DAV POLICE PUBLIC SCHOOL

New Police Lines, Panipat
SUMMER VACATION WORK (2026-27)
CLASS – XII (COMMERCE)

ENGLISH CORE (301)

Instructions:

- Complete the given Assignment neatly in your English notebook.
- Follow the word limit and format guidelines strictly.
- Submit the homework on the first day after the vacation.
- Originality will be appreciated. Avoid plagiarism.
- Use your creativity where required.
- Revise the entire syllabus done in class.

Project Work:

Each student should prepare and submit his/her Project Work Report. Following essentials need to be fulfilled for its preparation and submission.

The following parameters will be applicable for the topic:

- The entire project should be in file format.
- The project should be handwritten in blue/ black pen (Highlighters can be used).
- The project report should be developed in the following sequence-
- Cover page: School Name, Title Statement, Name of the student and year / Session.
- Index (List of contents)
- Acknowledgement
- Certificate
- Introduction Statement (The purpose of the project)
- Detailed project report
- Learning outcomes/experiences
- Use A4 size sheets

Note : Project work should be well illustrated with relevant / related / supportive photos/ pictures thereof

- Total pages: 10-15

Topics are allotted section wise which are mentioned below:

A1- THE LAST LESSON
A2- LOST SPRING
A3- MY MOTHER AT SIXTY-SIX
B1- KEEPING QUIET

C1- THE THIRD LEVEL
C2- THE TIGER KING

ACCOUNTANCY

- **Revise the following chapters and do the assignment in fair notebook**

Chapter-1 Fundamentals of Partnership
Chapter-2 Change in Profit Sharing Ratio among the existing partner.
Chapter – 3 Admission of a partner till the topic of accounting treatment of goodwill.

- **Do addition questions in fair note book**

Chapter 1- Fundamentals of Partnership
Ques 77 to 79, 82 to 85, 108 to 112.
Chapter 2- Change in profit sharing ratio
Ques 45 to 47, 52 to 64
Chapter 3 – Admission of a partner
Ques 91 to 112.

- **Project Work:**

Each student should prepare and submit his/her Project Work Report. Following essentials need to be fulfilled for its preparation and submission.
The following parameters will be applicable for the topic:

1.The entire project should be in file format.
2.The project should be handwritten in blue/ black pen (Highlighters can be used).
3.The project report should be developed in the following sequence-

Note : Cover page: School Name, Title Statement, Name of the student and year / Session. (In printed format)

- Index (List of contents)
- Acknowledgement (In printed format)
- Certificate (In printed format)
- Introduction Statement (The purpose of the project)
- Detailed project report which include
    1. Detail of the company
    2. Journal entries, ledgers accounts, Trial Balance, Financial statement.
- Learning outcomes/experiences
- Use A4 size sheets
- Project work should be well illustrated with relevant / related / supportive photos/ pictures thereof
- Total pages: 30-40

BUSINESS STUDIES

- . Revise the following chapters

Chapter-1 Nature and Significance of Management
Chapter-2 Principles of Management
Chapter – 3 Business environment
Chapter -12 Consumer Protection Act

- Revise the case studies of the chapters.
- Project Work:

Make a comprehensive project on Principles of management or marketing management by choosing your own product or Stock Exchange or Business Environment
Each student should prepare and submit his/her Project Work Report. Following essentials need to be fulfilled for its preparation and submission.
The following parameters will be applicable for the topic:

1. The entire project should be in file format.
2. The project should be handwritten in blue/ black pen (Highlighters can be used).
3. The project report should be developed in the following sequence-
    - Cover page: School Name, Title Statement, Name of the student and year / Session.
    - Index (List of contents)
    - Acknowledgement
    - Certificate
    - Introduction Statement (The purpose of the project)
    - Detailed project report
    - Learning outcomes/experiences
    - Use A4 size sheets
    - Project work should be well illustrated with relevant / related / supportive photos/ pictures thereof
    - Total pages: 30- 40

ECONOMICS (030)

- Revise:

  Chapter 1- Indian economy on the eve of independence
  Chapter 2- Indian Economy (1950 - 1990)
  Chapter 3- Economy Reform since 1991
  Chapter 10- Government Budget

- Solve the given assignment in your economics notebook.

