

DAV PUBLIC SCHOOL, BISTUPUR, JAMSHEDPUR

HOLIDAY HOMEWORK-2023-24

CLASS :XII

SUBJECT: ENGLISH

1. 'Understanding Kamala Das a little more'. You all have studied the poem 'My mother at 66' by Kamala Das. 'My Grandmother's House' is another poem written by the same poet- Kamala Das. Make a comparative study of both these poems by the same poet

Links for reference:

<https://www.britannica.com/biography/Kamala-Das>

<https://www.poetrynook.com/poem/my-grandmothers-house>

Include the following sub-headings in your project:

A detailed study of the poet

Her life

Her works

Her style of poetry

Comparison between the two poems. It should include-

The similarities

The differences

The theme in both the poems

SUBJECT:-PHYSICS

1. Why do the electrostatic field lines not form closed loop ?
2. In which orientation, a dipole placed in a uniform electric field is in (i) stable (ii) unstable equilibrium ?
3. Two point charges having equal charges separated by 1m distance experience a force of 8 N. What will be the

force experienced by them if they are held in water at the same distance? (Given, $K_{\text{water}} = 80$).

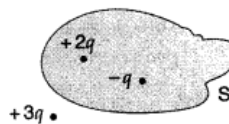
4. Two point charges q and $-2q$ are kept d distance apart, find the location of the point relative to charge q at which electric field intensity and electric potential due to this system is zero.

5. An electric dipole is placed in a uniform electric field E with its dipole moment p parallel to the field. Find the work done in turning the dipole till its dipole moment points in the direction opposite to E .

6. Two identical metallic spherical shells A and B having charges $+40\text{ C}$ and -10 C are kept a certain distance apart. A third identical uncharged sphere C is first placed in contact with sphere A and then with sphere B, and then taken far away. Find the ratio of initial to that of final forces between the spheres A and B.

7. If the radius of the Gaussian surface enclosing a charge is halved, how does the electric flux through the Gaussian surface change?

8. Figure shows three point charges, $+2q$, $-q$ and $+3q$. Two charges $+2q$ and $-q$ are enclosed within a surface 'S'. What is the electric flux due to this configuration through the surface 'S'.



9. Two charges of magnitudes $-3Q$ and $+2Q$ are located at points $(a, 0)$ and $(4a, 0)$ respectively. What is the electric flux due to these charges through a sphere of radius $5a$ with its centre at the origin?

10. A point charge $+Q$ is placed in the vicinity of a conducting surface. Draw the electric field lines between the surface and the charge.

11. A spherical conducting shell of inner radius r_1 and outer radius r_2 has a charge Q . A charge q is placed at the centre of the shell.

- (a) What is the surface charge density on the
 (i) inner surface,
 (ii) outer surface of the shell?

(b) Write the expression for the electric field at a point $x > r_2$ from the centre of the shell.

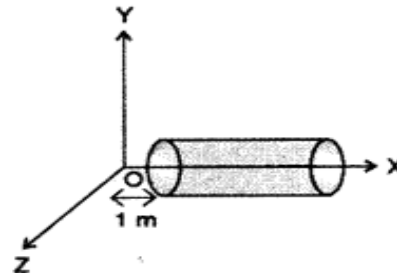
12. Plot a graph showing the variation of coulomb force (F) versus $(1/r^2)$, where r is the distance between the two

Charges of each pair of charges : $(1\mu\text{C}, 2\mu\text{C})$ and $(2\mu\text{C}, -3\mu\text{C})$.
 Interpret the graphs obtained.

13. A hollow cylindrical box of length 1m and area of cross-section 25 cm^2 is placed in a three dimensional coordinate

system as shown in the figure. The electric field in the region is given by $\vec{E} = 50x\hat{i}$ where E is in N/C and x is in metres. Find

- i) Net flux through the cylinder , ii) Charge enclosed by the cylinder.



14. State Gauss' law in electrostatics. Using this law derive an expression for the electric field due to a uniformly charged infinite plane sheet.

15. Two charged spherical conductors of radii R_1 and R_2 when connected by a conducting wire acquire charges q_1 and q_2 respectively. Find the ratio of their surface charge densities in terms of their radii.

