

CLASS XII A

HOLIDAY HOMEWORK 2022

ENGLISH

General Instructions:

1. **Revise the lessons, poems and writing skills done during online sessions.**
2. **Read the newspaper daily with special emphasis on school based reports, advertisements, posters and articles. Pay attention to the language used.**
3. **Attempt the following questions in English Registers.**
4. **Date of submission is 7th July 2022.**

READING

Q1. Read the passage and on the basis of your understanding of the passage answer the questions given below:

LIFE BEYOND ACADEMICS

1. Academics has always been an essential part of human development. It prepares us to survive in the outside world and establish an identity of our own. But, is an individual's development restricted to merely academics? In India, from an early age, we have been taught that education is limited to the boundaries of academics only; the idea of getting out into the field, for gaining practical experience, is always considered a hoax. This has hindered students' development. But the truth is that education represents a considerably broader field than we know of it. Our teaching, from the basics, has been focused on getting good grades and job offers, rather than being creative and unique.

2. In the 21st century, the pure academic type of education is slowly paving way for a whole new type. The paradigm shift in the whole education system is evident. People have now come to understand that education is a 360^o activity that should focus on students' overall development, rather than restricting him/her to the classroom.

3. Co-curricular activities that take place outside the classroom but reinforce or supplement classroom curriculum, in some way, have become a point of focus today. These activities help in the growth of the child, in more than one way. Participating in such activities helps youngsters grow mentally, socially and individually. Intellectual development of a student is developed in the classroom, but for the aesthetic development such as team- building, character- building, and physical growth, students must step out into the outside world. For instance, if a student is a part of school football team, he/ she will learn team- work and coordination, in a practical manner, which cannot be taught in the class.

4. Similarly, in colleges and institutions, there is a need for practical exposure so that the students can experience the actual working of an industry. For example, taking a student to a manufacturing firm will give him/ her the real insight and better learning of the industry. Catering to this change,

most professional colleges including B schools, have started providing practical exposure to students through regular guest lectures, industrial visits, conferences, seminars, cultural festivals, and so on. With industry visits, students are able to better identify their prospective areas of work in the overall organizational function. Moreover, they help enhance interpersonal skills and communication techniques. In addition, guest lectures are equally important for all – round development of students. It is a great way for students to gain maximum exposure, as guest speakers talk about their real- life experiences and not what is there in the text books.

5. Through such events, students are made to participate and coordinate different events wherein, they get to know how exactly things are managed. Classroom teaching provides the foundation, and co-curricular or extra- curricular activities provide practical exposure and opportunities to implement what students learn in the classroom. This helps in developing the overall personality of the students, inculcating various soft – skills in them, which otherwise are difficult to teach. Clearly, life beyond academics creates creative and empowered professionals.

1. Answer the following questions briefly:

- a. From earlier times what has not been the focus of education?
- b. Where should students go for aesthetic development?
- c. What kind of co- curricular activities have become points of focus today?
- d. What will give children a better insight into industry?
- e. Why are soft skills difficult to teach in the classroom?
- f. Pick out the words/phrases from the passage which are similar in meaning to the following:
 - i. untrue (Para 1)
 - ii. cooperative effort (Para 3)

Q2. Read the passage and on the basis of your understanding of the passage answer the questions given below:

1. India has never subscribed to the doctrine of militarism and war in her history. Here war was never treated as an ideal. It was only tolerated as unavoidable and inevitable, and all attempts were made to check it and bring it under control. In spite of the frequency of wars in ancient India, in spite of highly developed military organization, techniques of war and imperialism, and in spite of the open justification of war as national policy, the heart of India loved pacifism as an ideal capable of realization. India’s symbolic role was that of a peacemaker and it sincerely pinned its faith on the principle of “Live and let live”. At least philosophically, India’s intelligence supported the cause of peace not only in national affairs but in international affairs also. All the great seers of the yore visualized the unity of life, permeating all beings, animate or inanimate, which ruled out killing and suicidal wars.

