English:

INSTRUCTIONS FOR COMPILATION OF HOLIDAY HOMEWORK :.

1. Update your CW notebook. Complete all your pending Class Work / Home Work.
2. **Do all the following, questions in English Home-Work Notebook only.**
3. HW notebook is to be submitted for checking on the day the school reopens after vacation.

A copy of this assignment page should be pasted in the Home-work notebook.

1.VISTAS. (Supplementary Reader) Do detailed reading of chapters marked.

Write down Central theme, Message, Value points of each chapter & solve the questions given below.

CH 3– Journey to the end of the earth.

1.How do geological phenomena help us to know about the history of mankind?

2.What kind of indications do we get while visiting Antarctica to save Earth?

3.Why is a visit to Antarctica important to realise the effect of global warming?

4.What was the objective of the 'Students on Ice Programme'?

5.Why was Tishani Doshi filled with relief and wonder when he set foot on the Antarctic continent?

CH 4- The Enemy

1.What was his father's chief concern for Sadao?

2.Why was DrSadao not sent abroad along with the troops?

3.In what condition did DrSadao find the American soldier at the seashore?

4. Why did DrSadao treat the American solider even though, it was an unpatriotic act on his part?

5. How did DrSadao plan the American prisoner's escape?

CH 6- On the face of it.

1. How does Mr Lamb keep himself busy when it is a bit cool?

2. Why does Mr Lamb leave his gate always open?

3. What is the bond that unites the two—Mr Lamb, the old and Derry, the small boy? How does the old man inspire the little boy?

4. How did Derry's handicap damage his life?

5. Why does Derry's mother not want him to go back to visit Mr. Lamb?

CH 8- Memories of Childhood.

1.Why was Zitkala-Sa in tears on the first day in the land of apples?

2. What is common between Zitkala-Sa and Bama?

3. What were the articles in the stalls and shops that fascinated Bama on her way back from school?

4. What did Zitkala-Sa feel when her long hair was cut?

5. What was the advice that Annan gave to Bama? Did she follow it?

2. **Advanced Writing Skills**

Notice Writing

The Secretary of Gulmohar Park Colony, Mysore wants to inform the residents of his Colony about the 'Commercial Cookery Course' which will be arranged in the Colony shortly. Write a notice in not more than 50 words giving necessary details.

Invitation & Replies :

(1) **You are organising an Exhibition of Mithila-Madhubani Paintings done by you titled ' Satrangi Series' on 30th July, 2024 at Bharat Bhavan Art Gallery at 5:45 p.m. Draft an invitation card to invite the General Public. (Word Limit: 50 Words)**

(2)   You are Anuj / Anuja Singh of 23, Krishna Vihar, Delhi . Write an invitation letter to invite your best friend for the party you are giving to celebrate your selection in BTech in IIT Delhi .

(3)   Your school is holding 'Annual Prize Day' on 20 July 2024 at 5pm . As Principal of the school , draft an invitation inviting Dr. Kiran Bedi, Former LG Puducherry & India's First Woman IPS. to be the guest of honour at the function. Write the invitation in not more than 50 words.

Letter to the Editor :

You have realized the necessity of education and financial independence of women for their family, society and in turn for the nation. Write a *letter to the editor*, The National Times, highlighting your ideas on the importance of education of women leading to a better status for them. You are Tarun/Taruna B-7/9, Mall Road Delhi.

Suggested value points:-

(Letter—Importance of Education of Women Problems: . lack of education and financial independence • Its effect on family and society . Restricts growth. . Patriarchal Outlook .Illiteracy .Conservative Mindset Solutions : Girls should be motivated . More opportunities should be given to the girl child. Awareness to change mindsett . Govt. policies favouring girl child . Govt/NGO's role and incentives favouring girl child (reservations, free food, uniform, books etc) . Role of media in spreading awareness)

Article Writing :

Hard Work and Punctuality are essential for a happy and successful life. They help in meeting the desired targets of life. You are Kavya/Kanha. Write an article in 150-200 words highlighting the importance of hard work and punctuality in a student's life.

Suggested value points:

(Student's life—foundation for future life . Important to inculcate qualities of hard work and punctuality, helps meeting deadlines, saves from embarrassment , boosts confidence, builds positive self-image, wards off stress, disciplines one's life , Hard Work, Key to success, Has no shortcuts, Trains mind and body for future, Never goes waste ,Any other points)

3.   **ASL:** Topics to prepare for ASL (Total speaking time= 2min)
      1. Artificial Intelligence vs Human Intelligence: Unveiling the future
      2. How to take charge of your own well-being .
      3. Making informed choices: beyond the glamour of studying abroad.
      4. Lessons to be learnt fromgreat personalities
      5. Peer pressure in youngsters
      6. Have smart phones destroyed a generation?
      7. Understanding freedom of speech.
      8. Efficiency of recycling
      9. Safety and disaster management 10. India has a great potential to ......

Hindi :

परियोजना कार्य

1—दृश्य संचार माध्यमों द्वारा कारोबारी दवाब के तहत रियलिटी शोज़ के माध्यम् से पर्दे पर दिखाई जा रही संवेदनहीनता को रेखांकित करते हुए चित्र सहित आकर्ष परियोजना द्वारा अभिव्यक्त कीजिए।

2—सृजन एवं ध्वस की ताकत रखने वाले, क्रांति एवं बदलाव के अग्रदूत बादलों द्वारा प्रकृति में घटित होने वाले परिवर्तनों को एक चित्रात्मक परियोजना के माध्यम् से समझाइए।

3-विश्वास भी तो एक रचनात्मक भूमि का हो सकती है आपातकाल में निराशा दूर करने या धीरता को थामने अथवा विभक्त जनचेतना को जोड़ने के अर्थ में। इस कथन के आधार पर विज्ञान के तर्क और विश्वास के सामर्थ्य को एक आकर्षक चित्रात्मक परियोजना द्वारा व्यक्त कीजिए ।