16. A charge is distributed uniformly over a ring of radius 'a'. Obtain an expression for the electric intensity E at a point on the axis of the ring. Hence show that for points at large distances from the ring, it behaves like a point charge.

17. (i) Obtain the expression for the torque τ^{\rightarrow} experienced by an electric dipole of dipole moment p^{\rightarrow} in a uniform

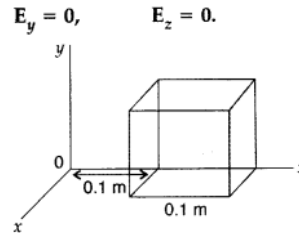
electric field \vec{E} .

(ii) What will happen if the field were not uniform ?

18. (a) Define electric flux. Write its SI units.

(b) The electric field components due to a charge inside the cube of side 0.1 m are as shown :

$$E_x = \alpha x^{1/2}, \text{ where } \alpha = 500 \text{ SI unit}$$

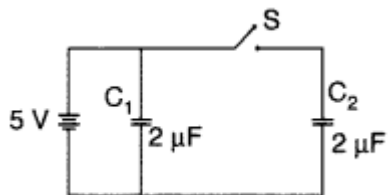


19. (a) Derive the expression for the energy stored in a parallel plate capacitor. Hence obtain the expression for the energy density of the electric field.

(b) A fully charged parallel plate capacitor is connected across an uncharged identical capacitor. Show that the energy stored in the combination is less than that stored initially in the single capacitor.

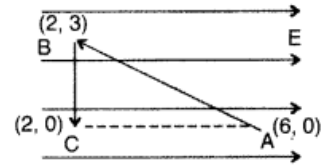
20. Figure shows two identical capacitors C_1 and C_2 , each of $2 \mu\text{F}$ capacitance, connected to a battery of 5 V.

Initially switch 'S' is left open and dielectric slabs of dielectric constant $K = 5$ are inserted to fill completely the space between the plates of the two capacitors. How will the i) charge and



(ii) potential difference between the plates of the capacitors be affected after the slabs are inserted ?

21. A test charge 'q' is moved without acceleration from A to C along the path from A to B and then from B to C in electric field E as shown in the figure.

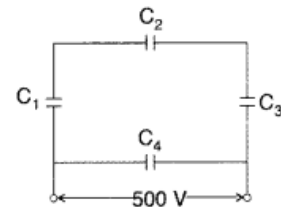


(i) Calculate the potential difference between A and C.

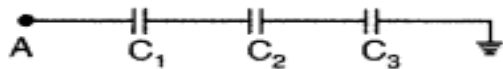
(ii) At which point (of the two A & C) is the electric potential more and why ?

22. A network of four capacitors each of $12\mu\text{F}$ capacitance is connected to a 500 V supply as shown in the figure.

Determine (a) equivalent capacitance of the network and (b) charge on each capacitor.



23. Calculate the potential difference and the energy stored in the capacitor C_2 in the circuit shown in the figure. Given potential at A is 90 V , $C_1 = 20\mu\text{F}$, $C_2 = 30\mu\text{F}$ and $C_3 = 15\mu\text{F}$.



24. Define an equipotential surface. Draw equipotential surfaces :

(i) in the case of a single point charge and

(ii) in a constant electric field in Z-direction. Why the equipotential surfaces about a single charge are not equidistant?

(iii) Can electric field exist tangential to an equipotential surface?

Give reason.

25. (i) If two similar large plates, each of area A having surface charge densities $+a$ and $-a$ are separated by a distance d in air, find the expressions for

(a) field at points between the two plates and on outer side of the plates. Specify the direction of the field in each case.

(b) the potential difference between the plates.

(c) the capacitance of the capacitor so formed.

(ii) Two metallic spheres of radii R and $2R$ are charged so that both of these have same surface charge density σ . If they are connected to each other with a conducting wire, in which direction will the charge flow and why ?

SUBJECT:-CHEMISTRY

1.(a) If Solubility product of CuS is 6×10^{-16} , Calculate the maximum molarity of CuS in aqueous solution.

(b) Why excess intake of common salt is not advised to person suffering from High Blood pressure.

(c) Suggest type of intermolecular attractions present in I_2 and CCl_4 , Methanol and acetone.

