HOLIDY HOMEWORK FOR CLASS XII
SESSION 2023-24
SCIENCE STREAM

ENGLISH

English project work

INTRODUCTION
The project consists of 10 MARKS.

CONTENT OF THE PROJECT FILE:

The project file to include the following:

Cover page, with the title of the project, school details and details of the student.
Certificate of Completion under the guidance of the teacher.
Objectives of the topic
Action Plan for the completion of assigned tasks (steps involved in doing the project)
Essay/report should be written in 800-1000 words.
Student reflections (the new learning experience/outcome achieved after completing the project)
If possible, photographs that capture positive learning experience of the students (collages/pics from various online sources) can be pasted.
List of Resources/Bibliography (Last page of the project file)

INSTRUCTIONS:

CHOOSE ANY ONE TOPIC FROM THE TOPICS GIVEN BELOW

Refer to the links of the videos attached with each topic (You can also select different videos available on YouTube, relevant to your topic).
Listen to these podcasts, documentaries, interviews etc. on the given topics.
Do a thorough research on the topic assigned.
Prepare a report/essay in about 800-1000 words describing the topic/issue/ giving your own opinion/ suggestions/measures/ viewpoints/its impact on people/your learning experience.
The project should be neat, legible, with an emphasis on quality of content, accuracy of information, creative expression, proper sequencing and should be relevant as per the assigned topic.

Use coloured practical sheets.

Plagiarism is strictly prohibited.

Students can select any one of the given topics for your English Project:

1. Bioterrorism (A Looming Threat) : (in context to 'Keeping quiet' by Pablo Neruda)
Links for reference: https://youtu.be/Faftnz8cg7E
https://youtu.be/6Af6b_wyiwl
https://youtu.be/b6NI97v2buc
Include the following sub-headings:
What is bio-terrorism?
Consequences of such wars
Measures that can be undertaken to prevent it.
Role of youth ('Gen X') in creating a world bereft of wars. Present this sub-topic creatively. You can compose / reproduce a poem/poster to depict the same.

2. 'Understanding Kamla Das a little more'.
You all have studied the poem 'My mother at 66' by Kamla Das. 'My Grandmother's House' is another poem written by the same poet- Kamla 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
Your reflections about both the poems

3. Analysis on FEAR/ AVERSIONS (in context to 'DEEP WATER'
Types of fear, causes, solutions, a complete resarch work on fear/ phobias.
Ten prominent/ famous people who had different sorts of fear

PHYSICS

1. Prepare an Investigatory Project on any of the following topics. Electrostatics, Current Electricity, Magnetism, EMI and AC, Optics, Modern Physics and Electronics
2. All solved examples, Exercises and Additional exercises of chapter 1, 2, and 3 from NCERT book to be done in a separate register.

CHEMISTRY

1. complete the investigation project as instructed. 2. do following assignments Multiple Choice Questions (Type - I)
1. Which cell will measure standard electrode potential of copper electrode ?
(a) Pt(s) H2(g, 0.1 bar) H+ (aq., 1 M)
Cu2+ (aq., 1 M) Cu
(b) Pt(s) H2(g, 1 bar) H+ (aq., 1 M)
Cu2+ (aq., 2 M) Cu
(c) Pt(s) H2(g, 1 bar) H+ (aq., 1 M)
Cu2+ (aq., 1 M) Cu
(d) Pt(s) H2(g, 1 bar) H+ (aq., 0.1 M)
Cu2+ (aq., 1 M) Cu
2. Which of the following statement is correct ?
(a) Ecell and rG of cell reaction both are extensive properties.
(b) Ecell and rG of cell reaction both are intensive properties.
(c) Ecell is an intensive property while rG of cell reaction is an extensive property.
(d) Ecell is an extensive property while rG of cell reaction is an intensive property.
3. The difference between the electrode potentials of two electrodes when no current is drawn through the cell is called
(a) Cell potential(b) Cell emf
(c) Potential difference(d) Cell voltage
4. Which of the following statement is not correct about an inert electrode in a cell ?
(a) It does not participate in the cell reaction.
(b) It provides surface either for oxidation or for reduction reaction.
(c) It provides surface for conduction of electrons.
(d) It provides surface for redox reaction.
5. An electrochemical cell can behave like an electrolytic cell when
(a) Ecell = 0(b) Ecell > Eext
(c) Eext > Ecell(d) Ecell = Eext
6. Which of the statements about solutions of electrolytes is not correct ?
(a) Conductivity of solution depends upon size of ions.
(b) Conductivity of solution depends upon viscosity of solution.
(c) Conductivity of solution does not depend upon salvation of ions present in solution.
(d) Conductivity of solution increases with temperature.