4-पत्रकारिता के विविध आयाम—अभिव्यक्ति और माध्यम ।

निर्देश—

परियोजना का —

प्रथम पृष्ठ—विद्यार्थी का नाम, कक्षा अनुक्रमांक, विद्यालय का नाम विद्यालय का प्रतीकचिह्न (लोगो)

द्वितीया पृष्ठ—आभारज्ञापन

तृतीया पृष्ठ—प्रमाणपत्र

चतुर्थ पृष्ठ—अनुक्रमाणिका

पंचम पृष्ठ—प्रस्तावना

षष्ठम् पृष्ठ—सम्पूर्ण चित्राकर्षक परियोजना

अन्तिम पृष्ठ—संदर्भग्रन्थ

<u>निर्देश—सम्पूर्ण कार्य आन्तरिक मूल्याकंन के अन्तर्गत जाँचा जायेगा।</u>

Mathematics:

(A) WORKSHEETS,(TO BE SOLVED IN THE MATHS HOMEWORK NOTEBOOKS)

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CHAPTER -2

1. The inverse of cosine function is defined in the interval

(a) $[-\pi, 0]$ (b) $[\frac{-\pi}{2}, 0]$ (c) $[0, \frac{\pi}{2}]$ (d) $[\frac{\pi}{2}, \pi]$

2. The domain of the function $\cos^{-1}(2x - 1)$ is

(a) $[0, 1]$ (b) $[-1, 1]$ (c) $(-1, 1)$ (d) $[0, \pi]$

3. The domain of the function defined by $f(x) = \sin^{-1} \sqrt{x - 1}$ is

(a) $[1, 2]$ (b) $[2, 1]$ (c) $[-1, 1]$ (d) $[0, 1]$

4. The principal value of $\sec^{-1} \frac{2}{\sqrt{3}}$ is

(a) $\frac{\pi}{3}$ (b) $\frac{\pi}{6}$ (c) $\frac{-\pi}{3}$ (d) $\frac{2\pi}{3}$

5. If $\tan^{-1} \frac{3}{4} = A$ then $\cos A = \frac{3}{5}$

(a) $True$ (b) $False$ (c) $cannot\ say$ (d) $partially\ true$

6. The value of $\tan^{-1} \left[2\sin \left(2\cos^{-1} \frac{\sqrt{3}}{2} \right) \right]$ is

(a) $\frac{\pi}{3}$ (b) $\frac{\pi}{6}$ (c) $\frac{-\pi}{3}$ (d) $\frac{2\pi}{3}$

7. The value of $\sin^{-1} \frac{1}{2} + \tan^{-1} \frac{1}{\sqrt{3}}$ is

(a) $\frac{\pi}{3}$ (b) $\frac{\pi}{6}$ (c) $\frac{-\pi}{6}$ (d) $\frac{2\pi}{3}$

8. The value of $\sin \left[\frac{\pi}{3} + \sin^{-1} \frac{1}{2} \right]$ is

(a) 0 (b) 2   (c) 1   (d) 4

9. The value of $\tan^{-1} \left(\frac{1}{\sqrt{3}} \right) + \cot^{-1} \left(\frac{1}{\sqrt{3}} \right) + \tan^{-1} \left(\sin \left(\frac{\pi}{2} \right) \right)$ is

(a) $\frac{\pi}{3}$ (b) $\frac{\pi}{6}$ (c) $\frac{3\pi}{3}$ (d) $\frac{\pi}{12}$

10. If $\sin^{-1} x = y, then \frac{-\pi}{2} \le y \le \frac{\pi}{2}$

(a) $True$ (b) $False$ (c) $cannot\ say$ (d) $partially\ true$

11. For the value $x = \sqrt{3}$, $\sin^{-1} \frac{1}{2} = \tan^{-1} x$.

(a) *True* (b) *False* (c) *cannot say* (d) *partially true*

12. If $4\cos^{-1}x + \sin^{-1}x = \pi$ then value of x is

    (a) $\frac{3}{2}$ (b) $\frac{1}{\sqrt{2}}$ (c) $\frac{\sqrt{3}}{2}$ (d) $\frac{2}{\sqrt{3}}$

13. The value of $\sin\left(\frac{1}{4}\sin^{-1}\frac{\sqrt{63}}{8}\right)$ is

    (a) $\frac{1}{2\sqrt{2}}$ (b) $\frac{1}{\sqrt{2}}$ (c) $\frac{1}{\sqrt{3}}$ (d) $\frac{1}{3\sqrt{3}}$

14. $\tan^{-1}\frac{1}{11} + \tan^{-1}\frac{2}{11}$ is equal to

    (a) 0 (b) $\frac{1}{2}$ (c) -1 (d) *none of these*

15. $\tan^{-1}3 + \tan^{-1}x = \tan^{-1}8$ then x=

    (a) 5 (b) $\frac{1}{5}$ (c) $\frac{5}{14}$ (d) $\frac{14}{5}$

16. if $\tan^{-1}\frac{x+1}{x-1} + \tan^{-1}\frac{x-1}{x} = \tan^{-1}(-7)$ then value of x is