2. This doctrine of philosophical pacifism was practiced by ancient Aryans is, no doubt, a question of controversial nature. Certainly, the great Indian teachers and savants stuck to this doctrine tenaciously and in their personal life they translated it into practice and preached it to masses and even to princes of military classes.

3. Another culture of those times, the existence of which has been proved by the excavations of Mohanjo-Daro, also enunciated the doctrine of pacifism and friendship to all. Strangely enough, the Indus Valley civilization has revealed no fortification and very few weapons.

4. Ahinsa or the doctrine of non-violence in thought, speech and action assumed a gigantic importance in the Buddhist and Jain period. By a constant practice of this virtue, man becomes unassailable by even wild beasts, who forgot their ferocity the moment they entered the circumference of his magnetic influence. The monks and nuns of these churches were apostles of peace, who reached every nook and corner of the world and delivered the message of love to war-weary humanity. The greatest votary was the royal monk Ashoka, who in reality was responsible for transforming Ahimsa as an act of personal virtue, to Ahimsa as an act of national virtue.

5. Many a historian recounting the causes of the downfall of the Mauryas, hold the pacific policy of Ashoka which had eschewed the aggressive militarism of his predecessors, responsible for an early decay of the military strength of the state and its consequent disintegration, leading to the rise of Sungas, Kanvas and Andhras. But, in reality the fault lies with the weak successors of Ashoka, who could not wield the weapon of non-violence with a skill and efficiency which required the strength of a spiritual giant like Ashoka. They failed due to their subjective weakness. Pacifism itself was no cause of their failure.

6. Besides the foregoing philosophical and religious school of thought, even many political authorities gave their unqualified support to the cause of pacifisms. They recognized the right of rivals to exist, not mainly as enemies, but as collaborators in the building of a civilization operation. Thus, for centuries, in the pre-Mauryan India, scores of small independent republics existed and flourished without coming in clash with each other.

7. With regard to Kautilya, the much-maligned militarist and the so-called Machiavelli of India, He thinks that the object of diplomacy is to avoid war.

8. The Mahabharata observes in the connection, “A wise man should be content with what can be obtained by the expedients of conciliation, gift and dissention.” It denounces the warring world of men by comparing it to a dog-kennel. “First there comes the wagging of tails, then turning of one round to other, then the show of teeth, then the roaring and then comes the commencement of the fights. It is the same with men; there is no difference whatever.” Yajnavalkya adds, “War is the last expedient to be used when all others have failed.” Likewise, Sri Krishna who’s Bhagwat Gita has been styled by some as ‘a song of the battle’, should not be considered out and out militarist. When all the three expedients were exhausted, then alone the fourth was resorted to.

9. All possible avenues of peace such as negotiation, conciliation through conference, meditation and so on, were explored before the war was resorted to. This proves that the heart of ancient India was sound and it longed for peace, although war also was not treated as an anathema, which was to be avoided as far as possible.

2.1 Answer the following questions briefly:

- (i) How was war treated in India?
- (ii) Describe India’s preparedness for war in spite of their belief in Pacifism.
- (iii) How did the Aryans practice the Doctrine of Pacifism?
- (iv) What is Ahinsa?
- (v) What is the meaning of co-existence with rivals?
- (vi) Why should Bhagavat Gita not be considered as “A song of the battle”?

2.2 Answer any three of the following questions in 30-40 words:

- (i) What kind of unity did all the seers visualize?
- (ii) By some, Ashoka was considered as the cause of the downfall of the Mauryas. Do you agree?
Give reasons for your answer.
- (iii) Which options were explored by Sri Krishna before resorting to war?
- (iv) Throw some light on the thinking of Kautilya regarding war.

2.3 Pick out the words/phrases from the passage which are similar in meaning to the following:

- (i) express in definite and clear terms (para 3)
- (ii) defensive wall (para 3)
- (iii) the beginning (para 8)

Q3. Choose an interesting topic for the project work to be done in Term 2. Listen to podcasts/ interviews/ radio or T.V documentary on the same topic.