Topics for project work

- Central Bank and its Functions
- Role of Banks in the Indian Economy
- Credit Creation Process
- Government Budget and its Components
- Exchange Rate Systems
- Foreign Exchange Markets
- Balance of Payments (BOP)
- Goods and Services Tax (GST)
- Demonetization
- Poverty and Unemployment in India
- Banking Sector Reforms
- Tax Reforms
- Import Substitution vs Export Promotion
- A New Approach – Sustainable Development
- Comparative Study of India and China's Economy
- Indian Economy on the Eve of Independence
- Pre-Independence Role of Railways – A Critical Analysis
- RBI's Policies to Curb Inflation and Appreciate Currency Value
- Rural Development – Factors and Government Initiatives
- Growth of Education Sector in India
- Growth of Health Sector in India
- Cooperatives – Case Study
- Self Help Groups (SHGs) – Case Study
- Aggregate Demand and its Components
- Short Run Equilibrium Output

Following essentials need to be fulfilled for its preparation and submission.
The following parameters will be applicable for the topic:

1. The entire project should be in file format.
2. The project should be handwritten in blue/ black pen (Highlighters can be used).
3. The project report should be developed in the following sequence-
    - Cover page: School Name, Title Statement, Name of the student and year / Session.
    - Index (List of contents)
    - Acknowledgement
    - Certificate

- Introduction Statement (The purpose of the project)
- Detailed project report
- Learning outcomes/experiences
- Use A4 size sheets
- Project work should be well illustrated with relevant / related / supportive photos/
- pictures thereof
- Total pages: 30- 40

MATHEMATICS (041)

- **Revise:**
  Chapter 2 - Inverse Trigonometric Functions
  Chapter 3 - Matrices
  Chapter 4 - Determinants
- Do Assignment Questions in separate notebook.
- Do lab Manual activity 1 (Types of Relations) and 5 (Inverse Trig. Functions)

PHYSICAL EDUCATION (048)

- 1.Prepare 5 yogasana and 3 pranayama
- 2. Revise chapter -1and2
- 3. Prepare any one game for practical

(Games for practical: basketball, football, kabaddi, athletics, kho-kho, cricket, hockey)

PAINTING (049)

Complete your 10 page in art file (05 with pencil shading and 5 with colour. **One student submit one project.**

Project work (Note Canvas board size 15 inch/18 inch)

- Buddha painting on Canvas board with acrylic color.
- Mandala painting on canvas board with acrylic color.
- Lippan art painting on MDF board and canvas with acrylic color and mirror work.
- African painting on MDF board and canvas with acrylic color.
- Warli art painting on canvas board with color and permanent marker

PSYCHOLOGY

Complete both practicals in File and submit on 2nd July

1. Intelligence Quotient
2. Emotional Quotient

Also complete the Assignments given for ch-1 and 3

INFORMATICS PRACTICES / ARTIFICIAL INTELLIGENCE

- Write 10 programs of creating series with different elements such as Integer, String, Decimal, NumPy Array, List, Dictionary in Lab Manual and practice.

PHYSICAL EDUCATION (048)

Do all the assigned work in lab manual:

a) Write down 3 Test
   1. Body Mass Index Test (BMI)
   2. Flamingo Balance Test
   3. Sit and Reach Test

b) Write down any one Game and Diagram should be hand made

c) Write down 5 Yoga Asan
   1. Vajrasana
   2. Ardhmatsyendrasana
   3. Halasana
   4. Pavanmukt Asana
   5. Shavasna

DAV POLICE PUBLIC SCHOOL
New Police Lines, Panipat
Holidays' Assignment (2026-27) Class- XII
(COMMERCE)

ENGLISH CORE (301)

Q.1. You are Karan/Simran, a student of Class 12B. You have lost your Physics Practical file in the school library. Draft a notice for the notice board.
Instructions:
• Describe the item briefly.
• Mention when and where it was lost.
• Request the finder to return it.

