DELHI PUBLIC SCHOOL ASANSOL

Under the Aegis of the DPS Society, New Delhi 10+2, Affiliation No. – 2430211

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SESSION : 2024-25
CLASS: XII A (Science)

SUBJECTS	HOMEWORK
ENGLISH	(1) **Project**- Interview Based Research- Evolving food habits in my Neighbourhood Frame a Questionnaire for an interview of your neighbors- at least two with pictures. Indicate their feedback with the help of statistics, pictures and posters. (2) Prepare a Report on the basis of the interview. (3) Deep Water – Make a table highlighting the name of swimmers, nationality and their achievements and honours and titles conferred on them. (4) The Rattrap – Make a Christmas tree Depict the character traits of the protagonists of the story highlighting the essence of Christmas spirit. (5) Job Application Letter M/s Tenant Technologies, Swetnagar, Bengaluru has advertised on Jobs.com some positions of Web-content Managers. Write a job application to offer your services. Express your willingness to work

	with them and invent all the other necessary details. Enclose your Bio- data as well. (6) You have read 'Adventure' by Jayant Narlikar in Hornbill in class- XI and the The Third Level by Jack Finney in class-XII. Compare the interweaving of fantasy and reality in the two stories. **Students , get the separate word file containing English comprehension below.**
PHYSICS	(1) **Investigatory project** : Complete investigatory project in laced file with hard boards and interleaf pages. P1) To design an appropriate logic gate combination for a given truth table(FOR COMPUTER STUDENTS) P2) To study the variation of current flowing in a circuit containing an LDR.(FOR NON-COMPUTER STUDENTS) (2) **Activity Copy**: (in laced file with hard boards and interleaf pages.) Activities from Section A and 3 from section B (3) **NCERT** Exercise Questions (IN CHANNEL FILE , A4 SHEETS) CH1 (1.6-1.20) and CH2 (2.1-2.11)
CHEMISTRY	(1) **NCERT** Exercise Questions (IN CHANNEL FILE , A4 SHEETS) 10.6-10.10 AND 10.14 (2) **Investigatory project :** (CHANNEL FILE) P1) Presence of oxalic ions in guava fruit and different stages of ripening(Group A Roll No. 1-11) P2) Isolation of Casein from different samples of milk(Group B Roll No. 12-21)
BIOLOGY	(1) **Investigatory project** : Complete investigatory project in laced file with hard boards and interleaf pages. P1) Use of genetic engineering in treatment of (a) AIDS (b) Cancer P2) Recombinant DNA technology used in preparation of (a) MAB (b)Insulin P3) Biotechnology in the production of golden rice P4) Types of vector and transformation in Biotechnology P5) Pedigree analysis of the traits linked with (a) Sex-linked disease (b) Autosomal disorder (2) Complete the Biology Practical file . Leave the space for observation tables.

	(3) 3O Questions from Ch1,2,3 (**Download the pdf of questions separately given below**)
MATHEMATICS	1. Prove that : $\sin^{-1}\frac{8}{17} + \sin^{-1}\frac{3}{5} = \cos^{-1}\frac{36}{85}$ 2. Prove that : $\tan^{-1}\left\{\frac{\sqrt{1+x}-\sqrt{1-x}}{\sqrt{1+x}+\sqrt{1-x}}\right\} = \frac{\pi}{4} - \frac{1}{2}\cos^{-1} x$ 3. Let f: W→ W : f(x) = $\begin{cases}(n-1), when\ n\ is\ odd\\(n+1), when\ n\ is\ even\end{cases}$ 4. Find the domain and range of the real function defined by $f(x)= \frac{1}{1-x^2}$ 5. Let A = { 1,2,3,4,5,6,7,8,9} and R be a relations in A ×A , defined by (a ,b) R (c ,d) ⇔ a +d = b + c for all (a ,b) and (c ,d) ∈ A ×A. Prove that R is an equivalence relations. Also obtain the equivalence class determined by (2,5). Maths Practical activities: Activity-1: To verify that the raltion R in the set L of all lines in a plane, defined by R={(l,m):l normal to m} is symmetric but neither reflexive nor transitive. Activity-2: To verify that the relation R in the set L of all lines in a plane, defined by R={(l,m): l parallel to m} is an equivalence realtion. Activity-3: To demonstrate a function that is not one-one but onto. Activity-4: To demonstrate a function that is one-one but not onto. Activity-5: To draw the graph of arcsin(x), using the graph of sin x and demonstrate the concept of mirror reflecgtion (about line y=x). Activity-6: To explore the principal value of the function arcsin(x) using a unit circle.

	Activity-7: To sketch the graphs of a^x and log(a)x, a > 0, a != 1 and examine that they are mirror images of each other. Activity-8: To establish a relationship between common logarithm (to the base 10) and natural logarithm (base e) of the number x. Activity-9: To analytically find the limit of a function f(x) at x = c and also to check the continuity of the function at that point. Activity-10: To verify that for a function f to be continuous at given point x, dy = | f(x + dx) - f(x) | is arbitrarily small provided dx is sufficiently small.
COMPUTER **SCIENCE**	Make your group project file for CBSE board examination.