2. (a) What is the value of vant Hoff factor i for $\text{K}_4[\text{Fe}(\text{CN})_6]$ (b) The preservation of fruits by adding concentrated sugar Solution protect against bacterial action.

(c) when 2 gram of benzoic acid is dissolved in 25 g of benzene, the experimentally determined molar mass is always greater than the true value.

(d) H_2S is a toxic gas with rotten egg smell is used for qualitative analysis. If solubility of H_2S in water at STP is 0.195m, calculate Henry's constant.

3.(a) Determine the Osmotic pressure of a solution prepared by dissolving 25 mg of K_2SO_4 in 2 L water at 25°C , assuming to be completely dissociated. (at mass of $\text{K}=39$ and $\text{S}=32$) (b) Give one example of Maximum and Minimum boiling Azeotrope.

4. (a) What will be the Osmotic pressure of 58.5 g/l of NaCl . (at mass of $\text{Na}=23$ and $\text{Cl}=35.5$)

(b) Define Reverse Osmosis with one use.

(c) Why 0.9 % NaCl is used as intravenous liquid and is administered to human body.

5.(a) write Units of Ebullioscopic constant and write its definition. (b) Why aquatic species are more comfortable in cold water than in warm water.

(c) Give formula of Raoult's law with graphs of Positive and negative deviation.

6. Three electrolytic cells A, B and C containing $ZnSO_4$, $CuSO_4$ and $AgNO_3$ are connected in series. A steady current of 1.5 amperes is passed till 1.45 g of Ag was deposited. How long did the current flow, what mass of zinc and copper got deposited.

7. Draw a neat diagram of Dry cell, Lead storage battery and fuel cell. Also write their Anodic and cathodic reactions.

8. What are concentration cells. Draw the diagram and write chemical reactions.

9. Write the Nernst equation for the following and calculate E_{cell} . $Zn(s) / Zn(0.004M) // Cu(0.200M) / Cu(s)$.

10. Write electrolysis for the aq $AgNO_3$ containing Platinum electrodes.

SUB:MATHEMATICS

1. If $y = (\cos x)^x + (x \sin x)^{\frac{1}{x}}$, find $\frac{dy}{dx}$.

2. If $y^x + x^y + x^x = a^b$, find $\frac{dy}{dx}$.

3. If $(x-y)e^{\frac{x}{x-y}} = a$, prove that $y \frac{dy}{dx} + x = 2y$.

4. If $x = a \sin 2t(1 + \cos 2t)$ and $y = b \cos 2t(1 - \cos 2t)$, find $\frac{dy}{dx}$ at $t = \frac{\pi}{4}$.

5. If $x = \cos t(3 - 2 \cos^2 t)$ and $y = \sin t(3 - 2 \sin^2 t)$, find $\frac{dy}{dx}$ at $t = \frac{\pi}{4}$.

6. Find $\frac{dy}{dx}$ for $y = \tan^{-1}\left(\frac{\sin x}{1 + \cos x}\right)$, $-\pi < x < \pi$.

7. Differentiate $\sin^{-1}\left\{\frac{2^{x+1} \cdot 3^x}{1 + (36)^x}\right\}$ with respect to x .

8. If $y = \{\log_{\cos x} \sin x\} \{\log_{\sin x} \cos x\}^{-1} + \sin^{-1}\left(\frac{2x}{1+x^2}\right)$, find $\frac{dy}{dx}$ at $x = \frac{\pi}{4}$.

9. If $x = a\left(\cos t + \log \tan \frac{t}{2}\right)$ and $y = a \sin t$, evaluate $\frac{d^2y}{dx^2}$ at $t = \frac{\pi}{4}$.

10. If $x = \left\{\log(x + \sqrt{x^2 + 1})\right\}^2$, then find the value of $(1+x^2) \frac{d^2y}{dx^2} + x \frac{dy}{dx}$.

11. If $x = \cos \theta$ and $y = \sin^3 \theta$, prove that

$$y \frac{d^2 y}{dx^2} + \left(\frac{dy}{dx} \right)^2 = 3 \sin^2 \theta (5 \cos^2 \theta - 1).$$

Discuss the continuity of following functions (in questions 12 and 13) at indicated points

12. $f(x) = \begin{cases} x \sin\left(\frac{1}{x}\right), & \text{for } x \neq 0 \\ 0, & \text{for } x = 0 \end{cases}$ at $x = 0$.