    (a) 0 (b) -2 (c) 1 (d) 2

17. The value of $\sin(2(\tan^{-1}0.75))$ is equal to

    (a) 0.75 (b) 1.5 (c) 0.96 (d) $\sin^{-1}1.5$

18. The value of $\tan\left(\cos^{-1}\frac{3}{5} + \tan^{-1}\frac{1}{4}\right)$ is

    a) $\frac{19}{8}$ (b) $\frac{8}{19}$ (c) $\frac{19}{12}$ (d) $\frac{3}{4}$

19. $\cot\left(\frac{\pi}{4} - 2\cot^{-1}3\right) =$

    (a) 5 (b) 6 (c) 7 (d) *none of these*

20. if $\tan^{-1}(\cot\theta) = 2\theta$ then $\theta =$

    (a) $\pm\frac{\pi}{3}$ (b) $\pm\frac{\pi}{6}$ (c) $\pm\frac{\pi}{4}$ (d) *none of these*

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CHAPTER 5

1. Show that the fun $f(x) = 2x - |x|$ is continuous at x=0.

2. If $(x) = \frac{\sqrt{2}\cos x - 1}{\cot x - 1}$, $x \neq \frac{\pi}{4}$, find the value of $f(\frac{\pi}{4})$ sothat fun f(x) becomes continuous at $x = \frac{\pi}{4}$

3. Show that $f(x) = |x|$ is not differentiable at x=0.

4. If $f(x) = \begin{cases} x^2 + 3x + a, & for\ x \leq 1 \\ bx + 2, & for\ x > 1 \end{cases}$ is everywhere differentiable, find the values of a and b.

5. if $f(x) = |\cos x|$, find $f'\left(\frac{\pi}{4}\right)$ and $f'\left(\frac{3\pi}{4}\right)$

6. Differentiate with respect to x (i) $\log_x 7(\log x)$ (ii)$\log_7 x(\log 7)$

7. If $\sqrt{1-x^6} + \sqrt{1-y^6} = a(x^3 - y^3)$, Prove that $\frac{dy}{dx} = \frac{x^2\sqrt{1-y^6}}{y^2\sqrt{1-x^6}}$

8. If $x^m y^n = (x+y)^{m+n}$, prove that $\frac{dy}{dx} = \frac{y}{x}$

9. Differentiate with respect to x $x = \frac{1+\log t}{t^2}$, $y = \frac{3+2\log t}{t}$

10. Differentiate $x^{\sin^{-1}x}$ with respect to $\sin^{-1}x$

11. If $y^3 - y = 2x$, prove that $\frac{d^2y}{dx^2} = \frac{24y}{(3y^2-1)^3}$

12. if $x = a\cos\theta + b\sin\theta$ and $y = a\sin\theta - b\cos\theta$, prove that $y^2\frac{d^2y}{dx^2} - x\frac{dy}{dx} + y = 0$

13. If $x = a\sin t - b\cos t, y = a\cos t + b\sin t$, prove that $\frac{d^2y}{dx^2} = -\frac{x^2+y^2}{y^3}$

14. If $y = \frac{\log x}{x}$, show that $\frac{d^2y}{dx^2} = \frac{2\log x - 3}{x^3}$

15. If $y = 2\sin x + 3\cos x$, show that $\frac{d^2y}{dx^2} + y = 0$.

CHAPTER -6 APPLICATION OF DERIVATIVES

Q1 A point source of light along a straight road is at a height of h metres. A boy of height b metres is walking along the road .How fast is his shadow increasing if he is walking away from the light at the rate of c metre /min ?

Q2 Find the intervals in which the function f given by $f(x) = \sin x + \cos x$, $x \in [0,2\pi]$ is strictly increasing or decreasing.

Q3 Find the least value of $f(x) = px + q/x$, $p,q,x>0$.

Q4 Find the intervals in which the function $f(x) = \cos\left(2x + \dfrac{\pi}{4}\right)$ is increasing or decreasing, $x \in [0,2\pi]$.

Q5 A man is moving away from a tower 85m high at a rate of 4m/sec. At what rate is his angle of elevation changing when he is at a distance 60m from the foot of the tower.

Q6 Show that the function $f(x)= a^x$, a>0, is increasing for all x.

Q7 Prove that the triangle of maximum area that must be inscribed in a given circle must be equilateral.

Q8 Given that the sum of the perimeter of a square and a circle is constant. Show that the sum of their areas is least when the side of the square is equal to the diameter of the circle.

Q9 A given quantity of metal is to be recast into half cylinder with rectangular base and semicircular ends . Show that in order that total surface area is minimum, prove that the ratio of length of the cylinder to its diameter is $\pi: \pi+2$.

Q10 If the surface area of an open cylindrical vessel is 100m², then find its maximum capacity.

Q11 If the sum of lengths of hypotenuse and side of a right angled triangle is given , show that the area of the triangle is maximum when the angle between them is $\pi/3$.

Q12 A window has the shape of a rectangle surmounted by an equilateral triangle . If the perimeter of window is 12 m , find the length and breadth of the rectangle so that the maximum light can enter the window.

Q13 A water tank has the shape of an inverted right circular cone with its axis vertical and vertex lowermost. Its semi-vertical angle is $\tan^{-1} 0.5$. Water is being poured into it at a constant rate of 5 cubic metre per hour. Find the rate at which water is rising in the cone at the instant when the depth of water in the tank is 4m.

Q14 The radius of cylinder is increasing at a rate of 2m/sec and height is decreasing at a rate of 3m/sec. At the instant when the radius is 3m and the height is 5m, find the rate at which the volume of cylinder is changing.

Q15 Find the intervals of increase and decrease of the function $f(x) = \dfrac{\log x}{x}$

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(B):- THE STUDENTS HAVE TO PREPARE MATHS ACTIVITY FILE THE INTERNAL ASSSESSMENTS IN MATHEMATICS, AS PER THE GUIDELINES ISSUED BY CBSE.

GUIDELINES AND INSTRUCTIONS FOR PREPARING THE ACTIVITY FILE:

➤ The activities should be done in a loose ruled project sheets and fixed in a stick file.
➤ It should contain the following in the order
- INDEX
- ACKNOWLEDGEMENT
- The figures should be drawn with pencil.
- The headings should be written in black in and the content in blue ink.
- Use the graph sheets wherever required.