Q 2. You are the Head Boy/Head Girl of City International School. Draft a notice informing prefects about a meeting to plan the Annual Sports Day.
Instructions:
• Mention the purpose of the meeting.
• Give date, time, and venue.
• Make it formal and concise.

Q 3. You are the Secretary of the History Club of Vidya Mandir School. Draft a notice in not more than 50 words informing students of a proposed visit to some important historical sites in your city.
Instructions:
• Mention the purpose of the meeting.
• Give date, time, and venue.
• Make it formal and concise.

Q4. Your school is organizing a trip to Jaipur for Class 12 students. As the Tour In-Charge, draft a notice to be put up on the school board.
Instructions:
• Mention dates, charges, and teacher in charge.
• Include a deadline for consent form submission.

Q 5. You are Riya/Arjun, Secretary of the Red Cross Society Unit of your school. Write a notice informing students about a blood donation camp being organized in the school auditorium.
Instructions:
Provide necessary details like time, date, and eligibility
Motivate students to participate

Q 6. You are Saurabh/Saumya, a resident of 15, Mall Road, Pune. You have seen an advertisement in The Times of India for the post of Software Engineer in a reputed company. Write an application in response to the advertisement applying for the post. (Word limit: 120-150 words)

Q 7. You are Sanjay/Sanjana, a resident of 14, Laxmi Nagar, New Delhi. You have seen an advertisement in The Hindustan Times for the post of a Marketing Executive in a company. Write an application with a résumé to the Manager of the company. (Word limit: 120-150 words.

Q 8. How does 'The Last Lesson' highlight the importance of language and education in preserving one's identity and culture?" (Word limit: 120-150 words)

Q 9. How does poverty deprive children of their childhood in 'Lost Spring'?" (Word limit: 120-150 words)

Q 10. How does the poet capture the emotional conflict of separation and fear of losing her aging mother in 'My Mother at Sixty-Six"?" (Word limit: 120-150 words)

Q 11. "How does the story 'The Third Level' explore the theme of escapism and the conflict between illusion and reality?" (Word limit: 120-150 words)

Q 12. "How does Kalki use satire in 'The Tiger King' to criticize the abuse of power and superstitions in society?" (Word limit: 120-150 words.

CLASS 12
PRACTICE ASSIGNMENT
CH-2,3,4,

Chapter: Matrices and Determinants

1. Construct a matrix $A=\left[a_{ij}\right]_{2\times 2}$ whose elements a_{ij} are given by

   a) $a_{ij}=e^{2ix}\sin jx$. b) $a_{ij}=\dfrac{(i-2j)^2}{2}$ c) $a_{ij}=\left|-2i+3j\right|$

2. Show that a matrix which is both symmetric and skew symmetric is a zero matrix.

3. If $X=\begin{bmatrix}3 & 1 & -1\\ 5 & -2 & -3\end{bmatrix}$ and $Y=\begin{bmatrix}2 & 1 & -1\\ 7 & 2 & 4\end{bmatrix}$, find a matrix Z such that $X+Y+Z$ is a zero matrix.

4. Find values of a and b if $A=B$ where $A=\begin{bmatrix}a+4 & 3b\\ 8 & -6\end{bmatrix}$ and $B=\begin{bmatrix}2a+2 & b^2+2\\ 8 & b^2-5b\end{bmatrix}$.

