Fitness Test.
- Procedure, benefits, and contraindications of any two yoga asanas.
- Brief explanation of fundamental skills and terminologies for your chosen game.