

DAV Public School, NTPC Rihand Nagar, Sonebhadra(U.P)
Summer Vacation Homeworks (2018-19)
Class XII Science
Subject: **English**

Q.1 You are Sana /Sanjay Head girl/boy of DAV Public School Patana. Write a notice about 50 words informing the students of class XI and XII about an inter class debate competition to be held in the school in first week of April. Give the necessary details. Put the notice in the box. Do not exceed 50 words.

Q.2 You have recently started a centre for personality development for school children. Draft an advertisement to be published in a local daily about it giving all relevant details.

Q.3 You have a three bedroom flat in Dwarka. Which you want to let out on rent. Draft an advertisement in not more than 50 words to be published in the Times of India, under classified column. Contact 2758902.

Q.4 You are Aman/ Aditi studying in BNS Public School varanasi. The road leading to your school is very congested and full of potholes. Students and parents are often caught in a traffic jam. In spite of several representations, the government has not done anything to improve the condition of the road . Write a letter to the Editor of 'The Times Of India', drawing the attention of government to this problem.

Q.5 Write an article on any of the two of the following topic in not more than 200 words.

- (a) The Role Of Youths in National Development (b) The increasing crime rate in today's society.
(c) Education of girls for national development (d) Information Technology
(e) value education - a Remedy for Social evils (e) Advantages of Co-education.

Q.6 Literature Reader

Answer any 6 of the following questions:

- i How has a dream come true for Saheb but What is out of his reach?
- ii Where is Mukesh house located? What is he proud of?
- iii What do you think is the theme of "Lost spring " series of stolen childhood?
- iv How did M. Hamel behave as the last lesson come to an end?
- v What order has been received from Berlin that day? What effect did it have on the life at school? [150 words]
- vi How did Douglas overcome his fear of water? [100 words]
 - a. How did Douglas make sure that he conquered old terror ?
 - b. Give a short summary of the poem " Elementary School class- room in a slum

विषय – हिंदी

1- रेखाचित्र ' भक्तिन ' पाठ का भाव सारांश लिखिए ।

2- फीचर लिखिए-

- (क) मानव तस्करी : मानवता पर कलंक
(ख) अन्नदाता कर रहे आत्महत्या : जिम्मेदार कौन ?
(ग) हमारी संसद, हमारी आवाज
(घ) कलम की ताकत

Subject: **Mathematics**

1-If $f: R \rightarrow R$ is given by $f(x) = \sqrt[3]{(3-x^3)}$, then determine $f(f(x))$.

2-Find $f \circ g(x)$ if $f(x) = |x|$ & $g(x) = |5x-2|$.

3-If $f(x) = x+7$ & $g(x) = x-7$ $x \in R$ then find $f \circ g(7)$.

4-Let $S = \{a, b, c\}$, find the total no. of binary operations on S .

5-If the binary operation $*$ defined on Q is defined as $a * b = 2a + b - ab \forall a, b \in Q$ then find the value of $3 * 4$.

6-If the mapping f & g are given by $f = \{(1,2), (3,5), (4,1)\}$ & $g = \{(2,3), (5,1), (1,3)\}$ then write $f \circ g$.

7-If X & Y are two sets having 2 & 3 elements respectively then find the number of functions from X to Y .

8-Evaluate $\sin^{-1}(\sin \frac{3\pi}{4})$ 9-Find the value of $\tan^{-1}(\tan \frac{3\pi}{4})$. 10- Find the value of $\cos^{-1}(\cos \frac{13\pi}{6})$.

11-Solve for x if: $2\tan^{-1}(\sin x) = \tan^{-1}(2 \sec x)$. 12- Solve for x if: $4 \sin^{-1}x + \cos^{-1}x = \pi$.

13- Solve for x if: $\sin^{-1} \frac{3x}{5} + \sin^{-1} \frac{4x}{5} = \sin^{-1} x$. 14- Solve for x if: $\cos(2 \sin^{-1} x) = \frac{1}{9}$.

15- Solve for x if: $\tan^{-1} x + \tan^{-1} 3 = \tan^{-1} 8$. 16-Write: $\tan^{-1}(\frac{\cos x}{1 + \sin x})$ in simplest form.