7. The quantity of charge required to obtain one mole of aluminium from Al2O3 is
(a) 1F(b) 6F
(c) 3F(d) 2F
8. The cell constant of a conductivity cell
(a) changes with change of electrolyte
(b) changes with change of concentration of electrolyte
(c) changes with temperature of electrolyte
(d) remains constant for cell
9. While charging the lead storage battery
(a) PbSO4 anode is reduced to Pb.
(b) PbSO4 cathode is reduced to Pb.
(c) PbSO4 cathode is oxidised to Pb.
(d) PbSO4 anode is oxidised to PbO2.
10. In the electrolysis of aqueous sodium chloride solution which of the half cell reaction will occur at anode ?
(a) Na+ (aq) + e- Na(s); E0cell = 2.71 V
(b) 2H2O (l) O2(g) + 4H+ (aq) + 4 e- ; E0cell = 1.23 V
(c) H+ (aq) + e- ½ H2 (g); E0cell = 0.00 V
(d) Cl- (aq) ½ Cl2 (g) + e- ; E0cell = 1.36 V

Matching Type Questions
11. Match the term given in Column I with the units given in Column II.
Column IColumn II
(a) m(i) S cm-1
(b) Ecell(ii) m-1
(c) k(iii) S cm2 mol-1
(d) G*(iv) V
12. Match the items of Column I and Column II.
Column IColumn II
(a) Lead storage battery(i) maximum efficiency
(b) Mercury cell(ii) prevented by galvanisation
(c) Fuel cell(iii) gives steady potential
(d) Rusting(iv) increases with dilution

13. Match the items of Column I and Column II.
Column IColumn II
(a) K(i) I x t
(b) m(ii) m / 0m
(c) α(iii) k/c
(d) Q(iv) G*/R

Assertion – Reason Type Questions
Note : In the following questions a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices:
(a) Both assertion and reason are true and the reason is correct explanation for assertion.
(b) Both assertion and reason are true and the reason is not correct explanation for assertion.
(c) Assertion is true but the reason is false.
(d) Both assertion and reason are false.
(e) Assertion is false but reason is true.
14. Assertion: Cu is less reactive than hydrogen.
Reason: E0Cu2+/Cu is negative.
15. Assertion: Ecell should have a positive value for the cell to function.
Reason: Ecathode < Eanode
16. Assertion: Conductivity of all electrolytes decreases on dilution.
Reason: On dilution number of Ions per unit volume decreases.
17. Assertion: m for weak electrolysis shows a sharp increase when the electrolytic solution is diluted.
Reason: For weak electrolytes degree of dissociation increases with dilution of solution.
18. Assertion: Mercury cell does not give steady potential.
Reason: In the cell reaction, ions are not involved in solution.
19. Assertion: Electrolysis of NaCl solution gives chlorine at anode instead of O2.
Reason: Formation of oxygen at anode requires over voltage.
20. Assertion: Current stops flowing when Ecell = 0.
Reason: Equilibrium of the cell reaction is attained.

Short Answer Type Questions
21. Can absolute electrode potential of an electrode be measured ?
22. Can E0cell or ∆rG0 for a cell reaction ever be equal to zero ?

23. Under what condition is Ecell = 0 and ∆rG = 0 ?
24. Aqueous copper sulphate solution and aqueous silver nitrate solution are electrolysed by 1 ampere current for 10 minutes in separate electrolysis cells. Will the mass of copper and silver deposited on the cathode be same or different ? Explain your answer.
25. Unlike dry cell, the mercury cell has a constant cell potential throughout its use full life. Why ?
26. When acidulated water (dil. H2SO4 solutions) is electrolysed, will the pH of the solution be affected ? Justify your answer.
27. What advantage do the fuel cells have over primary and secondary batteries ?
28. Write the cell reaction of a lead storage battery when it is discharged. How does the density of the electrolyte change when the battery is discharged ?
29. Why on dilution the ʌm of CH3COOH increases drastically, while that of CH3COONa increases gradually ?