13. $f(x) = \begin{cases} \frac{e^x - 1}{e^x + 1}, & \text{for } x \neq 0 \\ 0, & \text{for } x = 0 \end{cases}$ at $x = 0$.

14. If $\cos^{-1}\left(\frac{x^2 - y^2}{x^2 + y^2}\right) = \tan^{-1} a$, prove that $\frac{dy}{dx} = \frac{y}{x}$

15. If $\tan^{-1}\left(\frac{1-x}{1+x}\right) + \tan^{-1}\left(\frac{x+2}{1-2x}\right)$, find $\frac{dy}{dx}$.

SUBJECT:-COMPUTER SCIENCE

Unit/Topic: Revision Tour of class XI

I. Answer the following questions with appropriate example:

i) Differentiate the terms Mutable and Immutable

ii) List and Dictionary

iii) and , or operator

iv) Syntax and Runtime errors

v) Phishing and Pharming

II. Programming in Python:

i) WAP to find the 2nd largest word in a sentence.

ii) WAP to display all the palindrome numbers present in a list of n integers

iii) WAP to create a dictionary containing n no. of names of students as keys and percentage as values. Find the following out of it.

- A) Find the name of the topper/toppers
- B) Find the average percentage
- C) Display the name of students having same percentage.

II) Answer the following questions:

Topic: User Defined Function

i) Answer following questions with appropriate example:

- a) Positional and Keyword argument
- b) nonlocal and global keyword
- c) What is the use of return keyword.

Programming:

- i) WAP to create a function accepting a list of n no. of words as argument and create a dictionary out of it. The keys of dictionary will be 'vowel' and 'consonant'. The values will be the tuple of words start with vowel and consonant respectively.
- ii) WAP to create a function to check elements of tuples (Elements are float values) whether they are arranged or not. If arranged return 'A' for ascending, 'D' for descending and 'U' for unordered.
- iii) Write a menu driven program to check an integer whether it is
 - a) Armstrong b) Special c) Prime d) Niven e) Spy numbersusing separate user defined function.

d) Find the output of the following program code:

i)

```
x=5
```

```
def fun(a,b=10):
```

```
    global x
```

```
    for I in range(a,b):
```

```
        x+=i
```

```
    return x
```

```
print(fun(4))
```

```
print(fun(10,15))
```

ii)

```
def f1(a,b):
```

```
    C=10
```

```
    A+=b+c
```

```
    b-=c
```

```
    print(a,b,c)
```

```
    def f2(n):
```

```
        nonlocal c
```

```
        while n:
```

```
            c+=n%10
```

```
            n//=10
```

```
        else:
```

```
            return c
```

```
    c=f2(543)
```

```
    print©
```

```
f1(15,25)
```

iii)

```
s='ENCYCLOPEDIA'
```

```
def prn(n=2):
```

```
    st=''
```

```
    for I in range(len(s)-1,n,-1):
```

```
        st=st+s[i].lower()
```

```
    return st
```

```
print(prn())
```

```
print(prn(3))
```

iv)

```
s='CbsE@AiiisCE23-24'
```

```
def fun(lst):
```

```
    x=0
```

```
    while x<len(s):
```

```
        if s[x].isalpha():
```

```
            if s[x].islower():
```

```
                lst.append(s[x].upper())
```

```
            elif s[x].isupper():
```

```
                lst.append(s[x+1])
```

```
        elif s[x].isdigit():
```

```
            lst.append(chr(ord(s[x])+1))
```

```
        else:
```

```
            lst.append('#')
```

```
        x+=1
```

```
    else:
```

```
        return lst
```

```
#Main Block
```

```
lst=fun(list(s))
```

```
print(lst)
```

```
v)
```

```
def outer():
```

```
    x='welcome'
```

```
    def inner():
```

```
        x='goodbye'
```

```
    inner()
```

```
    print('x=',x)
```

```
outer()
```

vi)

```
def outer():
```

```
    x='welcome'
```

```
    def inner():
```

```
        nonlocal x
```

```
        x='goodbye'
```

```
    inner()
```

```
    print('x=',x)
```

```
outer()
```