17-Write: $\tan^{-1} \frac{3x-x^3}{1-3x^2}$ in simplest form. 18-Write: $\sin^{-1}(2ax\sqrt{1-a^2x^2})$ in simplest form.

19-Write: $\cot^{-1}[\frac{\sqrt{1-\sin x} + \sqrt{1+\sin x}}{\sqrt{1-\sin x} + \sqrt{1+\sin x}}]$ in simplest form. 20-Write: $\cos^{-1}(1-2x^2)$ in simplest form.

21-Find the value of x, y, z , if $\begin{bmatrix} x+y+z \\ x+z \\ y+z \end{bmatrix} = \begin{bmatrix} 9 \\ 5 \\ 7 \end{bmatrix}$

22- Find the value of a if $\begin{bmatrix} a-b & 2a+c \\ 2a-b & 3c+d \end{bmatrix} = \begin{bmatrix} -1 & 5 \\ 0 & 13 \end{bmatrix}$

23- If $\begin{bmatrix} 9 & -1 & 4 \\ -2 & 1 & 3 \end{bmatrix} = A + \begin{bmatrix} 1 & 2 & -1 \\ 0 & 4 & 9 \end{bmatrix}$, then find the matrix A .

24-If $A = \begin{bmatrix} \cos \theta & \sin \theta \\ -\sin \theta & \cos \theta \end{bmatrix}$, then write A^n .

25-Find the least positive integral value of k if $\begin{bmatrix} \cos \frac{2\pi}{7} & -\sin \frac{2\pi}{7} \\ \sin \frac{2\pi}{7} & \cos \frac{2\pi}{7} \end{bmatrix}^k = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$.

26-If $A = [a_{ij}] = \begin{bmatrix} 2 & 3 & -5 \\ 1 & 4 & 9 \\ 0 & 7 & -2 \end{bmatrix}$ and $B = [b_{ij}] = \begin{bmatrix} 2 & 1 & -1 \\ -3 & 4 & 4 \\ 1 & 5 & 2 \end{bmatrix}$ then find $a_{22} + b_{21}$.

27-Write a square matrix of order 2, which is both symmetric and skew symmetric

28-If $\begin{bmatrix} 3 & 4 \\ 2 & x \end{bmatrix} \begin{bmatrix} x \\ 1 \end{bmatrix} = \begin{bmatrix} 19 \\ 15 \end{bmatrix}$, then find the value of x ? 29- If $x \begin{bmatrix} 2 \\ 3 \end{bmatrix} + y \begin{bmatrix} -1 \\ 1 \end{bmatrix} = \begin{bmatrix} 10 \\ 5 \end{bmatrix}$ then find the value of x ?

30-If A is a 3×3 matrix, whose elements are given by $a_{ij} = \frac{1}{3}|-3i+j|$, then write the value of a_{23} .

31-If $\begin{vmatrix} x+1 & x-1 \\ x-3 & x+2 \end{vmatrix} = \begin{vmatrix} 4 & -1 \\ 1 & 3 \end{vmatrix}$ then write the value of x .

32-Find the value of x if $\begin{vmatrix} x & 4 \\ 2 & 2x \end{vmatrix} = 0$. 33-Find $A^2 - 5A + 6I$ if $A = \begin{bmatrix} 2 & 0 & 1 \\ 2 & 1 & 3 \\ 1 & -1 & 0 \end{bmatrix}$

1 2 0 0 0
1 2 3 0 0
1 2 3 4 0
1 2 3 4 5

3. Write UDF in C++ to print the row sum and column sum of a matrix A[2][5].
4. Write UDF in C++ to find a name from a list of names using binary search method.
5. Write UDF in C++ to insert an element in a one-dimensional sorted array in such a way that after insertion the array remains sorted.
6. Write UDF in C++ to sort an array in ascending order using bubble sort
7. Write UDF in C++ to sort an array (storing names) in ascending order using insertion sort.

Subject:- **PHE**

- 1- What is Planning in sports? Write any 5 objectives of Planning in sports.
- 2- What is Fixture? Make a fixture of 13 , 17, 19,and 21 teams for knockout method.
- 3- What is a League tournament? Make a fixture of 5,6,and 7,teams for cyclic or stair cage method.
- 4- What is Extamural Tournament? Explain any 5 importance of Extramural Tournament.
- 5- Explain any various responceibilities of committee of Extramural tournament.