ENGLISH

Date of submission: 15th June,2023.

General Instructions:

1. Read the newspaper daily with special emphasis on school-based reports, advertisements, posters and articles. Pay attention to the language used.
2. All sections are compulsory for all except creative corner which is allotted roll no. wise.

READING COMPREHENSION
(To be done in the English Register)

A. *Read the passage given below:*

1. In the recent past, there has been a thought given to the several problems that the system of school education is facing. Starting with focus on the Delhi region, one of the first discussion points has been to find ways to bring the lakhs of children who have so far been denied education into a workable school system. A further aspect of the same problem is to ensure minimum dropout rate in school children (particularly girls). In Delhi, this has reached alarming proportions. Finding solutions for Delhi will help other areas as well.

2. A tool called 'learning style inventory' was used; it addressed to know how information of skills are learnt, which factor makes an individual comfortable with learning skills or acquiring declarative knowledge. Different answers emerged. In dealing with factual knowledge some people liked to experience first, others to observe, yet others to experiment and still some who preferred to plunge into learning, leaving analysis for later.

3. It then became easy to discover which of the attributes made for better learning for an individual. The learning situation will benefit by understanding these differences. Two major processes cover most people's learning styles. These are as follows: Information gathering process and process of transforming information. The continuance of information gathering is bound by people who gather information through experiences at one end and by those who gather information through reading/listening, on the other. The continuance of transformation of information is bound by people who internalise through watching/observing, on the one hand, and by those who learn while applying knowledge and doing something with it, on the other. Others fall somewhere in between. All this has a bearing at school because children too have similar learning styles on these two axes.

4. There are four types of learners. Firstly, there are children who will absorb facts through experiences. They will readily share their thoughts with others. The second type of learners will take unrelated facts and try to seek order in them in using independent judgement. They

will prefer to be exact in their knowledge and correctly apply as per their understanding. The next type of learner is the pragmatist. They use their abilities to problem solving. Such person – is a useful type to function in a group. The fourth type of learner belongs to the world of action. Everything is brought down to the level of concrete observation and doing.

5. With some awareness of how children react in different ways, teachers may find effective methods of teaching. The psyche of each child depends upon one's background and upbringing. Devising innumerable ways of identifying and resolving acute problems faced by a learner then, becomes the sole responsibility of the school, especially educators. Dealing with the profound inquisitiveness also forms the basis of all education.

1.1. On the basis of your understanding of the above passage, answer the given question by choosing the correct option:

i.   Mention two major problems that the system of school education is facing.
       a. Enrolling children in school, promoting girls' education.
       b. Preventing dropping out, providing text books.
       c. Enrolling children, preventing dropping out.
       d. Providing school buildings, giving textbooks.

ii.   What are the two main uses of learning style inventory?
       a. to know how information of skills are learnt and which factors lead to learning comfortably.
       b. factual knowledge and experience.
       c. analysis and observation.
       d. experiment and hands-on learning.

iii.   Information can be gathered
       a. through experience, reading and listening.
       b. through applying knowledge.
       c. through observing.
       d. through doing something with knowledge.

iv.   Which type of a learner falls a prey to judgements using chronology of thoughts?
       a. First
       b. Second
       c. Third
       d. Fourth

v.   Select the suitable option for the given statements:
       (1) 'Learning style inventory' is addressed to know how information of skills is learnt.
       (2) The pragmatist type of learners are not capable of problem-solving.
       a. (1) is false but (2) is true.
       b. Both (1) and (2) are true.
       c. Both (1) and (2) are false.
       d. (2) is false but (1) is true.

vi.   Factual in paragraph 2 is the opposite of
   a. based on experience.
   b. told by knowledgeable people.
   c. fanciful.
   d. found in books.

1.2. Answer the given questions in 20-30 words

vii.   The continuance of gathering of information is bound by
   _____

viii.   'Such person is-a useful type to function in a group'. Which attributes of a learner can be inferred from this statement?

ix.   Which word in the passage means same as 'to absorb an attitude'? (Para 3)

x.   What should be the approach of schools while dealing with individual difference in children?