- Color pencil and pen can be used.
- Mention NAME OF THE SCHOOL, your NAME, CLASS AND SECTION, SUBJECT and SESSION in the activity file.
- Prepare a neat and clean creative activity file.

NOTE: THE PDF OF THE ACTIVITIES TO BE COMPLETED WIL BE SHARED IN THE CLASS WHATASPP GROUPS BY THE SUBJECT TEACHER.

THE HOLIDAY HOMEWORK HAS TO BE SUBMITTED AFTER THE SUMMER VACATIONS.

PHYSICS:
1. Prepare an investigatory project report on any one topic out of the following-
   a) Gauss's Law and its Applications
   b) Dielectric and Polarisation
   c) Parallel Plate Capacitor
   d) Combination of Capacitors in Series and Parallel
   e) Electric Dipole and Electric field due to Dipole at Axial Point and Equatorial point
   f) Wheat Stone Bridge and its Applications
   g) Cells, Emf, Internal Resistance and Combinations in Series and Parallel
   h) Kirchhoff's Law
   i) Solenoid
   j) Moving Coil Galvanometer
   k) Self Inductance and Mutual Inductance
   l) A.C. Generator
   m) A.C Voltage applied for a series LCR Circuit.
   n) Transformers
   o) Electromagnetic Waves and its Property
   p) Huygen's Principle and its Applications
   q) Microscope and Telescope
   r) Semi Conductor and its Types
   s) Full wave and Half wave Rectifier
   t) P-N Junction Diode and its Applications

Instructions :
   (i) The project report should be handwritten in A-4 size Project sheets.
   (ii) The project report should be of 25-30 pages.
   (iii) The project report should be presented in the following order:
      a) Cover page showing name of school, title of the project, name of subject, academic session, student information and name of the guide teacher along with his/her designation.
      b) Certificate
      c) Acknowledgement
      d) Index
      e) Content with relevant headings
      f) Summary and conclusion based on findings
      g) Bibliography/References
   (iv) Credit will be awarded to the original drawings and illustrations and creative use of materials.
   (v) All photographs and sketches should be labelled and acknowledged.
   (vi) Check the relevant content and References from different books and web sites.
2. Following Activities to be written in the activity file from lab manual :
   i) To assemble the components of a given electrical circuit.
   ii) To assemble a household circuit comprising three bulbs, three switches, a fuse and a power source.
   iii) 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.

iv) To identify a diode, a L.E.D, a transistor, an IC, a resistor and a capacitor from mixed collection of such items.

v) To observe diffraction of light due to thin slit between sharp edges of two razor blades.

vi) To study the nature and size of the image formed by a convex lens, on a screen by using a candle and a screen.

Instructions:

    (i)   Separate Practical File to be made for the activity.

    (ii)   Following sequence to be followed – (a) Aim   (b) Apparatus (c) Formula used (d) Result (e) Precaution   (f) Sources of error

    (iii)   Circuit diagram to be made with pencil only.

Chemistry :

Prepare an Investigatory project report on any ONE of the following topics :

• Study of the presence of oxalate ions in guava fruit at different stages of ripening.

• Study the quantity of casein present in different samples of milk.

• Preparation of soybean milk and its comparison with natural milk with respect to curd formation, the effect of temperature, etc.

• Study of the effect of Potassium Bisulphate as a food preservative under various conditions (temperature, concentration, time, etc.)

• Study of digestion of starch by salivary amylase and effect of pH and temperature on it.

• Comparative study of the rate of fermentation of the following materials: wheat flour, gram flour, potato juice, carrot juice, etc.

• Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom).

• Study of common food adulterants in fat, oil, butter, sugar, turmeric power, chilli powder and pepper.

• **Any other topic related to the syllabus.**

Instructions:

(i)   The project report should be handwritten in A-4 size (Interleaf) Project sheets.

(ii)   The project report should be of 25-30 pages.

(iii)   The project report should be presented in the following order:

    (a) Cover page showing name of school, title of the project, name of subject, academic session, student information and name of the guide teacher along with his/her designation.

    (b) Certificate

    (c) Acknowledgement

    (d) Index

    (e) Content with relevant headings

    (f) Summary and conclusion based on findings

    (g) Bibliography/References

(iv)   Credit will be awarded to the original drawings and illustrations and creative use of materials.

(v)   All photographs and sketches should be labelled and acknowledged.

(vi)   Check the relevant content and References from different books and web sites.

Biology:

Prepare an investigatory project report on any one topic out of the following-

Antibiotics and their effects on humans/ Covid-19 and its effects/Alcohol and Drug abuse amongst adolescents and its control/Smoking and its ill effects/DNA Fingerprinting/ Human Genome Project/Amniocentesis and Female foeticide/ Conservation of wetlands (Ramsar sites)/Forest and

wildlife conservation/Sacred groves/Threatened species and their conservation/ Genetically modified Organisms (Study of GM Plants and Transgenic Animals)/*Bacillus thuringiensis*/ Infertility in humans / IVF Technology /Test tube baby programme/Various Contraceptive devices/Study of Human Population and its control/Menstrual hygiene/ Sexually Transmitted Diseases/ Ectopic pregnancy/ Polycystic Ovaries/Pelvic Inflammatory diseases/ Maternal and Child Health Care(Prenatal and post natal care of mother and child)/Breast Cancer/Thalassemia/Haemophilia/Colour blindness/Sickle-cell anaemia/Gene Therapy/Down's Syndrome/ Plastic waste and its remedy/ AIDS/Breast Cancer/Uterine cancer/Brain Tumour/Child immunisation Programme/Vaccination Programme against COVID-19 in India/Ascariasis in children/ Amoebiasis/ Elephantiasis/ Ringworm/ Typhoid/ Pneumonia/ Malaria/ Allergies/Rheumatoid Arthritis-an auto- immune disease/Human Evolution/Maintenance of Aquarium/Assisted Reproductive Technologies/Organic Farming/Mendelian and Chromosomal Disorders/Human Health and Hygiene/Study of Antibiotics on the micro-organisms/Pollination in flowers/Microbes in Human welfare/Invasive weeds in India/Application of Biotechnology in Agriculture/Ecosystem and its components.