5. Find the value of x if $\begin{bmatrix}1 & x & 1\end{bmatrix}\begin{bmatrix}1 & 3 & 2\\ 2 & 5 & 1\\ 15 & 3 & 2\end{bmatrix}\begin{bmatrix}1\\ 2\\ x\end{bmatrix}=O$

6. If $A=\begin{bmatrix}1 & 3 & 2\\ 2 & 0 & -1\\ 1 & 2 & 3\end{bmatrix}$, then show that A satisfies the equation $A^3-4A^2-3A+11I=O$.

7. Let $A=\begin{bmatrix}2 & 3\\ -1 & 2\end{bmatrix}$, then show that $A^2-4A+7I=O$. Using this result calculate A^5 also.

8. If $A=\begin{bmatrix}3 & -5\\ -4 & 2\end{bmatrix}$, then find $A^2-5A-14I$. Hence obtain A^3.

9. If the matrix $\begin{bmatrix}0 & a & 3\\ 2 & b & -1\\ c & 1 & 0\end{bmatrix}$ is a skew symmetric matrix, find the values of a, b and c.

10. If $P(x)=\begin{bmatrix}\cos x & \sin x\\ -\sin x & \cos x\end{bmatrix}$, then show that $P(x).P(y)=P(x+y)=P(y).P(x)$.

11. If $A=\begin{bmatrix}\cos\alpha & \sin\alpha\\ -\sin\alpha & \cos\alpha\end{bmatrix}$ and $A^{-1}=A'$, find the value of α.

12. Find the matrix A satisfying the following equations:

    a) $\begin{bmatrix}2 & 1\\ 3 & 2\end{bmatrix}A\begin{bmatrix}-3 & 2\\ 5 & -3\end{bmatrix}=\begin{bmatrix}1 & 0\\ 0 & 1\end{bmatrix}$

    b) $\begin{bmatrix}4\\ 1\\ 3\end{bmatrix}A=\begin{bmatrix}-4 & 8 & 4\\ -1 & 2 & 1\\ -3 & 6 & 3\end{bmatrix}$

    c) $\begin{bmatrix}2 & -1\\ 1 & 0\\ -3 & 4\end{bmatrix}A=\begin{bmatrix}-1 & -8 & -10\\ 1 & -2 & -5\\ 9 & 22 & 15\end{bmatrix}$

13. If $A=\begin{bmatrix}\cos\theta & \sin\theta\\ -\sin\theta & \cos\theta\end{bmatrix}$, then show that $A^2=\begin{bmatrix}\cos 2\theta & \sin 2\theta\\ -\sin 2\theta & \cos 2\theta\end{bmatrix}$

14. If $A=\begin{bmatrix}1 & 5\\ 7 & 12\end{bmatrix}$ and $B=\begin{bmatrix}9 & 1\\ 7 & 8\end{bmatrix}$, find a matrix C such that $3A+5B+2C$ is a null matrix

15. Show that A'A and AA' are both symmetric matrices for any matrix A.

16. Express the following matrices as sum of a symmetric and skew-symmetric matrices

a) $\begin{bmatrix}2 & 3 & 1\\ 1 & -1 & 2\\ 4 & 1 & 2\end{bmatrix}$ b) $\begin{bmatrix}2 & 4 & -6\\ 7 & 3 & 5\\ 1 & -2 & 4\end{bmatrix}$

17. Give an example of matrices A, B and C such that AB = AC, where A is nonzero matrix, but $B \neq C$.

18. Show by an example that for $A \neq O$, $B \neq O$, $AB = O$.

19. Find inverse of the following matrices, if exists.

a) $\begin{bmatrix}2 & -1 & 3\\ -5 & 3 & 1\\ -3 & 2 & 3\end{bmatrix}$ b) $\begin{bmatrix}2 & 3 & -3\\ -1 & -2 & 2\\ 1 & 1 & -1\end{bmatrix}$ c) $\begin{bmatrix}2 & 0 & -1\\ 5 & 1 & 0\\ 0 & 1 & 3\end{bmatrix}$