WRITING

1. Choose your favourite scene from any one of the chapters given below and make a comic strip on the same, on A3 size sheet:
 - The last Lesson
 - Lost Spring
 - My Mother at Sixty-Six
 - The Third Level
2. Prepare an attractive poster in not more than 50 words to create awareness among people, highlighting the importance of eating healthy food to lead a happy life.
3. You are Raman/ Ritu studying in Bharat School, Delhi. The road leading to your school is very congested and full of potholes. Students and parents are often caught in traffic jam. In spite of several representations, the government has not done anything to improve the condition of the road. Write a letter to the Editor of Times of India drawing the attention of the government towards this problem. (120-150 words).
4. You feel that India will face a severe water crisis by the year 2020. Write a letter to the Editor of The National Daily expressing your concern about it and requesting individuals and authorities to take steps to avert this crisis. You are Shalini/ Shaheen. (120-150 words).
5. Taking selfies has become a rage and is a global phenomenon. It has cost us several lives and also immortalised several moments. Write an article for a National Daily on the trend of taking selfies and its impact on people. You are Aditi/ Aditya. (150-200 words).
6. You are Karan / Kirti of L.M. Memorial Public School, Dwarka. Your school has adopted a village as a social responsibility. Students are being taken to teach the children of that village on a regular basis. Write a report, for your school magazine, on the various other programmes organized there in 150-200 words.

LITERATURE

1. Attempt the questions given below in 120-150 words each.
 - a) Justify the title 'The Last Lesson'
 - b) How is Mukesh's attitude towards his situation different from that of Saheb? Why?

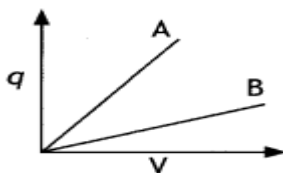
- c) 'Imagination is a temporary refuge from reality'. Explain with reference to the chapter 'The Third Level'.
- d) In today's fast paced life, sometimes children are forced to neglect their ageing parents. With reference to 'My Mother at Sixty-Six', what do you think children can do to have an involved and inclusive relationship with their elderly parents?

PHYSICS

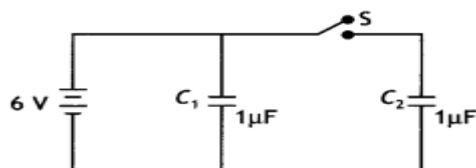
Date of submission: 6th July 2022

➤ **Complete the following assignment in your physics notebook**

- A hollow metal sphere of radius 5 cm is charged such that the potential on its surface is 10 V. What is the potential at the center of the sphere?
- The given graph shows the variation of charge 'q' versus potential difference 'V' for two capacitors C_1 and C_2 . Both the capacitors have the same plate separation but the plate area of C_2 is greater than that of C_1 . Which line (A or B) corresponds to C_1 and why?

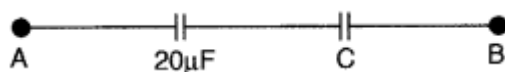


- Does the charge given to a metallic sphere depend on whether it is hollow or solid?
- The figure shows two identical capacitors, C_1 and C_2 , each of $1 \mu\text{F}$ capacitance connected to a battery of 6 V. Initially switch 'S' is closed. After some time 'S' is left open and dielectric slabs of dielectric constant $K = 3$ are inserted to fill completely the space between the plates of the two capacitors. How will (i) the charge and (ii) potential difference between the plates of the capacitors be affected after the slabs are inserted?



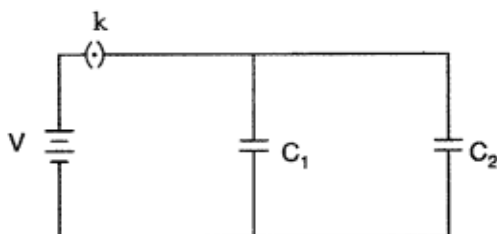
- A particle, having a charge $+5 \mu\text{C}$, is initially at rest at the point $x = 30 \text{ cm}$ on the x axis. The particle begins to move due to the presence of a charge Q that is kept fixed at the origin. Find the kinetic energy of the particle at the instant it has moved 15 cm from its initial position if (i) $Q = +15 \mu\text{C}$ and (ii) $Q = -15 \mu\text{C}$
- Two identical capacitors of 12 pF each are connected in series across a battery of 50 V. How much electrostatic energy is stored in the combination? If these were connected in parallel across the same battery, how much energy will be stored in the combination now? Also, find the charge drawn from the battery in each case.