Instructions:

       i) The project report should be handwritten in A-4 size Project sheets.

       ii) The project report should be of 25-30 pages.

       iii) The project report should be presented in the following order:

          a) Cover page showing name of school, title of the project, name of subject, academic session, student information and name of the guide teacher along with his/her designation.

          b) Certificate

          c) Acknowledgement

          d) Index

          e) Content with relevant headings

          f) Summary and conclusion based on findings

          g) Bibliography/References

       iv) Credit will be awarded to the original drawings and illustrations and creative use of materials.

       v) All photographs and sketches should be labelled and acknowledged.

       vi)   Check the relevant content and References from different books and web sites.

History :

Collect the data on any ONE of the following topics:

- The History and Legacy of Mauryan Empire.
- "Mahabharat"- The Great Epic of India.
- The History and Culture of the Vedic period .
- Buddha Charita.
- A Comprehensive History of Jainism.
- Bhakti Movement- Multiple interpretations and commentaries.
- "The Mystical Dimensions of Sufism.
- Global legacy of Gandhian ideas.
- The Architectural Culture of the Vijayanagar Empire.
- Life of women in the Mughal rural society.
- Comparative Analysis of the Land Revenue Systems introduced by the Britishers in India.
- The Revolt of 1857- Causes; Planning & Coordination; Leadership, Vision of Unity.
- The Philosophy of Guru Nanak Dev.
- The Vision of Kabir.
- An insight into the Indian Constitution.
- Comparative study of Stupas and Pillar edicts.

> Comparative study of Mughal and Vijayanagar architecture.
> The Indus Valley Civilization-Archaeological Excavations and New Perspectives.

*Guidelines: -

-- Students can use primary sources available in books, newspaper cuttings, Internet etc.

GENERAL GUIDELINES:

➤Students have to preserve the initial drafts of the project as well as any research papers that they may have used.

➤Students have to be prepared to give a presentation of the project in the class.

➤A summary/synopsis (one page) of the project has to be prepared.

Political Science:

As per CBSE guidelines, students of Class XII have to submit a handwritten project on **any one** of the following topics on:

1.   India and its relation with the neighboring countries.
2.   United Nations Organizations.
3.   Relevance of Non Aligned Movement in the contemporary Geo Political Situation.
4.   European Union and ASEAN.
5.   Comparison in the economic growth of India and China.

General Instructions:

1. The project should be hand written.

2. It should be well presented, researched, and pictorial.

3. Cover page, table of contents, acknowledgements, bibliography, headings and sub – headings, teacher's observation and student's observation are a must.

4. The project should be presented in a file or get your project spiral bound.

5. The project should **not exceed 25 pages**.

Geography :

1. Prepare Geography Practical file. This practical file should be as per the syllabus given by CBSE.

2.Map Items for locating and labeling on political outline map of India (India - People and Economy)

Chapter No. and Name	Map Items
1-Population Distribution Density Growth and Composition	State with highest population density & state with lowest population density (2011)
3-Land Resources and Agriculture	Leading producing states of the following crops:(a)Rice(b)Wheat(c)Cotton(d)Jute(e)Sugarcane(f)Tea and(g)Coffee
5-MineralAndEnergyResources	Mines: Iron-oremines: Mayurbhanj, Bailadila, Ratnagiri, Bellary • Manganese mines: Balaghat, Shimoga • Coppermines: Hazaribagh, Singhbhum, Khetari • Bauxitemines: Katni, Bilaspur and Koraput • Coalmines: Jharia, Bokaro, Raniganj, Neyveli • Oil Refineries :Mathura, Jamnager, Barauni
8-InternationalTrade	Mark and label the major sea ports and air ports on an outline map of India. **Major Sea Ports:** Kandla, Mumbai, Marmagao ,Kochi, Mangalore, Tuticorin ,Chennai, Vishakhapatnam, Paradwip, Haldia **International Airports:** Ahmedabad, Mumbai, Bengaluru, Chennai, Kolkata, Guwahati, Delhi, Amritsar, Thiruvananthapuram & Hyderabad.

Economics : As per CBSE guidelines for the session 2024-25 the students will prepare a project work on any ONE of the following topics :

Suggestive list of Projects :-

* Micro and Small Scale Industries
* Goods & Services Tax Act and its impact on GDP
* Self Help Group
* Exchange Rate Determination- Methods & Techniques
* Sarva Shiksha Abhiyan – Cost Ratio Benefit
* Digital India- Step Towards the future
* Make in India- The way Ahead
* Monetary Policy Committee and its functions
* Waste Management in India – Need of the hour
* Role of RBI in Control of Credit
* Currency War
* Golden Quadrilateral- Cost Ratio Benefit
* Relation between Stock Price Index and Economic Health of Nation
* Minimum Wage Rate-Approach and Application
* Rain Water Harvesting- A Solution to Water Crises
* Bumper Production- Boon or Bane for the Farmer
* Sri Lanka Economic Crisis
* New Education Policy 2020
* Sustainable development Goals

* Contemporary Employment Situation in India
* Human Development Index
* Government Budget and its Components
* Live Stock- Backbone of Rural India
*Organic Farming- Back to the Nature
* Vertical Farming- An alternate way
* Rise of Concrete Jungle- Trend Analysis
* Minimum Support Prices
* Food Supply Channel in India
* Trends in Budgetary Condition of India
*Alternative Fuels Types and Importance
* Silk Route- Revival of the Past