Questions from Board Examinations
1. (a) Define electrode potential.
(b) What is standard hydrogen electrode ?
2. Distinguish between emf and potential difference.
3. Following reactions occur at cathode during electrolysis of aqueous silver chloride solution:
Ag+ (aq) + e- Ag (s), E0 = + 0.80 V
H+ (aq) + e- ½ H2 (g), E0 = 0.00 V
On the basis of standard reduction potential (E0 value), which reaction is feasible at cathode and why ?
4. Why does the cell potential of mercury cell remain constant throughout its life ?
5. (a) Write Faraday's second law of electrolysis.
(b) Draw a labelled diagram of standard hydrogen electrode.
6. What is a secondary battery ? Write the mechanism of lead storage battery with the help of chemical equation.
7. Using the E0 values of A and B, predict which is better for coating the surface of iron. (E0 Fe2+/Fe = -0.44 V)in order to prevent the corrosion. [Given E0A2+/A = -2.37 V ; E0B2+/B = -0.14 V]

8. What type of battery is dry cell ? Write overall reaction occurring in dry cell.
9. From the given cells :
Lead storage cell, Mercury cell, Fuel cell and Dry cell
Answer the following :
(i) Which cell is used in hearing aids?
(ii) Which cell was used in Apollo space programme?
(iii) Which cell is used in automobiles and inverters?
(iv) Which cell does not have long life?
10. What is the name of the cell which is generally used in inverters ? Write the reactions taking place at the anode and the cathode in the cell.
11. What will happen to the value of emfof the following cell if the concentration of the electrolyte in the anode compartment is increased ?
Zn Zn2+ (0.1 M) Cu2+ (0.1 M) Cu

BIOLOGY

1. Do the given assignments of chapters taught. 2.Complete the investigatory project as instructed.

MATHS

A. Do Maths practical activities in inter leaf file or in NCERT lab manual.
1.To verify that the relation R in the set L of all lines in a plane, defined by R = {(l, m) : l ⊥ m} is symmetric but Neither reflexive nor transitive.
2.To demonstrate a function which is Not one-one but is onto.
3.To draw the graph of sin-1x, using the Graph of sin x and demonstrate the
Concept of mirror reflection (about The line y = x).
4.To sketch the graphs of a^x and logs x, a > 0, a ≠ 1 and to examine that they
Are mirror images of each other.
5.To verify Rolle's Theorem.
6.To understand the concepts of Decreasing and increasing functions.
7.To understand the concepts of local Maxima, local minima and point of Inflexion.
8.To construct an open box of maximum Volume from a given rectangular sheet By cutting equal squares from each Corner.
9.To measure the shortest distance Between two skew lines and verify it Analytically.
10.To explain the computation of The conditional probability of a given Event A, when event B has already Occurred, through an example of Throwing a pair of dice.
11.To evaluate the definite integral ∫ √(1-x²)dx as the limit of a sum and Verify it by actual integration.
12.To verify geometrically for vectors a, b and c that c ×(a + b) = c × a + c × b
B.Make a project on the topic ' Story of π' and decorate it with
the Ancient Art of ANDAMAN AND NICOBAR ISLAND(Art
Integration).
C.Revise the chapters done so far from NCERT Book

COMPUTER SCIENCE

Write python codes and Mysql queries in practical file.

INFORMATICS PRACTICES

Write codes of Pandas,Matplotlib and Mysql in practical file.

PHYSICAL EDUCATION

A. Learn and write two asana (procedure, precautions and contraindications) from each lifestyle disease (asthama, diabetes, hypertension, backpain)

COMMERCE STREAM

ENGLISH

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ACCOUNTS

Project Work, One specific project based on financial statement analysis of a company covering any two aspects from the following:

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Comparative and common size financial statements

2.

Accounting Ratios

3.

Segment Reports

4.

Cash Flow Statements

BUSINESS STUDIES

I. Project One: Elements of Business Environment. II. Project Two: Principles of Management , III. Project Three: Stock Exchange, 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 9. 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