B. Read the passage given below and answer the questions that follow:

1. The Mayan civilization of Mexico and Central America are one of the ancient world's most fascinating, prolific, and mysterious civilisations. They left their mark on the region's culture, architecture, cuisine, and language – and left an indelible impression on the imagination of the modern world. Who were they? How were they able to build such an impressive civilisation of towering temples and sophisticated artwork in the middle of the harsh rainforests of Mesoamerica? And why did they vanish?

2. The earliest Mayans lived along the Pacific coast of what is now Guatemala and can be dated to about 1800 BC; by 1000 BC they were also living in Guatemala's southern lowlands. The period from about 1800 BC to about AD 250 is referred to as the Pre – classic, a time when the early Mayans lived as farmers in small villages along rivers and other bodies of water, hunting game, tending gardens and making use of the abundant natural foods found in the region's marshes and seasonal swamps. In time, strong rulers began wielding power over these communities, and the Mayan culture grew in complexity. Cities rose from the forest floor, boasting stone temples with stuccoed and painted facades created at the behest of elite rulers. People in the new power centres communicated over long distances, and traders using the same routes carried luxury goods such as cacao beans, jade ornaments, quetzal feathers, and jaguar pelts.

3. The Classic period, AD 250 – 900, is the time of the civilisation's greatest glory – and of the greatest depths of political intrigue between rival cities. During these centuries, the Mayans erected countless stelae, stone monuments inscribed with portraits and hieroglyphs that recorded dynastic histories – the births, marriages and conquests of the ruling families. There were dozens of important regional capitals at the time, and among the most important were Tikal in Guatemala and its fierce rival Calakmul in Mexico, Palenque in southern Mexico, Caracol in Belize, and Copán in Honduras.

4. The Classic period is known for artistic and intellectual splendour. The Mayans developed a complex religious and ritual system that considered rulers divine beings and called for blood

sacrifices. They also grasped the numerical notion of zero, created agricultural timetables and sophisticated calendars to track the heavens, and made beautiful polychrome pottery as well as exquisite ornaments, murals, and carved decorations.

5. But the Classic Mayans were also known for their rancorous political fighting and for being extremely bellicose – warfare was always on the horizon. One by one, the cities in the southern Mayan lowlands fell to each other, their downfall often recorded on stelae in the conquering city. By AD 900 most of the important Classic period cities had collapsed, and their remaining populations had scattered into the surrounding forests. The last date recorded on stelae that archaeologists have found so far is from 909 in Toniná, in southern Mexico. Among the factors that help explain why the civilisation collapsed were the endemic warfare, overpopulation, degradation of the environment, and drastic climate change and drought.

6. While the cities and ceremonial centres of the southern lowlands were being reclaimed by the jungle, the Mayans living to the north were gaining prominence, rising to amazing heights during the post-classic period (900 – 1502). Wonderful and wealthy cities in Mexico's Yucatán Peninsula flourished, most famous among them being Chichén Itzá. Yet it too fell victim to political infighting and by 1200 had collapsed.

7. "The Mayans never truly disappeared. Centuries after the major cities were abandoned, small groups of Mayans continued to live in the area. It was they who met and resisted the Spanish conquistadors after the first contact, in 1502. And today, more than six million Mayans live in Mexico, Guatemala, and Belize, speaking 28 languages, and blending ancient and modern ways.

(a) On the basis of your understanding of the above passage, make notes on it using headings and subheadings. Use recognizable abbreviations (wherever necessary- minimum four) and a format you consider suitable. Also supply an appropriate title to it.

(b) Write a summary of the passage in about 80 words.