* Aatmnirbhar Bharat

* Environmental Crisis
* e- Rupee (e-Rs)

* **Any other newspaper articles and its evaluation on basis of Economic Principles**

Guidelines for Presentation of the Project:
* Introduction of topic/ title.
* Identifying the causes, consequences and remedies.
* Various stakeholders and effects on each of them.
* Advantages and disadvantages of situations or issues identified.
* Short term and long term implications of economic strategies.
* Presentation and writing that is succinct and coherent in project file.
  The Project should include the following details:
a) The total length of the project report should be 3500-4000, words (excluding diagrams and graphs).
b) The project work should be hand written and credit will be given to original drawing.
c) It should be presented in a neatly bound simple project file. The project should be developed and presented in the following order :
    i) Cover page showing project title, student information, school and year.
    ii) List of contents with page number.
    iii) Certificate page
    iv) Acknowledgement
    v) Summary and Conclusion
    vi) Bibliography

Accountancy :

One specific project based on financial statement analysis of a company covering any two aspects from the following:
1. Comparative and Common size financial statements
2. Accounting Ratios
3. Segment Reports
4. Cash Flow Statements

BST : Students are supposed to select one unit out of four and are required to make only ONE project from the selected unit. (Consist of one project of 20 marks)

I. Project One:

Elements of Business Environment

The students should pick any one element out of the following:

1. Changes witnessed over the last few years on mode of packaging and its economic impact.

   a) The changes in transportation of fruits and vegetables such as cardboard crates being used in place of wooden crates, etc. Reasons for above changes.

   b) Milk being supplied in glass bottles, later in plastic bags and now in tetra-pack and through vending machines.

   c) Plastic furniture [doors and stools] gaining preference over wooden furniture.

   d) The origin of cardboard and the various stages of changes and growth.

   e) Brown paper bags packing to recycled paper bags to plastic bags and cloth bags.

   f) Re use of packaging [bottles, jars and tins] to attract customers for their products.

   g) The concept of pyramid packaging for milk.

   h) Cost being borne by the consumer/manufacturer.

   i) Packaging used as means of advertisements.

2. The reasons behind changes in the following:

   Coca – Cola and Fanta in the seventies to Thums up and Campa Cola in the eighties to Pepsi and Coke in nineties.

   The students need to enquire about

   a) Reasons of stopping the manufacturing of the above mentioned drinks in India THEN.

   b) The introduction of Thums up and Campa cola range.

   c) Re entry of Coke and introduction of Pepsi in the Indian market.

   d) Factors responsible for the change.

   e) Other linkages with the above.

   f) Leading brands and the company having the highest market share.

   g) Different local brands venturing in the Indian market.

   h) The rating of the above brands in the market.

   i) The survival and reasons of failure in competition with the international brands.

   j) Other observations made by the students

3. Changing role of the women in the past 25 years relating to joint families, nuclear families, women as a bread earner of the family, changes in the requirement trend of mixers, washing machines, micro wave and standard of living.

4. The changes in the pattern of import and export of different Products.

5. The trend in the changing interest rates and their effect on savings.

6. A study on child labour laws, its implementation and consequences.

7. The state of 'anti plastic campaign,' the law, its effects and implementation.

8. The laws of mining /setting up of industries, rules and regulations, licences required for running that business.

9. Social factors affecting acceptance and rejection of an identified product. (Dish washer, Atta maker, etc)

10. What has the effect of change in environment on the types of goods and services?
The students can take examples like:

   a) Washing machines, micro waves, mixers and grinder.

   b) Need for crèche, day care centre for young and old.

   c) Ready to eat food, eating food outside, and tiffin centres.

11. Change in the man-machine ratio with technological advances resulting in change of cost structure.

12. Effect of changes in technological environment on the behaviour of employee.

II. Project Two:
Principles of Management

The students are required to visit any one of the following:
1. A departmental store.
2. An Industrial unit.
3. A fast food outlet.
4. Any other organisation approved by the teacher.

You are required to observe the application of the general Principles of management advocated by Fayol.

Fayol's principles
1. Division of work.
2. Unity of command.
3. Unity of direction.
4. Scalar chain
5. Espirit de corps
6. Fair remuneration to all.
7. Order.
8. Equity.
9. Discipline
10. Subordination of individual interest to general interest.
11. Initiative.
12. Centralisation and decentralisation.
13. Stability of tenure.
14. Authority and Responsibility

OR

You may enquire into the application of scientific management techniques by F.W. Taylor in the unit visited.

Scientific techniques of management.
1. Functional foremanship.
2. Standardisation and simplification of work.
3. Method study.
4. Motion Study.
5. Time Study.
6. Fatigue Study
7. Differential piece rate plan.

III. Project Three:
Stock Exchange

Objective: The students should learn the values of investing and utilising the stock market.
The basis of this project is to learn about the stock market while investing a specified amount of fake money in certain stocks. Students then study the results and buy and sell as they see fit.
This project will guide and provide you with the supplies necessary to successfully monitor stock market trends and will teach students how to calculate profit and loss on stock.

The students are expected to:
a) Develop a brief report on History of Stock Exchanges in India. (your country)
b) Prepare a list of at least 25 companies listed on a Stock Exchange.

c) To make an imaginary portfolio totalling a sum of Rs. 50,000 equally in any of the 5 companies of their

choice listed above over a period of twenty working days.

The students may be required to report the prices of the stocks on daily basis and present it diagrammatically on the graph paper.

During this period of recording students are supposed to distinctively record the daily and starting and closing prices of the week other days under the

negotiable instrument act so that you acquire knowledge about closing and opening prices.