ECONOMICS	Suggestive List of Projects: (any one from the following) Micro and Small Scale Industries Food Supply Channel in India Contemporary Employment situation in India Disinvestment policy of the government Goods and Services Tax Act and its Impact on GDP Health Expenditure (of any state) Human Development Index Inclusive Growth Strategy Self-help group Trends in Credit availability in India Monetary Policy Committee and its functions Role of RBI in Control of Credit Government Budget & its Components Trends in budgetary condition of India Exchange Rate determination – Methods and Techniques Currency War – reasons and repercussions Livestock – Backbone of Rural India Alternate fuel – types and importance Sarva Shiksha Abhiyan – Cost Ratio Benefits Golden Quadrilateral- Cost ratio benefit Minimum Support Prices Relation between Stock Price Index and Economic Health of a Nation Waste Management in India – Need of the hour Minimum Wage Rate – Approach and Application Digital India- Step towards the future Rain Water Harvesting – A solution to water crisis Vertical Farming – An alternate way Silk Route- Revival of the past Make in India – The way ahead Bumper Production- Boon or Bane for the farmer Rise of Concrete Jungle- Trend Analysis Organic Farming – Back to the Nature Aatmanirbhar Bharat e-Rupee (e- ₹) Sri Lanka's Economic Crisis Sustainable Development Goals (SDG's) Environmental Crisis Comparative Study of Economies (Maximum three economies) New Education Policy (NEP) 2020: A Promise for a New Education System G-20: Inclusive and Action Oriented Amrit Kaal: Empowered and Inclusive Economy Cashless Economy
PHYSICAL EDUCATION	Learn and write two asana (procedure, precautions and contraindications) from each lifestyle disease (asthama, diabetes, hypertension, backpain)
INFORMATICS PRACTICES	Write codes of Pandas,Matplotlib and Mysql in practical file.
MATHS	A. Do Maths practical activities in inter leaf file or in NCERT lab manual. 1.To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \perp m\}$ is symmetric but Neither reflexive nor transitive. 2.To demonstrate a function which is Not one-one but is onto. 3.To draw the graph of sin-1x, using the Graph of sin x and demonstrate the Concept of mirror reflection (about The line y = x). 4.To sketch the graphs of a^x and logs x, a > 0, $a \neq 1$ and to examine that they Are mirror images of each other. 5.To verify Rolle's Theorem. 6.To understand the concepts of Decreasing and increasing functions. 7.To understand the concepts of local Maxima, local minima and point of Inflexion. 8.To construct an open box of maximum Volume from a given rectangular sheet By cutting equal squares from each Corner. 9.To measure the shortest distance Between two skew lines and verify it Analytically. 10.To explain the computation of The conditional probability of a given Event A, when event B has already Occurred, through an example of Throwing a pair of dice. 11.To evaluate the definite integral $\int \sqrt{(1-x^2)}dx$ as the limit of a sum and Verify it by actual integration. 12.To verify geometrically for vectors a, b and c that c ×(a + b) = c × a + c × b B.Make a project on the topic ' Story of π' and decorate it with the Ancient Art of ANDAMAN AND NICOBAR ISLAND(Art Integration). C.Revise the chapters done so far from NCERT Book
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HISTORY	Prepare a project on the topics provided in your class
POLITICAL SCIENCE	Make a project on topics provided in your class.
ECONOMICS	Suggestive List of Projects: (any one from the following) Micro and Small Scale Industries Food Supply Channel in India Contemporary Employment situation in India Disinvestment policy of the government Goods and Services Tax Act and its Impact on GDP Health Expenditure (of any state) Human Development Index Inclusive Growth Strategy Self-help group Trends in Credit availability in India Monetary Policy Committee and its functions Role of RBI in Control of Credit Government Budget & its Components Trends in budgetary condition of India Exchange Rate determination – Methods and Techniques Currency War – reasons and repercussions Livestock – Backbone of Rural India Alternate fuel – types and importance Sarva Shiksha Abhiyan – Cost Ratio Benefits Golden Quadrilateral- Cost ratio benefit Minimum Support Prices Relation between Stock Price Index and Economic Health of a Nation Waste Management in India – Need of the hour Minimum Wage Rate – Approach and Application Digital India- Step towards the future Rain Water Harvesting – A solution to water crisis Vertical Farming – An alternate way Silk Route- Revival of the past Make in India – The way ahead Bumper Production- Boon or Bane for the farmer Rise of Concrete Jungle- Trend Analysis Organic Farming – Back to the Nature Aatmanirbhar Bharat e-Rupee (e- ₹) Sri Lanka's Economic Crisis Sustainable Development Goals (SDG's) Environmental Crisis Comparative Study of Economies (Maximum three economies) New Education Policy (NEP) 2020: A Promise for a New Education System G-20: Inclusive and Action Oriented Amrit Kaal: Empowered and Inclusive Economy Cashless Economy
HINDI	परियोजना कार्य
	* हिंदी के किन्ही पांच कवियों/ लेखकों का जीवन परिचय व लेखन कार्य विस्तारपूर्वक।
	* हिंदी की विभिन्न चार विधाओं का विस्तारपूर्वक वर्णन।
	* हिंदी कविताओं मे प्रकृति चित्रण (उषा/बगुलो के पंख)
	- विभिन्न कवियों की कविताओं का तुलनात्मक अध्ययन
	- भाषा शैली
	- विशेषताएं
	* जनसंचार के विभिन्न माध्यमों का विस्तारपूर्वक वर्णन।
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	- आज़ादी के पहले व वर्तमान मे स्थिति
	- सुधार की आवश्कता
	- अपनी भूमिका,योगदान
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	- जी 20 और भारत
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	- विभिन्न देशों मे प्रभाव
	- भारत के साथ तुलनात्मक अध्ययन
	- कारण और निवारण
	- अपनी भूमिका/ योगदान
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