20. Evaluate a) $\begin{vmatrix}a+ib & c+id\\ -c+id & a-ib\end{vmatrix}$. b) $\begin{vmatrix}\cos 15^\circ & \sin 15^\circ\\ \sin 75^\circ & \cos 75^\circ\end{vmatrix}$ c) $\begin{bmatrix}1 & -3 & 2\\ 4 & -1 & 2\\ 3 & 5 & 2\end{bmatrix}$ d) $\begin{bmatrix}0 & 2 & 6\\ 1 & 5 & 0\\ 3 & 7 & 1\end{bmatrix}$

21. Find x if $\begin{vmatrix}3 & x\\ x & 1\end{vmatrix} = \begin{vmatrix}3 & 2\\ 4 & 1\end{vmatrix}$

22. Find the value of k such that the points are collinear
   a) A(−3, 7), B(7, k) and (2, 1).
   b) A(1, −5), B(−4, 5) and (k, 7).

23. Find the area of the triangle whose vertices are A (11, 7), B (5, 5) and C (-1, 3)

24. Compute A^{-1} for the matrix $A=\begin{bmatrix}0 & 1 & 2\\ 1 & 2 & 3\\ 3 & 1 & 1\end{bmatrix}$

Hence solve the system of equations:
$$y+2z+8=0$$
$$x+2y+3z+14=0$$
$$3x+y+z+8$$

25. Find A^{-1} for the matrix $A=\begin{bmatrix}0 & 1 & 1\\ 1 & 0 & 1\\ 1 & 1 & 0\end{bmatrix}$ and show that $A^{-1}=\dfrac{A^2-3I}{2}$

26. Using matrix method solve the following system of equations:

a)
$$6x-9y-20z=-4$$
$$4x-15y+10z=-1$$
$$2x-3y-5z=-1$$

b)
$$2x+y+z=1$$
$$x-2y-z=\frac{3}{2}$$
$$3y-5z=9$$

c)
$$3x+2y-2z=3$$
$$x+2y+3z=6$$
$$2x-y+z=2$$

27. If $A=\begin{bmatrix}1 & 2 & 0\\ -2 & -1 & -2\\ 0 & -1 & 1\end{bmatrix}$, find A^{-1}. Using A^{-1} solve the system of equations

$x-2y=10,\ 2x-y-z=8,\ -2y+z=7.$

28. Use product $\begin{bmatrix}1 & -1 & 2\\ 0 & 2 & -3\\ 3 & -2 & 4\end{bmatrix}\begin{bmatrix}-2 & 0 & 1\\ 9 & 2 & -3\\ 6 & 1 & -2\end{bmatrix}$ to sole the system of equations
$x-y+2z=1,\ 2y-3z=1,\ 3x-2y+4z=2$

29. Given $A=\begin{bmatrix}2 & 2 & -4\\ -4 & 2 & -4\\ 2 & -1 & 5\end{bmatrix}$ and $B=\begin{bmatrix}1 & -1 & 0\\ 2 & 3 & 4\\ 0 & 1 & 2\end{bmatrix}$, find BA and use this to solve the system of equations $y+2z=7,\ x-y=3,\ 2x+3y+4z=17$

30. Prove that $(A^{-1})'=(A')^{-1}$, where A is an invertible matrix.

31. Show that the points $(a+5,\ a-4)$, $(a-2,\ a+3)$ and $(a,\ a)$ do not lie on a straight line for any value of a.

32. The sum of three numbers is 6. If we multiply third number by 3 and add second number to it, we get 11. By adding first and third numbers, we get double of the second number. Represent it algebraically and find the numbers using matrix method.