The students may conclude by identifying the causes in the fluctuations of prices.

The students are expected to find the value of their investments and accordingly rearrange their portfolio.

The project work should cover the following aspects;
1. Graphical presentation of the share prices of different companies on different dates.
2. Change in market value of shares due to change of seasons, festivals, natural and human disasters.
3. Change in market value of shares due to change in political environment/ policies of various countries/crisis in developed countries or any other reasons
4. Identify the top ten companies out of the 25 selected on the basis of their market value of shares. It does not matter if you have made profits or losses.

IV. Project Four: Marketing

1. Adhesives	2. Air conditioners	3. Baby diapers	4. Bathing Soap
5. Bathroom cleaner	6. Bike	7. Blanket	8. Body Spray
9. Bread	10. Breakfast cereal	11. Butter	12. Camera
13. Car	14. Cheese spreads	15. Chocolate	16. Coffee
17. Cosmetology product	18. Crayons	19. Crockery	20. Cutlery
21. Cycle	22. DTH	23. Eraser	24. e-wash
25. Fairness cream	26. Fans	27. Fruit candy	28. Furniture
29. Hair Dye	30. Hair Oil	31. Infant dress	32. Inverter
33. Jams	34. Jeans	35. Jewellery	36. Kurti
37. Ladies bag	38. Ladies footwear	39. Learning Toys	40. Lipstick
41. Microwave oven	42. Mixers	43. Mobile	44. Moisturizer
45. Music player	46. Nail polish	47. Newspaper	48. Noodles
49. Pen	50. Pen drive	51. Pencil	52. Pickles
53. Razor	54. Ready Soups	55. Refrigerator	56. RO system
57. Roasted snacks	58. Salt	59. Sarees	60. Sauces/ Ketchup
61. Shampoo	62. Shaving cream	63. Shoe polish	64. Shoes
65. Squashes	66. Suitcase/ airbag	67. Sunglasses	68. Tea
69. Tiffin Wallah	70. Toothpaste	71. Wallet	72. Washing detergent
73. Washing machine	74. Washing powder	75. Water bottle	76. Water storage tank
77. Wipes			

Identify one product/service from the above which you may like to manufacture/provide [pre-assumption].

Now you are required to make a project on the identified product/service keeping in mind the following:

1. Why have you selected this product/service?
2. Find out '5' competitive brands that exist in the market.

3. What permission and licences would be required to make the product?
4. What are your competitors Unique Selling Proposition.[U.S.P.]?
5. Does your product have any range give details?
6. What is the name of your product?
7. Enlist its features.
8. Draw the 'Label' of your product.
9. Draw a logo for your product.
10. Draft a tag line.
11. What is the selling price of your competitor's product?
     (i) Selling price to consumer
     (ii) Selling price to retailer
     (iii) Selling price to wholesaler
What is the profit margin in percentage to the
Manufacturer.
Wholesaler.
Retailer.
12. How will your product be packaged?
13. Which channel of distribution are you going to use? Give reasons for selection?
14. Decisions related to warehousing, state reasons.
15. What is going to be your selling price?
     (i) To consumer
     (ii) To retailer
     (iii) To wholesaler
16. List 5 ways of promoting your product.
17. Any schemes for
     (i) The wholesaler
     (ii) The retailer
     (iii) The consumer
18. What is going to be your 'U.S.P?
19. What means of transport you will use and why?
20. Draft a social message for your label.
21. What cost effective techniques will you follow for your product.
22. What cost effective techniques will you follow for your promotion plan.
At this stage you will realise the importance of the concept of marketing mix and the necessary decision regarding the four P's of marketing.
     Product
     Place
     Price
     Promotion
On the basis of the work done by the students the project report should include the following:
1. Type of product /service identified and the (consumer/industries) process involve there in.
2. Brand name and the product.
3. Range of the product.
4. Identification mark or logo.
5. Tagline.
6. Labeling and packaging.
7. Price of the product and basis of price fixation.
8. Selected channels of distribution and reasons thereof.
9. Decisions related to transportation and warehousing. State reasons.
10. Promotional techniques used and starting reasons for deciding the particular technique.
11. Grading and standardization.

Following essentials are required to be fulfilled for its preparation and submission.
1. The total length of the project will be of 25 to 30 pages.
2. The project should be handwritten.
3. The project should be presented in a neat folder.
4. The project report should be developed in the following sequence-

Cover page should include the title of the Project, student information, school and year.

List of contents.

Acknowledgements and preface (acknowledging the institution, the places visited and the persons who have helped).

Introduction.

Topic with suitable heading.

Planning and activities done during the project, if any.

Observations and findings of the visit.

Conclusions (summarized suggestions or findings, future scope of study).

Photographs (if any).

Appendix

Signatures of the teachers.

Physical Education:

1. Make a project on Procedure for Asanas, Benefits and Contradiction for any two Asanas for each lifestyle disease.
2. Any one game of your choice related to class XII syllabus along with labeled diagram of field and equipment (Rules, Terminologies and Skills)

Computer :

Q1: Write program in python in order to:
   a) read a text file and write the content into other file after reversing all the words present in it.
   b) to read a binary file emp.dat and increase salary of all employee by 20% whose salary is less than 15000 record consists of eno.ename.esal.
   c) **to read all content of "product.csv" and display only those records where the quantity is greater than 10 or price is less than 150. Records stored in the file is in format :ProductID, PName, Price, Quantity.**

Q2:Consider table Lab and give SQL commands for

LAB

No	ItemName	CostPerItem	Quantity	Dateofpurchase	Warranty	Operational
1	Computer	60000	9	21/5/96	2	7
2	Printer	15000	3	21/5/97	4	2
3	Scanner	18000	1	29/8/98	3	1
4	Camera	21000	2	13/10/96	1	1
5	Switch	8000	1	31/10/99	2	1
6	UPS	5000	5	21/5/96	1	4
7	Router	25000	2	11/1/2000	2	5

a) to create structure of table
b) list the name of items where price is in between 5000 and 10000
c) increase qty by 10 %
d) add a column price
e) put price of computer @35000 and switch @ 3500
f) remove the tuple of camera
g) find total number of products in lab

h) decrease the cost by 20%

i) find degree and cardinality

j) display records in descending order of price.