CREATIVE CORNER

➢ **Questionnaire Making (Roll Nos 1-10)**

How to do: *Prepare 10 multiple choice questions each from the following stories. The questions must test high order thinking skills wherein all the components of the chapter must be included ranging from narrative style, characters, moral. literary devices etc:*

a) A Portrait of a Lady
b) The Summer of a Beautiful White Horse
Where to do: A-4 size sheets

Parameters: accuracy, content, authentication

➢ Script Writing (Roll Nos 11-20)

*How to do: Write a script on any **SOCIAL ISSUE** of the prevailing times. It should be divided into a minimum of two scenes involving the conflict and its resolution. The names*

of the characters should be written on a different page along with themes and moral.
<u>Where to do:</u> A-4 size sheets

<u>Parameters:</u> content, presentation, setting of a plot

➢ Creation with Proverb (Roll Nos 21-30)

<u>How to do:</u> Describe any one of the following proverbs in your own words and portray in the form of a story, poem or a paragraph enumerating its meaning and application in routine life. You should also add pictures to make it creative.
- 'The pen is mightier than the sword'
- 'No pain No gain
- 'All's well that ends well'
   <u>Where to do:</u> A-3 size sheet

   <u>Parameters:</u> creativity, relevance, presentation

➢ Rock the Blog (Roll Nos 31-40)

<u>How to do:</u> Create a blog of your own showcasing your love for English language sharing your experiences and the challenges posed by the language on a global platform.
<u>Where to do:</u> Pen drive

<u>Parameters:</u> creativity, content, presentation

➢ <u>Being innovative with values</u> (Roll Nos 41-50)

<u>How to do:</u> Create your own diary in which you will write daily about any one positive change which you will bring in yourself like being organized or being punctual etc. (80-100 words)

<u>Where to do:</u> An A-4 size handmade diary which should be properly decorated.
<u>Parameters:</u> creativity, content, authentication

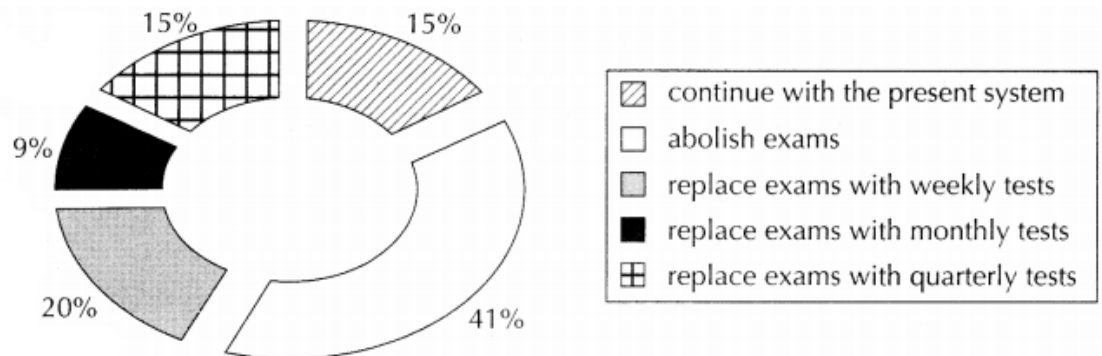**Grammar and Writing Skills (To be done in the English Register)**

a. Fill in the blanks with the correct form of the verb given in brackets.

   A newspaper recently (a) _____ a report of a man in search of his newly born twin.   The babies were missing at hospital where his wife (b) _____ birth to them. The hospital authorities claimed that the babies (c) _____ but they refused to hand over their bodies. Now, the unfortunate father (d) _____ a complaint with the police.

b. Rearrange the following words or phrases to make meaningful sentences.

   i.   to / the popularity / every corner / junk food / has led / of eating / joints / around / of / the / opening

ii. believed in / people of India / the sacredness of / have traditionally / wildlife
iii. the / sparrow / from / city / it / disappeared / house / has / seems / common / the / that
iv. holidays / their / children / this / the / is / refrain / hear / during.
v. one / since / in / summer / worse / are / things / play / cannot / sun / in / the
vi. hands / condemned / en / their / the / to / indoors/ a lot of time
vii. are / of amusement / a / sleep walkers / source / other / to / people
viii. for / sleep / walkers / anxiety / source of / are / a / but / families / their

c. Tourism Department, Government of Andaman and Nicobar Islands has launched an ambitious plan to develop adventure sports and eco-tourism activities in the state. Prepare a suitable poster for display at important public places /publication in newspapers using creative slogans.

