



HOLIDAY HOMEWORK 2017-18

Class/Section: XII B

General Instructions:

- Holiday Homework of all subjects to be done in **Stick File** (only).
- **Practical subjects need to be given only AISSCE Board Projects**
- The areas to be covered are suggested below. You can of course use your creativity and innovation for new ideas too!
- Credit will be awarded to original photographs/ drawings, illustrations and creative use of materials.
- Holiday Homework needs to be submitted on 10th July 2017.
- Holiday Homework needs to be developed and presented in this order:
 - Cover page showing title, student information, school and academic year.
 - List of contents with page numbers.
 - The last page should have Bibliography/ Sources of information from where you have collected your information.

SUBJECT: ENGLISH

1. Read the novel, The Invisible man and write a 300- 400 word book review covering the following aspects: Plot and theme, main characters, setting, language and vocabulary and any other elements which make the story interesting.
2. There are a lot of summer camps mushrooming in every city and locality. Children line up to learn dancing, singing, a new language, swimming and many more activities. Interview an instructor/teacher or organizer of such a camp and then write an article on the use, need and importance of these summer camps. Cover the financial side too. You will also interview a few parents and students who are enrolled in these camps and get their side of the story. Write a 200 word article based on these interactions. Give details of the camp along with the name and address, student strength and response of the locals.

SUBJECT: MATHEMATICS

Solve the set of questions based on the topics from NCERT book.

TOPIC: INVERSE TRIGONOMETRY FUNCTIONS

EX -2.1	Q 1, 9, 11
EX -2.2	Q 3, 13, 19
MISC EX.	Q 6, 8, 13, 14, 16

TOPIC: MATRICES

EX -3.1	Q 3, 5, 7
EX -3.3	Q 10, 12
EX -3.4	Q 12, 15
MISC. EX.	Q 3, 7, 11

TOPIC: DETERMINANTS

EX -4.2	Q 5, 13, 14
EX -4.3	Q 3, 5
EX -4.6	Q 11, 13, 15
MISC. EX.	Q 4, 11, 16

TOPIC: DIFFERENTIATION

EX -5.1	Q 6, 24, 30
EX -5.3	Q 6, 11, 15
EX -5.4	Q 2, 4, 8
EX -5.5	Q 7, 12, 15
EX -5.6	Q 5, 6, 10
EX -5.7	Q 14, 17
MISC. EX.	Q 13, 17, 23

SUBJECT: PHYSICS

LAB WORK: On the basis of Experiment done in lab and reading taken from the lab, complete the lab work in manual by the given guidelines on the following experiments.

1. To determine resistance per cm of a given wire by plotting a graph for potential difference versus current.
2. To find resistance of a given wire using metre bridge and hence determine the resistivity (specific resistance) of its material.
3. To verify the laws of combination (series) of resistances using a metre bridge.
4. To verify the laws of combination (parallel) of resistances using a metre bridge.

GUIDE LINES:

(As per the work done in lab, complete the WRITTEN work with following headings in your lab manual)

- | | |
|----------------------------------|---|
| a) Aim | b) Apparatus Required |
| c) Theory Formula used (if any) | d) Observation and calculation (if any) |
| e) Tabulation of the data | f) Result |
| g) Precaution | h) Sources of error |

AISSCE PROJECTS FOR PHYSICS:

On the basis of the mentioned list, choose **ONE** topic of your interest and make a working project on it.

The project must include following points:

- | | |
|----------------------------------|---|
| a) Aim | b) Apparatus Required |
| c) Theory Formula used (if any) | d) Observation and calculation (if any) |
| e) Tabulation of the data | f) Result |
| g) Precaution | h) Sources of error |

SUGGESTED TOPICS :

1. To study various factors on which the internal resistance/emf of a cell depends.
2. To study the variations, in current flowing, in a circuit containing a LDR, because of a variation:
 - (a) in the power of the incandescent lamp, used to 'illuminate' the LDR. (keeping all the lamps at a fixed distance).
 - (b) in the distance of a incandescent lamp (of fixed power) used to 'illuminate' the LDR.
3. To find the refractive indices of (a) water (b) oil (transparent) using a plane mirror, a equiconvex lens, (made from a glass of known refractive index) and an adjustable object needle.
4. To design an appropriate logic gate combination for a given truth table.
5. To investigate the relation between the ratio of
 - (i) Output and input voltage and
 - (ii) Number of turns in the secondary coil and primary coil of a self-designed transformer.