vii)

```
def outer():
```

```
    x='welcome'
```

```
    def inner():
```

```
        nonlocal x
```

```
        x='goodbye'
```

```
    inner()
```

```
    print('x=',x)
```

```
outer()
```

viii)

```
a=1
```

```
def block3():
```

```
    a=2;b=3
```

```
    print('block3:',a,b)
```

```
    def block2():
```

```
        global a
```

```
        a=a+100
```

```
        print('block2:',a,b)
```

```

        def block1():
            print('block1:',a,b)
        block1()
    block2()
block3()
ix)
a=1
def block3():
    a=2;b=3
    print('block3:',a,b)
    def block2():
        #nonlocal a
        global a
        a=a+100
        print('block2:',a,b)
        def block1():
            print('block1:',a,b)
        block1()
    block2()
block3()

```

SUBJECT: BIOLOGY

1) Investigatory project based on class 12 syllabus as prescribed by CBSE.

2) Solve the NCERT Questions from the topics completed.

SUBJECT;-BIO TECHNOLOGY

1. Do investigatory project on topic given in Biotechnology.(in A3 file)
2. Write a brief note on(in notebook)
 - (i) structure of amino acid
 - (ii) Bond involved in structure of proteins
- 3 . Do all extra questions (shared in whatsapp group) in your notebook.

SUBJECT: APPLIED MATHEMATICS

1. At a game of billiards, A can give B 15 points in 60 and A can give C to 20 points in 60. How many points can B give C in a game of 90?
2. A boat goes 20 km upstream and 22 km downstream in 6 hours. Also, it goes 25km upstream and 33 km downstream in 8 hours. Find the speed of the boat in still water and that of the stream.
3. A boat covers 4 km against the stream in 1 hr and covers the same distance in the direction of stream in 40 minutes. How long will it take to go 10 km in still water?
4. A man takes twice as long as to row a distance against the stream as to row the same distance in the direction of stream. Find the ratio of speed of man in still water to the speed of stream.
5. In what ratio water must be added in milk costing ₹60 per litre, so that resulting mixture would be worth ₹50 per litre?
6. In a flat race, A beats B by m and C by 29 m. When B and C run over the course together B wins 15 m. Find the length of the race course.
7. In a game, A can give 15 points to B, A can give 30 points to C, and B can give 20 points to C. How many points make the game?
8. Three pipes A , B and C can fill a tank together in two hours. Pipes B and C take three hours to fill the tank, while pipes A and C take four hours to fill the tank. Find the time taken by each pipe to fill the tank alone?

9. Pipes A and B can fill a tank in 1 hour and $1\frac{1}{2}$ hours respectively.

While pipe C drains 16b litres of water in 1 minute. If all three taps are kept open when the tank is full, the tank gets emptied in 1 hour then find the capacity of the tank?

10. Solve the following inequalities:

- $|x+3| < 5$
- $|3-5x| < 7$
- $5 < |5x-1| < 9$
- $|2 - 3x| \geq 5$

Q11. If

$$A = \begin{bmatrix} \alpha & 0 \\ 1 & 1 \end{bmatrix}, B =$$

$$\begin{bmatrix} 1 & 0 \\ 2 & 1 \end{bmatrix}$$

and $A^2 = B$, then find the values of α .

Q12. Find the value of x, if

$$[1 \ x \ 1] \begin{bmatrix} 1 & 3 & 2 \\ 2 & 5 & 1 \\ 15 & 3 & 2 \end{bmatrix} \begin{bmatrix} 1 \\ 2 \\ x \end{bmatrix} =$$

0.

SUBJECT: ACCOUNTANCY

1. Define Partnership Deed.
2. Explain in 50 words as to why it is considered desirable to make the partnership agreement in writing.
3. List the items which are debited and credited in capital accounts of the partners when: (i) Capitals are fixed. (ii) Capital are fluctuating.
4. Why is Profit and Loss Adjustment Account prepared? Explain.
5. Give two circumstances under which the fixed capitals of partners may change.

6. If a fixed amount is withdrawn on the first day of every quarter, for what period the interest on total amount withdrawn will be calculated?
7. Name and explain the factors affecting the value of goodwill of a firm.
8. What do you understand by 'no. of years purchased'?