7. Two uniformly large parallel thin plates having charge densities $+\sigma$ and $-\sigma$ are kept in the X-Z plane at a distance 'd' apart. Sketch an equipotential surface due to electric field between the plates. If a particle of mass 'm' and charge 'q' remains stationary between the plates, what is the magnitude and direction of this field?
8. Two small identical electrical dipoles AB and CD, each of dipole moment 'p' are kept at an angle of 120° . What is the resultant dipole moment of this combination? If this system is subjected to electric field (\vec{E}) directed along + X direction, what will be the magnitude and direction of the torque acting on this?
9. Plot a graph showing the variation of current density (j) versus the electric field (E) for two conductors of different materials. What information from this plot regarding the properties of the conducting material, can be obtained which can be used to select suitable materials for use in making (i) standard resistance and (ii) connecting wires in electric circuits?
10. The equivalent capacitance of the combination between A and B in the given figure is $4\ \mu\text{F}$.

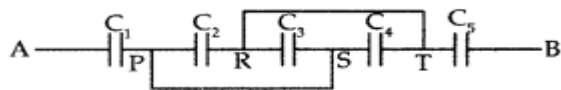


- (i) Calculate capacitance of the capacitor C.
- (ii) Calculate charge on each capacitor if a 12 V battery is connected across terminals A and B.
- (iii) What will be the potential drop across each capacitor?
11. Two parallel plate X and Y capacitors, X and Y, have the same area of plates and same separation between them. X has air between the plates while Y contains a dielectric medium of $\epsilon_r = 4$.
 - (i) Calculate capacitance of each capacitor if equivalent capacitance of the combination is $4\ \mu\text{F}$.
 - (ii) Calculate the potential difference between the plates of X and Y.
 - (iii) What is the ratio of electrostatic energy stored in X and Y?
12. Two parallel plate capacitors of capacitances C_1 and C_2 such that $C_1 = 3C_2$ are connected across a battery of V volts as shown in the figure. Initially the key (k) is kept closed to fully charge the capacitors. The key is now thrown open and a dielectric slab of dielectric constant 'K' is inserted in the two capacitors to completely fill the gap between the plates, Find the ratio of

- (i) the net capacitance and
- (ii) the energies stored in the combination, before and after the introduction of the dielectric slab



13. (i) Find equivalent capacitance between A and B in the combination given below. Each capacitor is of $2\ \mu\text{F}$ capacitance

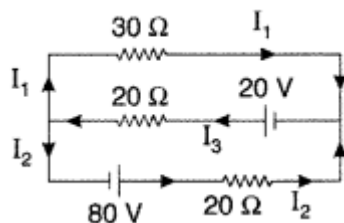


(ii) If a DC source of 7 V is connected across AB, how much charge is drawn from the source and what is the energy stored in the network?

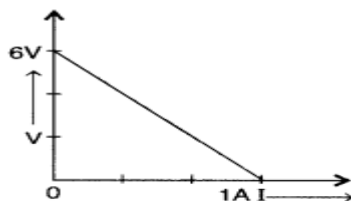
14. Two metallic wires of the same material have the same length but cross-sectional area is in the ratio 1:2. They are connected

- (i) in series and
- (ii) in parallel. Compare the drift velocities of electrons in the two wires in both the cases (i) and (ii).

15. Use Kirchoff's rules to determine the value of the current I_1 flowing in the circuit shown in the figure.



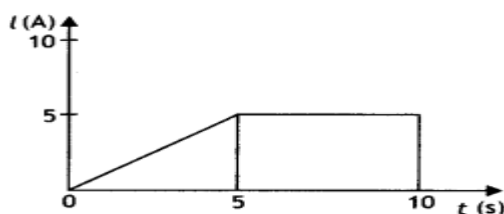
16. The plot of the variation of potential difference A across a combination of three identical cells in series, versus current is shown along the question. What is the emf and internal resistance of each cell?