d. In today's age of stress and anxiety, the children need to understand the importance of sleep, meditation and yoga over social networking and the use of the cell phone. Write an article of 120 words on 'Concentration and Composure', the need of the hour.

e. A survey was conducted by students of Sacred Heart Convent School regarding the importance of examinations. Given below are their findings.
Based on the information given below, ideas and your ideas, write a paragraph on the topic: 'Examinations Should Be Abolished' within120 words.

Literature (To be done in the English Register)

A. Answer the following questions in 40-50 words each.

➢ The grandmother's reception and send-off of her grandson was very touching. Comment.
➢ How is the poem 'A Photograph' an elegy?
➢ What do you think induced the boys to return the horse to its owner?

B. Answer the following questions in 120-150 words each.

➢ Gradually the author and the grandmother saw less of each other and their friendship was broken. Was the distancing deliberate or due to the demands of the situation? Elaborate.
➢ The narrator mentioned 'a crazy streak' running in his family. Which two characters showed this streak in their behaviour and words? Write briefly about them showing how they could be called crazy.
➢ The sea 'appeared to have changed less' in comparison to the three girls who enjoyed the sea holiday. Comment.

PHYSICS

Date of submission: 16th June, 2023

Complete the following assignment in your Physics register.

1. Find the dimensions of the following quantities:
(a) Torque = force x distance perpendicular to force
(b) Coefficient of viscosity = force x distance/(area x velocity)
(c) Angular momentum = momentum x radius
(d) Latent heat = heat energy/ mass
(e) Impulse = force x time
(f) Coefficient of expansion = change in length /(original length x change in temperature)
(g) Modulus of elasticity = Pressure* Volume/change in volume

2. Find the dimensions of a and b in the given equation that relates energy and time as :
$E = (b - x^2)/at$ where x is the distance.

3. Find the dimensions of a and b in the given equation:
$(P + a/V^2) (V - b) = RT$
where P is the pressure, V is the volume and T is the temperature of an ideal gas.

4. Obtain the dimensional formula for the speed of an object in terms of acceleration due to gravity and time taken by the object.

5. Find the dimensional formula for velocity of waves in water in terms of the density of water and the pressure.
6. Using energy, pressure and density as standard quantities, find a dimensional formula for length.
7. Check the correctness of the following relations:
(a) Frequency of waves, $f = (F/m)^{1/2}$ where F is the force and m is the mass.
(b) Acceleration due to gravity, $g = 4\pi GR^3/d$ where G is the universal Gravitational constant, R is the radius of Earth and d is the density of Earth.
(c) Work done in compressing a system, $W = PV^2/3$ where P is the pressure applied and V is the volume of the system.
8. Using dimensions, derive a formula for mass in terms of energy, momentum and pressure.
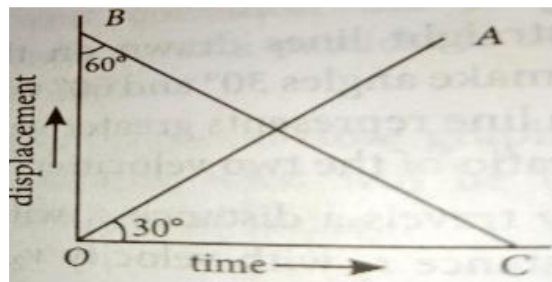
9. Check the correctness of given relationship and if required, make suitable changes to make it correct :

$$h = r\, d\, g\,/2S \cos \emptyset$$

where h is the height , r is the radius, d is density, g is the acceleration due to gravity, S is surface tension . { Surface tension is defined as force per unit length}

10. Calculate the dimensional formula for force in terms of velocity , density and frequency.

11. Displacement–time graph of two bodies P and Q is represented by lines OA and BC respectively. Find the ratio of velocities of P and Q.