NUMERICALS

9. Solve the additional questions given in the textbook of chapter 1 'Accounting for partnership firm' and chapter 2 'Change in Profit Sharing Ratio Among The Existing Partners'.
10. Solve the Multiple-Choice Questions of chapter 1 and 2.

SUBJECT: BUSINESS STUDIES

Long Answer Type Questions

1. **'In the absence of management, the productive resources will remain resources and shall never become production'. Explain the importance of management in the light of the above statement.**
2. **"Management is regarded as an Art by some, as Science or as an inexact Science by others. The truth seem to be somewhere in between". In the light of this statement explain the true nature of management.**
3. **"Coordination is the orderly arrangement of group efforts to provide unity of action in the pursuit of common purpose". In the light of this statement, explain the nature of coordination.**
4. **In your school, you observe that books are kept in office, chinks in the library and office records in the staffroom. How will that affect the achievement of school objectives? Which aspect of management is lacking here and why? As a manager, what steps will you take to rectify the shortcomings?**

5. What is the principle of 'scalar chain'? Explain briefly the utility of 'Gang Plank' with the help of a diagram.
6. Explain the technique of scientific management which is the strongest motivator for a worker to reach standard performance.
7. Explain why it is said that principles of management are 'mainly behavioral' and 'contingent' in nature. Also explain how principles of management 'provides managers with useful insights into reality' and 'helps in thoughtful decisions-making'.
8. The government of India announced Demonetization of Rs.500 and Rs.1,000 currency notes with effect from the midnight of November 8, 2016. As a result, the existing 500 and 1,000 currency notes ceased to be legal tender from that date. New currency notes of the denomination of 500 and 2,000 were issued by Reserve Bank of India after the announcement. This step resulted in a substantial increase in the awareness about and use of Point of Sale machines, e-wallets, digital cash and other modes of cashless transactions. Also, increased transparency in monetary transactions and disclosure led to a rise in government revenue in the form of tax collection.
 - a. Enumerate the dimensions of business environment highlighted above.
 - b. State the features of Demonetization.

SUBJECT: PHE

1. What do you mean by knock out tournaments? Draw the fixtures of 21 teams on knock out basis.
2. What is league tournament? Draw a fixture of six teams using round robin method.
3. What do you mean by specific sports programmes? Explain any three.
4. Define and classify 'fixtures'. Draw a league fixture of 16 teams.
5. Write three differences between intramurals and extramurals.

6. What do you mean by balanced diet? Explain the components of diet.
7. What do you mean by healthy weight? Discuss about the methods to control healthy body weight for life time.
8. 'Vitamins are essential for our metabolic process'. What happens if there is deficiency of vitamins.
9. Discuss briefly about various food myths.
10. Draw the chart of macro and micro minerals – sources, function and deficiency.

SUBJECT:-HISTORY

INTRODUCTION

History is one of the most important disciplines in school education. It is the study of the past, which helps us to understand our present and shape our future. It promotes the acquisition and understanding of historical knowledge in breadth and in depth across cultures.

The course of history in senior secondary classes is to enable students to know that history is a critical discipline, a process of enquiry, a way of knowing about the past rather than just a collection of facts. The syllabus helps them to understand the process, through which a historian collects, chooses, scrutinizes and assembles different types of evidence to write history.

Projects are an imperative component in enhancing students learning with the related themes. In the research project, students can go beyond the textbook and explore the world of knowledge. They can conceptualize under the embedded themes. Forms of rubrics are a significant aspect and to be discussed in the classroom itself for clear understanding of concept & for assessment.

OBJECTIVES

Project work will help students:

- To develop skill to gather data from a variety of sources, investigate diverse viewpoints and arrive at logical deductions.