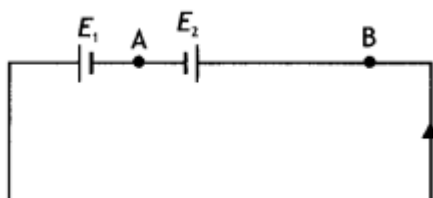
17. Two wires of equal length, one of copper and the other of manganin have the same resistance. Which wire is thicker?

18. Draw a graph showing the variation of resistivity with temperature for nichrome. Which property of nichrome is used to make standard resistance coils?

19. Figure shows a plot of current 'I' flowing through the cross-section of a wire versus the time 't'. Use the plot to find the charge flowing in 10 s through the wire.



20. The circuit in the figure shows two cells connected in opposition to each other. Cell E_1 is of emf 6 V and internal resistance 2Ω ; the cell E_2 is of emf 4 V and internal resistance 8Ω . Find the potential difference between the points A and B.



Note down the following activities from your lab manual in your activity file, with relevant diagrams to be drawn on the blank side.

- To assemble the components of a given electrical circuit.
- To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.
- To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
- To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
- To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
- To study the nature and size of the image formed by a convex lens, on a screen by using a candle and a screen (for different distances of the candle from the lens).

CHEMISTRY

Date of submission: 5th July 2022

I Complete the first three experiments in your chemistry practical file. The same has been uploaded on Google Classroom.

II Complete the following assignment in your Chemistry register.

- Why is thionyl chloride process the best method to prepare alkyl chlorides from alcohols?
- What is the role of acetone in Finkelstein reaction?
- Give the order of reactivity of the following towards SN_1 mechanism:
 - RI, RCl, RBr
 - CH_3CH_2Br , $(CH_3)_2CHBr$, $(CH_3)_3Br$
 - Vinyl chloride, Benzylic chloride, Chloro benzene, Allylic chloride
- Halo alkanes with KCN form alkyl cyanides while AgCN will give alkyl isocyanide as major product. Why?

5. What is a chiral carbon? Why does SN_1 give a racemic mixture whereas SN_2 gives inverted product?
6. How can you convert aniline into Iodobenzene?
7. Why aryl halides do not undergo nucleophilic substitution?
8. Why is X group in aryl halides ortho- para directing but deactivating for electrophilic substitution?
9. p-Nitrochlorobenzene undergoes nucleophilic substitution more easily than Chloro benzene. Why?
10. Give a chemical test to distinguish between the following pairs of compounds:
 - chloroethane and chlorobenzene
 - chloroethane and bromoethane
11. What is phosgene gas?
12. Carry out the following conversions:
 - (i) Butane to 2-Nitrobutane
 - (ii) But-1ene to But-2ene
 - (iii) 1-Bromoethane to Butane
 - (iv) Chloro benzene to p-Nitrophenol
 - (v) Propanol to Butane nitrile
 - (vi) Ethane to Ethene
 - (vii) Ethene to Ethyne

BIOLOGY

Date of submission: 4th July 2022

1. You are required to make a multimedia presentation on any topic related to BIOTECHNOLOGY AND ITS APPLICATION. Your presentation must conform to the following guidelines:
 - i) The presentation should be made using Microsoft Power Point.
 - ii) It should comprise of text, graphics, animation and sound.
 - iii) The presentation time is 10mins with approximately 10- 15 slides.
 - iv) A final slide that acts as a reference section/bibliography that lists all of the sources of information you used.It will be assessed on the basis of :-
 - i) Content
 - ii) Use of software features
 - iii) Communication skills.All the students have to speak on the topic in coordination with the PPT.
2. Complete the NCERT back exercise questions of
 - i) Human Reproduction
 - ii) Reproductive Health
3. Complete the practical file and write the following experiments:
 - i) Prepare a temporary mount to observe pollen germination.
 - ii) Study the plant population density by quadrat method.