Q3 :Give 3 example of each DDL.DML and TCL commands with their syntax

Q4: Solve paper of ut1.

Psychology:

- **Attempt all the in your home work notebook**

1) What is meant by delay of gratification? Why it is considered important for adult development?

2) How does Freud explain the structure of personality?

3) Discuss the main observational method used in personality assessment. What problems do we face in using these methods?

4) What is meant by structured personality tests? Which are the two most widely used structured personality test?

5) Explain how projective techniques assess personality. Which projective tests of personality are widely used by psychologist?

6) A child wants Ice cream cone. How do you explain it by using his structural elements of personality i.e id, ego and super ego?

7) How is Karen Horney's dew point regarding women different from that of Freud's?

8) Mir had no re collection of the bicycle he received as a gift on his 10th birthday. But when Neeta reminder him about the same he was able to recall it. What do you think why Mir has no re collection of the bicycle?

Case study based questions

A. Read the case given below and answer the questions that follow.

Samar is a school going child. Due to lockdown he is at home. One day he happens to have an instance to eat ice cream cone. However, there is only one ice cream cone in refrigerator. He wants to grab the cone and eat it.He also realizes that of he grabs the cone without asking, he may be punished.

The best way for Samar to achieve gratification is to ask for permission to eat the cone. In this way, he knows that if his behaviour is morally correct and this approach towards obtaining the ice cream will not create guilt, fear or anxiety in him.

i. The instinctual energy of Samar to eat ice cream cone is derived from:

a) Repression   b) Reaction formation   c) Pleasure principle   d) Rationalization

ii. The realisation experienced by Samar that if he grabs the cone without asking, him may be punished comes from:

a) Id   b) Ego   c) Super ego   d) Repression

iii. Which of the following determine that the behaviour of Samar is morally correct and guilt free?

a) Id   b) Ego   c) Superego

B. Read the case given below and answer the questions that follow.

There is a tribe in Jharkhand namely Birhor. The Birhor tribe lives a nomadic life, which requires constant moment in small bands from one forest to another in search of games and other forest products such as foods,mushrooms, honey etc. In the Birhor society, children from an early age are allowed a normal freedom to move into forest and learn hunting and gathering skills. Theirchild socialization practice are also aimed at making children to do things without the help from elders, take decisions for themselves, and accept risks and challenges such as those involved in hunting from an early age of life.

i. The development of personality among children occurs through

a) Behavioural approach b) Cultural approach   c) Humanistic approach   d) Psychodynamic approach

ii. • Which of the following create allows the child in Birhor tribe to take decisions for them?

a) Independence   b) Autonomous   c) Achievement   d) Livelihood

iii. The groups economic maintenance system please a vital role in which of the following?

a) Psychodynamic approach   b) Humanistic approach c) Cultural approach   d) Behaviour approach

iv. Which statement in the above passage reflex the achievement oriented behaviour?
a) Children from and early age are allowed enormous freedom to move into forest and done hunting and gathering skills.
b) The Birhor tribe lives on nomadic life, which requires constant moment in small bands from one forest to another in search of games and other forest products.
c) Their child socialization practices are also aim that making children to do things without the help from elders.
d) They can take decision for themselves.

PRACTICAL WORK REMINDER

Students complete your boards practical work that has been discussed in class.

Painting:
* Make 10 still life in water colour.
* Size – Half Imperial Sheet.
* Colour- Artist Water Colour (Camelin)
* Brushes- Use Round Brushes

Music (Vocal) :

Project Work
1. Musical Terms- Alankaar, Meend, Khatka, Murki, Alaap, Taan, Moorchhana, Gamak, Gram
2. Tuning of Tanpura with Labelled Diagram of Tuning.
3. Description of Raga Bhairav , Raga Malkauns and Raga Bageshri along with Notation of the Composition (Chhota Khayal)
4. Life Sketch of Ustad Bade Ghulam Ali Khan, Ustad Faiyaz Khan & Pt. Krishna Rao Shankar Pandit.
5. Dugun Tigun and Chaugun Laykari of Jhaptaal, Rupak, Dhamar, Teentaal and Ektaal.
6. Create 'ALANKARS' in Three different Taals.

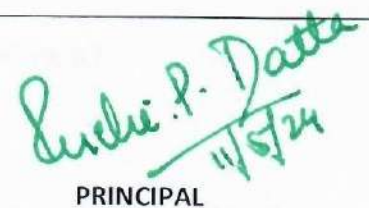Note- All work to be done in Project File only.

Music (Instrumental Tabla) :

Project Work
1. Definition of Uthan with example
2. Classification of Laykari
3. Biographies – 1. Pt. Kishan Maharaj
4. Description of Delhi Gharana and Ajrada Gharana
5. Taal – Teentaal, Chaptaal , Ektaal, Rupaktaal (Dugun, Tigun and Chaugun Laykari)
6. Write down the Peshkar, Two Kaidas in teentaal, Kaida Rela in teentaal, Rela in teentaal, Tukda in teentaal, Lapet Ka Tukda in teentaal, Chakradaar Tukda and Farmaishi Tukda in teentaal.

Note- All work to be done in Project File only.

HEAD SENIOR SCHOOL

PRINCIPAL