- To develop skill to comprehend, analyse, interpret, evaluate historical evidence, and understand the limitation of historical evidence.
- To develop 21st century managerial skills of co-ordination, self-direction, and time management.
- To learn to work on diverse cultures, races, religions, and lifestyles.
- To learn through constructivism-a theory based on observation and scientific study.
- To inculcate a spirit of inquiry and research.
- To communicate data in the most appropriate form using a variety of techniques

STEPS INVOLVED IN THE CONDUCT OF THE PROJECT:

Students may work upon the following lines as suggested:

1. Choose a Title/Topic
2. Need of the Study, Objective of the Study
3. Hypothesis
4. Content -Timeline, Maps, Mind maps, Pictures, etc. (Organization of Material/Data Present Material/Data)
5. Analysing the Material/Data for Conclusion
6. Draw the Relevant Conclusion
7. Bibliography

EXPECTED CHECKLIST FOR THE PROJECT WORK:

1. Introduction of topic/ title
2. Identifying the causes, events, consequences and/or remedies
3. Various stakeholders and effect on each of them
4. Advantages and disadvantages of situations or issues identified
5. Short-term and long-term implications of strategies suggested during research
6. Validity, reliability, appropriateness, and relevance of data used for research work and for presentation in the project file
7. Presentation and writing that is succinct and coherent in project file

8. Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

A FEW SUGGESTIVE TOPICS FOR CLASS XII PROJECTS

1. The Indus Valley Civilization-Archaeological Excavations and New Perspectives
2. The History and Legacy of Mauryan Empire
3. “Mahabharat”- The Great Epic of India
4. The History and Culture of the Vedic period
5. Buddha Charita
6. A Comprehensive History of Jainism
7. Bhakti Movement- Multiple interpretations and commentaries.
8. “The Mystical Dimensions of Sufism
9. Global legacy of Gandhian ideas
- 10.The Architectural Culture of the Vijayanagar Empire
- 11.Life of women in the Mughal rural society
- 12.Comparative Analysis of the Land Revenue Systems introduced by the Britishers in India
- 13.The Revolt of 1857- Causes; Planning & Coordination; Leadership, Vision of Unity
- 14.The Philosophy of Guru Nanak Dev
- 15.The Vision of Kabir
- 16.An insight into the Indian Constitution
- 17.Comparative study of Stupas and Pillar edicts
- 18.Comparative study of Mughal and Vijayanagar architecture

SUBJECT:-GEOGRAPHY

1) COMPLETE THE PRACTICAL WORK OF CHAPTER 1 AND 3 DISCUSSED IN THE CLASS WITH FOLLOWING SUB-HEADINGS:

CH 1: DATA- ITS SOURCE AND COMPILATION

- WHAT IS DATA?
- NEED OF DATA
- SOURCES OF DATA
- SOURCES OF PRIMARY DATA
 - PERSONAL OBSERVATION (FIG 1.1 TO BE DONE)
 - INTERVIEW
 - QUESTIONNAIRE /SCHEDULE
 - OTHER METHODS
- SECONDARY SOURCE OF DATA
 - PUBLISHED SOURCES (GOVERNMENT PUBLICATIONS, QUASI-GOVERNMENT PUBLICATIONS, INTERNATIONAL PUBLICATIONS, PRIVATE PUBLICATIONS, NEWSPAPERS AND MAGAZINES, ELECTRONIC MEDIA)
 - UNPUBLISHED SOURCES (GOVERNMENT DOCUMENTS, QUASI-GOVERNMENT DOCUMENTS, PRIVATE DOCUMENTS)
- TABULATION AND CLASSIFICATION OF DATA
- DATA COMPILATION AND PRESENTATION
 - ABSOLUTE DATA
 - PERCENTAGE/RATIO
 - INDEX NUMBER
- PROCESSING OF DATA
- GROUPING OF DATA
- PROCESS OF CLASSIFICATION (FREQUENCY DISTRIBUTION: SIMPLE FREQUENCY, CUMULATIVE FREQUENCY, EXCLUSIVE METHOD, INCLUSIVE METHOD, FREQUENCY POLYGON, OGIVE)

CH 3: GRAPHICAL REPRESENTATION OF DATA

- REPRESENTATION OF DATA

- GENERAL RULES FOR DRAWING GRAPHS, DIAGRAMS AND MAPS
 - LINE GRAPH
 - POLYGRAPH
 - BAR DIAGRAM
 - SIMPLE BAR DIAGRAM
 - LINE AND BAR DIAGRAM
 - MULTIPLE BAR DIAGRAM
 - COMPOUND BAR DIAGRAM
 - PIE DIAGRAM
 - FLOW CHART/MAPS
 - THEMATIC MAPS
 - DOT MAPS
 - CHOROPLETH MAPS
 - ISOPLETH MAPS
- 2) HEADINGS AND SUB HEADINGS TO BE PROPERLY HIGHLIGHTED (BLACK PEN TO BE USED)