- iii) Study the plant population frequency by quadrat method.
- iv) Common disease-causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause (spotting).

MATHEMATICS

Complete the following assignment in your Mathematics notebook

Date of submission: 8th July 2022

1. If A is any square matrix of order 3×3 such that $|A| = 3$, then the value of $|\text{adj}A|$ is ?
2. If A is a 3×3 invertible matrix, then what will be the value of k if $\det(A^{-1}) = (\det A)^k$.
3. Determine the value of the constant 'k' so that the function

$$f(x) = \frac{kx}{|x|}, \quad x < 0$$

$$3, \quad x \geq 0$$

is continuous at $x = 0$.

4. Write a 2×2 matrix which is both symmetric and skew-symmetric.
5. Suppose P and Q are two different matrices of order $3 \times n$ and $n \times p$, then the order of the matrix $P \times Q$ is?

$$6. \text{ If the function } f(x) = \frac{x^2-1}{x-1}, \quad x \neq 0$$

$$k, \quad x = 0$$

Is given to be continuous at $x = 0$, then the value of k is?

$$7. \text{ Differentiate: } \sin^2(x^2) \text{ w.r.t } x^2$$

$$8. \text{ If } A = \begin{bmatrix} 2 & 3 \\ 5 & -2 \end{bmatrix} \text{ be such that } A^{-1} = kA, \text{ then find the value of k.}$$

$$9. \text{ If } A^{-1} = \begin{bmatrix} 1 & 2 \\ 3 & -1 \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & 3 \\ -1 & 1 \end{bmatrix}, \text{ write the value of } \det(AB).$$

$$11. \text{ If } A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix} \text{ find } A^2 - 5A + 4I \text{ and hence find a matrix } X \text{ such that } A^2 - 5A + 4I + X$$

$$= O$$

12. Find the maximum value of $\begin{vmatrix} 1 & 1 & 1 \\ 1 & 1 + \sin A & 1 \\ 1 & 1 & 1 + \cos A \end{vmatrix}$
13. If A is a square matrix such that $A^2 = I$, then find the simplified value of $(A - I)^3 + (A + I)^3 - 7A$.
14. Show that all the diagonal elements of a skew symmetric matrix are zero.
15. If $f(x) = \begin{vmatrix} a & -1 & 0 \\ ax & a & -1 \\ ax^2 & ax & a \end{vmatrix}$, using properties of determinants find the value of $f(2x) - f(x)$.
16. If $x = a \cos \theta + b \sin \theta, y = a \sin \theta - b \cos \theta$, show that $y^2 \cdot y'' - x \cdot y' + y = 0$.
17. Show that the function $f : \mathbb{R} \rightarrow \mathbb{R}$ defined by $f(x) = \frac{x}{x^2+1}$ is neither one-one nor onto.
18. If $(x - y) \cdot e^{\frac{x}{x-y}} = a$, prove that $y \cdot y' + x = 2y$.
19. If $x = a \sin 2t (1 + \cos 2t)$ and $y = b \cos 2t (1 - \cos 2t)$, find the values of dy/dx at $t = \pi/3$ and $t = \pi/4$
20. If $y = x^x$, then prove that $\frac{d^2y}{dx^2} - \frac{1}{y} \cdot \left(\frac{dy}{dx}\right)^2 - \frac{y}{x} = 0$
21. If $x = a(\cos 2\theta + 2\theta \sin 2\theta)$ and $y = a(\sin 2\theta - 2\theta \cos 2\theta)$. Find $\frac{d^2y}{dx^2}$ at $\theta = \pi/8$
22. If $y = \log(1 + t^2 + t^4)$ and $x = \tan^{-1} t$, find $\frac{d^2y}{dx^2}$
23. If $\sin y = x \cos (a + y)$, then show that $y_1 = \frac{\cos^2(a+y)}{\cos a}$

Also, show that $y_1 = \cos a$, when $x = 0$.