12. The motion of a particle is described by the equation:
$X = 3(t - 2) + 5 (t - 2)^2$ At what time, is the particle at origin?
Find the acceleration of the particle at t= 2s.

13. A body is thrown up with an initial velocity u . It returns to its initial position after time t. Draw its (i) position – time graph (ii) velocity – time graph. (iii) acceleration – time graph.

14. Find the ratio of the distance moved by a freely falling body from rest in its 4th second and 5th second of its journey.

15. A car driver driving at 36km/h spots a child on the road 55m ahead. He immediately applies brakes so as to stop within 5m of the child. Calculate the retardation & time taken to stop.

16. A stone is released from a balloon from a height of 300m. How long will the stone take to reach the ground if the balloon is ascending with a velocity of 5m/s?
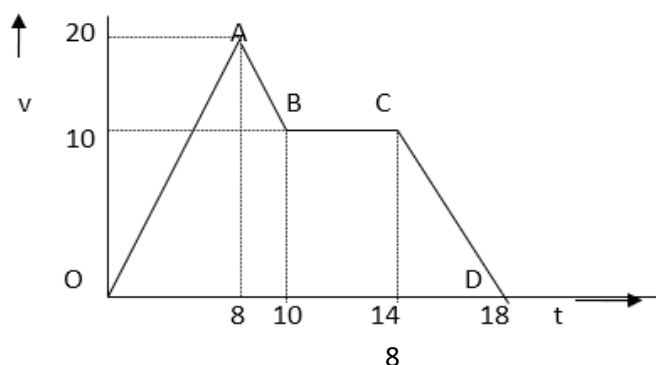
17. A body covers 20m in the 7th sec & 24m in the 9th sec. How much shall it cover in 15th sec?

18. A stone thrown vertically upward from the top of a tower 85m high reaches ground in 5s. Find the greatest height above ground, velocity with which it reaches ground & the time taken to reach the maximum height ($g = 10$m/s^2).

19. A stone is dropped freely from rest from the top of a tower of height 80m. At the same time another stone is projected vertically upward from the foot of a tower with a velocity of 40m/s. After what time would they meet.

20. The v-t graph for a particle is shown by the curve OABCD. Calculate the distance covered between (a) t = 0 to t = 18s (b) t = 2 to t = 12s
c) Maximum value of acceleration.

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CHEMISTRY

Date of submission: 20th June 2023

Complete the following assignment in your Chemistry register.

1. What is the molality of a 1 L solution of H_2SO_4 which is 46% wt/vol?
   (Density of solution = 1.40 g/cm^3)
2. Calculate the molarity of pure water if its density at room temperature is 1.0 g/cm^3.
3. Calculate the molarity of solution obtained by dissolving 0.100 g of Na_2CO_3 in 250 cm^3 of solution.
4. Calculate the molality of solution of C_2H_5OH in water in which the mole fraction of C_2H_5OH is 0.050.
5. Calculate the percentage composition of zinc, phosphorus and oxygen in zinc phosphate, $Zn_3(PO_4)_2$
6. What is the molecular formula of a compound that contains 47.4% S and 52.6% Cl? The molecular mass of the compound as determined experimentally is 135 g mol^{-1}.
7. Mass percent composition of a substance is 24.7% Ca, 1.24% H, 14.8% C and 59.3% O. Calculate the molecular formula of the substance if its molecular mass is 162 u.
8. A compound of carbon, hydrogen and nitrogen contains elements in the ratio 9: 1: 3.5. Molecular mass of substance is 108u. Calculate the following:
   (i) Empirical formula
   (ii) Molecular formula
9. A carbon compound containing only carbon and oxygen has an approximate molecular mass of 290u. On analysis it is found to contain 50% by mass of each element. What is the molecular formula of the compound?
10. Calculate the number of molecules in 4.25 g of NH_3.
11. Which has maximum molecules?
    (i) 7 gm N_2
    (ii) 2 gm H_2
    (iii) 16 gm NO_2
    (iv) 16 gm O_2
12. A compound has following composition
    (i) Sodium = 14.13%
    (ii) Sulphur = 9.97%
    (iii) Oxygen = 69.50%
    (iv) Hydrogen = 6.22%.
    Calculate the molecular formula of the compound assuming that whole hydrogen in compound is present as water of crystallisation. Molecular mass of compound is 322u.
13. A sample of phosphorus has 0.5 moles of P_4 molecules
    (i) How many P_4 molecules are there?
    (ii) How many P atoms are there?
    (iii) How many moles of P atoms are there in the sample?
    (iv) What is the mass of the sample?
14. Calculate the number of atoms in each of the following:

(i) 4 mole atoms of nitrogen.
(ii) 0.4 mole molecules of nitrogen.

BIOLOGY

Date of submission: 21ˢᵗ June 2023

1. You are required to make mind maps on the following topics given below on an A4 size sheet.
    i)   Kingdom Monera
    ii)   Kingdom Protista
    iii)   Kingdom Plantae

2. Solve the NCERT exemplar questions of the following chapters in your notebook.
    i)   Plant Kingdom
    ii)   The Living world
    iii)   Biological classification

3. Complete the practical file and write the following experiments:
    (a) Study of osmosis by potato osmometer.
    (b) Study of distribution of stomata on the upper and lower surfaces of leaves.
    (c) Specimens/slides/models and identification with reasons - Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
    (d) Virtual specimens/slides/models and identifying features of - Amoeba, Hydra, liver fluke, Ascaris, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.

4. Prepare a project report in any one of the human physiological diseases of your choice. (Max Pages 5-7)

MATHEMATICS

Date of submission: 23ʳᵈ June 2023

Complete the following assignment in your Mathematics Register

1.   Write the following in set – builder form:
     (a) A = {2,3,5,7,….,101}
     (b) B = {-$\sqrt{3}$, $\sqrt{3}$}
     (c) C = {1,2,4,8,16,32,64}
     (d) D = {0}
     (e) E = [-23,5)

2.   List all the subsets of {0, {1}, 3}.

3.   Draw the Venn diagram of A ∩ (B – C).

4.   Given A = {x : x^3 – 1 = 0, x ∈ N}

     and B = {x : x^2 – 4x + 3 = 0, x ∈ N}

     Is A ⊆ B? Justify your answer.

5.   If U = {x : x is a natural number less than 9},

     A = {1,2,3,4}, B = {2,4,6} and C = {1,2,3,4}.

     Then find (i) (A' – B') ∩ (B' – C')

     (ii) (A U B) – (B U C)'.

6.   If A = {1,2,3,4} and V = {2,4,6,8} then find A – (A ∩ V).

7.   If A = {1,3,5,7,9,,11,13,15,17}, B = {2,4,6,,,,,18} and N, the set of natural numbers is the universal set then find the value of A' U {(B U A) ∩ B'}

8.   If the ordered pairs(a,-1) and (5,b) belong to {(x, y) : y = 2x – 3},find the values of a and b.

9.   Let A = {-2,-1,0,1,2} then write the ordered pairs for each of the following relations on A.

     (i)   "is greater than"
     (ii)   "is square of"
     (iii) "is the negative of"

10. Let A = {0,1} B ={2,3,4} and C = {3,5}. Find
     (i) A X (B U C)
     (ii) A X (B ∩ C)

11. A function f:R → R and g: R → R be defined by f(x) = x + 2 and g(x) = $(x + 4)^3$, find
     (i)   (f – g) (2)   (ii) (f. g)(2)   (iii) $(\frac{f}{g})$(x)