ECONOMICS

Read the following hypothetical data calculate

- (a) Compensation of employees (b) Operating Surplus (c) NNP at factor Cost

Items	Rs(Rs Cr)
Wages & Salaries	700
Rent	200
Social Security Contribution by Employer	100
Interest	150
Dividend	50
Corporate Tax	30

Subsidies	20
Consumption of fixed capital	10
Indirect tax	90
Net Factor Income To Abroad	10
Undistributed Profit	20
Direct Tax	40

Calculate Gross Value Added at Market Price

Item	Rs(in Lakhs)
Depreciation	20
Domestic Sales	200
Change in Stock	(-) 10
Exports	10
Single use producer goods	120
Indirect Tax	20

Answer the following questions

- The goods which satisfy human wants directly are called
(a) Intermediate goods (b) consumer goods (c) capital goods (d) stock
- If a car is purchased by a taxi-operator, it will be regarded as a
(a) capital good (b) intermediate good (c) final good (d) both (a) (c)
- increase in the stock of capital is known as
(a) capital loss (b) capital gain (c) capital formation (d) net addition in stock
- Depreciation reserve fund is needed for

(a) inventory stock (b) advertisement (c) replacement investment (d) capital formation

5. "Income of the family" is the example of which variable

(a) stock (b) flow (c) inventory (d) capital

6. Reason for circular flow of income is :

(a) Govt intervention (b) production of goods & services (c) mutual interdependence of producer & consumer household (d) circulation of money

7. Which of the following is the example of normal residents of India?

(a) foreign workers working in WHO located in India (b) German working in IMF office located in India (c) Ambassador in India from the Rest Of The World (d) Ambassador of India from Rest of the world

8. Which of the following item is not included while estimating national income by income method

(a) Rent (b) Mixed Income (c) Fixed Investment (d) Undistributed profit

9. which of the following is not the element of final consumption expenditure

(a) Household expenditure on food (b) Govt final consumption expenditure (c) Household expenditure on education (d) Expenditure on raw material

10. Operating Surplus =

(a) Rent + Interest + Profit (b) Rent + Interest + Compensation Of Employees (c) NDP (FC) – COE- Mixed Income of self employed (d) both (a) & (c)

Reasoning Questions

1. Giving reason classify the following into intermediate goods & final goods

(a) Machine Purchased by a dealer

(b) A car purchased by a household

- (c) Milk purchased by a household
- (d) Purchase of rice by a grocery shop
- (e) Purchase of an air conditioner for use in shop

SUBJECT:-POLITICAL SCIENCE

The Project work will be implemented for 20 Marks.

The project work will be individual/pair/group of 4-5 each (each student will have individual file).

The Project can be made on any of the topics given in the syllabus.

Steps involved in the conduct of the project:

Students may work upon the following lines as a suggested flow chart:

Choose a Title/Topic

Need of the Study, Objective of the Study Hypothesis

Content -Timeline, Maps, Mind maps, Pictures, etc. (Organisation of Material/Data Present Material/Data) Analysing the Material/Data for

Conclusion

Draw the Relevant Conclusion

Bibliography

TO BE DONE IN A SHOE LACE FILE. NO COLOUR PAPERS OR DECORATIONS. EVERYTHING HANDWRITTEN

SUBJECT:-INFORMATICS PRACTICES

I. Answer the following questions:-

1. Explain the utility of tiles() function
2. Explain any three modules that you have learnt along with its utility
3. Explain the difference between len() and count() functions
4. How Series is different from dataframe
5. List out all attributes of series

II. Write the following programs:-

1. Create the series with all armstrong numbers from 1 to 1000
2. Create the series with all harshad numbers from 1 to 100
3. Create the series with all prime numbers from 1 to 50
4. Create the series with all automorphic numbers from 1 to 500

5. Create the series with products as values and its first character as index
6. Write the command to print the values of 3 and 4 index of the series named "colour"
7. Write the command for sorting the values of the series with the help of an example.
8. Write the command to display first five values of the series
9. Illustrate with an example how you can create an array using numpy package
10. Illustrate with an example the creation of the series with the help of the dictionary.