33. If A and B are invertible matrices, then prove that $(AB)^{-1}=B^{-1}A^{-1}$.

34. If $A=\begin{bmatrix}3 & 1\\ 2 & -3\end{bmatrix}$, find $|adj\ A|$ and $|A\ adj\ A|$.

35. If $A=\begin{vmatrix}1 & -2 & 3\\ 0 & -1 & 4\\ -2 & 2 & 1\end{vmatrix}$, find $(A^T)'$. (Ans: $\begin{bmatrix}-9 & -8 & -2\\ 8 & 7 & 2\\ -5 & -4 & -1\end{bmatrix}$)

Chapter: Relations and Functions

36. Let $A=\{1,2,3,.....9\}$ and R be the relation in A × A defined by $(a,b)R(c,d)$ if $a+d=b+c$ for $(a,b),(c,d)\in A\times A$. Prove that R is an equivalence relation and also obtain the equivalence class $[(2,5)]$ and $[(1,3)]$.

37. Show that the relation R on the set Z of all integers defined by $(x,y)\in R\Leftrightarrow(x-y)$ is divisible by 3 is an equivalence relation.

38. Let N be the set of all natural numbers and let R be a relation on N × N, defined by $(a,b)R(c,d)\Leftrightarrow ad=bc$ for all $(a,b),(c,d)\in N\times N$. Show that R is an equivalence relation. Also, find the equivalence class $[(2,6)]$.

39. Let N be the set of all natural numbers and let R be a relation on N × N, defined by $(a,b)R(c,d)\Leftrightarrow ad(b+c)=bc(a+d)$ for all $(a,b),(c,d)\in N\times N$. Show that R is an equivalence relation. Also, find the equivalence class $[(2,6)]$.

40. Let R be the equivalence relation in the set $A=\{0,1,2,3,4,5\}$ given by $R=\{(a,b):2\ divides\ (a-b)\}$. Write the equivalence class $[0]$.

41. Let $A=[-1,1]$. Then discuss whether the following functions defined on A are one-one onto or bijective.

a) $f(x)=\frac{x}{2}$ b) $g(x)=|x|$ c) $h(x)=x|x|$ d) $k(x)=x^2$

42. Check whether following functions are one-one onto or not?

(i) $f(x)=\frac{x}{x^2+1}$, $f:R\to R$ (ii) $f(x)=\cos x$ iii) $f(x)=9x^2+6x-5$, $f:R_+\to[-5,\infty)$

iv) $f(x)=5x^2+6x-9$, $f:R_+\to[-9,\infty)$ (R_+ is the set of all non-negative real numbers)

v) $f(x)=4x^2+12x+15$, $f:N\to S$ where S is the range of S

43. Show that $f:N\to N$ given by $f(x)=\begin{cases}x+1, & \text{if } x \text{ is odd}\\ x-1, & \text{if } x \text{ is even}\end{cases}$ is both one-one and onto.

44. Find the number of all one-one functions from set $A=\{a,b,c\}$ to itself.

Chapter: Inverse Trigonometric Functions

45. Find the principal value of $\tan^{-1}\left(\tan\frac{7\pi}{6}\right)$ (Ans: $\frac{\pi}{6}$)

46. Find the principal values of i) $\tan^{-1}\left(\tan\frac{9\pi}{8}\right)$ ii) $\cot^{-1}\left(-\frac{1}{\sqrt{3}}\right)$ iii) $\sec^{-1}\left(\sec\frac{9\pi}{5}\right)$

47. Evaluate: $\sin\left(\cot^{-1}\left(\cot\frac{17\pi}{3}\right)\right)$. (Ans: $\frac{\sqrt{3}}{2}$)

48. Find the domain of the following functions:

a) $\sin x+\sin^{-1}x$ b) $\cos^{-1}(3x-2)$

49. Evaluate: i) $\sin^{-1}(\sin 10)$ ii) $\sin^{-1}(\sin 5)$ iii) $\cos^{-1}(\cos 10)$

50. Find the principal value of $\cot^{-1}\left(-\sqrt{3}\right)+\tan^{-1}(1)+\sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$. (Ans: $\frac{5\pi}{4}$)