12. Find the domain of the functions:
     (i) $f(x) = \frac{1}{\sqrt{x+ |x|}}$ (ii) $f(x) = \frac{1}{\sqrt{x^2-9}}$ (iii) $f(x) = \sqrt{4 - x} + \frac{1}{\sqrt{x^2-1}}$

PSYCHOLOGY

Date of submission: 27ᵗʰ June 2023

I. Watch any two of the following movies based on psychological themes and write reviews in your notebook (word limit 400-450 words) based on:
• Character sketch of the (protagonist) main character.
• What were the various problems encountered by the protagonist and how were they resolved.
• Reflect on the relationship that the protagonist shared with other characters.
• Your learning from the movie.
• Discuss your favorite part of the movie giving reasons.
• Your criticism/opinion/comments/suggestions/feedback on the movie (Positive or Negative).
The list of movies:
a. Life of Pi
b. Inside Out
c. Theory of Everything
d. A Beautiful Mind
e. Pursuit of Happiness
f. A Few Good Men
g. Bend it Like Beckham
h. I am Kalam
i. Queen
j. Highway

II. Complete the following assignment in your notebook

1. Define psychology and explain different fields or scope of Psychology.

2. What is behaviour? Give examples of overt and covert behaviour?

Give a brief account of the evolution of psychology.

3. What are the problems for which collaboration of psychologists with other disciplines

can be fruitful? Take any two problems to explain.

4. Differentiate between (a) a psychologist and a psychiatrist (b) a counsellor and a clinical

psychologist.

5. Describe some of the areas of everyday life where understanding of psychology can be put

to practice.

6. How can knowledge of the field of environmental psychology be used to promote

environment friendly behaviour?

7. In terms of helping solve an important social problem such as crime, which branch of

psychology do you think is most suitable. Identify the field and discuss the concerns of

the psychologists working in this field.

COMPUTER SCIENCE

Date of submission: 23rd June 2023

Identify, install and demonstrate any AI based app for any one of the following
1. Chatbot
2. Education- how can it be used in school to enhance the learning experience
3. Music recommendation app

Make a 10-12 slide presentation on the same or make a video to demonstrate the same.

GENERAL INSTRUCTIONS:

- Code for the following programs is to be printed on A4 size sheets along with the snapshot of the output.
- Font for the Code: Courier New: Font size – 12

1.	Write a program to print your name and class.

2.	Write a program to input two numbers and find its
	  - Sum
	  - Difference
	  - Product

3.	Write a program to input two integers and print
	  - Quotient
	  - Remainder
	  - Floor of the quotient

4.	Write a program to input two numbers and print the larger of the two.
5.	Write a program to input a number and print if the number is even or odd.
6.	Write a program in Python perform the following- a. Find the Area of a circle b. Find the square and perimeter of a rectangle

- Only one program and its output to be printed on one A4 size sheet

PHYSICAL EDUCATION

Date of submission: 30th June 2023

I.To be done in Practical File

•Practical-1: Labelled diagram of 400 m Track & Field with computations.
•Practical-2: Describe Changing Trends in Sports & Games in terms of changes in Playing surface, Wearable gears, Equipment, Technological advancements.
•Practical-3: Labelled diagram of field & equipment of any one IOA recognised Sport/Game of choice.
II. Plan any sport during summer vacation and note the changes in body systems.
III.Visit any sports complex nearby and write about the game specific changes in infrastructure of different games.
IV. Complete the following assignment in your Register
1. Define Physical Education.
2. What are the objectives of Physical Education?
3. How Physical Education develop neuro-muscular coordination?
4. How can Physical Education contribute in moral and character building?
5. How does Physical Education contribute to an individual's development mental development?
6. What are advantages of using technology in sports?
7. What are the career options an individual has after completion of professional course in Physical Education?
8. What is khelo India Programme?
9. What is the need of sports competition in school? Discuss in details.
10. Apart from a professional degree in Physical Education, what other key skills are required for opting for career other than teaching?