24. If $y = \frac{x \cos^{-1} x}{\sqrt{1-x^2}} - \log \sqrt{1-x^2}$ then prove that $y_1 = \frac{\cos^{-1} x}{(1-x^2)^{3/2}}$
25. If $x^m \cdot y^n = (x + y)^{m+n}$. then prove that $y'' = 0$
26. Given $A = \begin{bmatrix} 1 & 2 & 1 \\ 2 & 3 & 2 \\ 5 & 0 & 4 \end{bmatrix}$, $B^{-1} = \begin{bmatrix} 1 & 3 & 4 \\ 1 & 4 & 3 \\ 1 & 3 & 3 \end{bmatrix}$, compute $(AB)^{-1}$
27. If $y = \sin(\sin x)$, prove that $y'' + \tan x \cdot y' + y \cdot \cos^2 x = 0$
28. Differentiate the function $(\sin x)^x + \sin^{-1} \sqrt{x}$ with respect to x .
29. Let $A = \{x \in \mathbb{Z} : 0 \leq x \leq 12\}$. Show that

$R = \{(a, b) : (a, b) \in A, |a - b| \text{ is divisible by } 4\}$ is an equivalence relation.

Find the set of all elements related to 1. Also write the equivalence class [2].

30. If $y = \log(x + \sqrt{x^2 + a^2})$,

Then prove that $(x^2 + a^2)y_2 + x.y_1 = 0$

PHYSICAL EDUCATION

The following practicals should be written in Practical/ Record file. Date of submission:
13th July 2022

Record File shall include:

Practical-1: Fitness tests administration for all items.

Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.

Practical-3: Procedure for administering Senior Citizen Fitness Test for 5 elderly family members.

Practical-4: Any one game of your choice out of the list above. Labelled diagram of field & equipment (Rules, Terminologies & Skills).

****To be done in the Notebook:**

Q1: What is knock out tournament? Explain different types of knock-out tournaments. Draw a fixture of 21 teams on knock-out basis.

Q2: Define league tournament. Draw a fixture of nine (9) teams on the basis of league tournament using cyclic method. Explain British method to declare the winner.

Q3: What do you mean by balanced diet? Explain the factors which affect the balanced diet.

Q4: Explain the nutritive and non-nutritive components of diet.

Q5: Which are the Asanas practiced for preventing Asthma? Write in detail about any two of them.

Q6: What are the causes of back pain? Explain the procedure, benefits and contra-indications of any two asanas recommended to cure back pain.

Q7: Define the term Disability and also explain the types of disability.

Q8: Describe five types of disorders with their symptoms and causes.

COMPUTER SCIENCE

Date of submission: 8th July 2022

GENERAL INSTRUCTIONS:

- Code for the following programs to be printed on A4 size sheets along with the snapshot of the output
 - Font for the Code: Courier New: Font-size – 12
 - Only one program and its output to be printed on one A4 size sheet
1. Write a program to check if the given number (positive Integer) is a palindrome.
 2. Write a program to reverse a given string
 - a. Using Loops in Python
 - b. Using Slicing Method in Python
 3. Write a program to remove all odd numbers from a given list (without using Python in-built functions)
 4. Write a program to find and display the sum of all the integers (positive/negative) that have 3 in the units place in a tuple.
 5. Write a random number generator that generates random numbers between 1 and 6 (simulates a dice).
 6. Write a program in Python to use standard library- Math and perform the following-
 - a. Find the Area of a circle
 - b. Find the square root of a given number
 7. Write program in Python to find the area of- circle, square, rectangle, trapezium, sphere and cylinder with the help of user defined functions
 8. Write a menu-driven program in Python to create a calculator with the help of user defined functions
 9. Write a user defined function that takes a given number as an input argument and returns the Fibonacci series upto the given number from the function.
 10. Write a Python program to read a text file line by line and display each word separated by a '#'.
 11. Write a Python program to read a text file and display the number of vowels/consonants/uppercase/lowercase characters in the file
 12. Write a Python program to read a text file and display the total word count of the file.
 13. Write a Python program to read a text file and display the count of the occurrences of the word- 'the', 'an', 'this' (case-sensitive)