SUBJECT: CHEMISTRY

INSTRUCTIONS/GUIDELINES FOR `MAKING THE PROJECT` :

- 1) The project should be made covering the following points:
 - a) Page with school logo, your name and roll no.
 - b) Index
 - c) Certificate
 - d) Acknowledgement
 - e) Object
 - f) Material required : (i) Apparatus (ii) Chemical requirement
 - g) Theory
 - h) Procedure
 - i) Observation
 - j) Result
 - k) Bibliography
- 2) Put diagrams and photographs wherever necessary.
- 3) Also give a brief introduction / description of your work immediately after index.
- 4) **One topic is given to two students but each student will have to submit his/her own work.**

Complete the investigatory project as per the given topics

S. no.	Name of Student	Topic for Investigatory Project
1	AARON ENGTI	To study the presence of Oxalate ions contained in Guava fruit in different stages of ripening.
2	RONIT IROM	
3	ZOYA KHAN	Preparation of soya bean milk and its comparison with the natural milk.
4	JIGMET RINCHEN	
5	SHRIDHAM	To study the effect of potassium bisulphite as good preservative under various condition (concentration, time and temperature).
6	YOGESH TANWAR	
7	RHYTHM BABERWAL	To study the quantity of casein present in different samples of milk
8	JIGMET DISKET	
9	NAKU HAGE	To study the presence of insecticide / pesticide ((Nitrogen containing) in various fruits and vegetables.
10	LOKESH PRADHAN	
11	ATUL SUREKHA	To analyse the given samples of commercial antacids by determining the amount of HCl they can neutralise.
12	VISHWAJEET YADAV	
13	ARVAAN BIR SINGH	To study the settling of mixture of cement with sand, lime and fly ash with respect to time and strength.
14	ADITYA GROVER	

SUBJECT: BIOLOGY

1) Make a Project on any one of the following topics in a stick file. Put diagrams and photographs wherever necessary. Make a proper Index, Acknowledgment and References taken :

- | | |
|--|---|
| a) Dengue | b) Ebola, |
| c) Aids | d) Malaria, |
| e) Immune system in human body | f) Cancer, |
| g) Swine flu | h) Drug addiction and commonly abused drugs |
| i) Effect of Narcotic drugs on the Brain | j) Gene therapy for some diseases like Cystic fibrosis, Haemophilia |
| k) Parkinson's disease and SCID | |

INSTRUCTIONS/GUIDELINES FOR MAKING THE PROJECT:

- a) Put diagrams and photographs wherever necessary. Make a proper Index, Acknowledgment and mention the references taken.
 - b) If choosing any of the diseases, the project should contain - Introduction, Causes/Pathogens, Mode of transmission/ Vectors, Symptoms, Body parts affected, Prevention and Line of treatment.
 - c) If choosing Gene therapy, writing principle, procedure and examples of success story is mandatory.
 - d) If choosing Drug addiction, chemical nature of the drugs, Symptoms and their effects on different body parts should be written in the project.
 - e) For immune system, the components and physiology thereof is required to be documented.
- 2) Complete your Biology Practical Note book along with diagrams (As per Board's instructions).

SUBJECT: PSYCHOLOGY

Q1. Complete the written work of Lab Manual for Board Practical Exam during this summer vacations.

The following practical to be done:

1. DBDA
2. 16 PF
3. Adjustment Inventory
4. Eysenck Personality Inventory

GUIDELINES:

For each practical test mentioned:

- AIM
- MATERIAL USED
- DESCRIPTION OF THE TEST
- PROCEDURE OF CONDUCTION
- DETAILS OF YOUR SUBJECT
- RESULT/SCORING
- CONCLUSION

Q2. Make the flow chart for various mental disorders along with mentioning their symptoms in the notebooks.

SUBJECT: COMPUTER SCIENCE (C++)

1. Write an interactive C++ program to take two single dimensional arrays of integers and merge them into a single dimensional array, excluding the common elements of both the arrays.
2. Write an interactive program in C++ language to create an application program which generates the telephone bills. It stores various details of users Telephone Number, Name, Address, No. of calls, local or STD/ISD call. Compute the amount to be paid if the charges per local call is Rs. 2/- and for STD/ISD call is Rs. 5/-. It should have feature of searching the customer records using the telephone number. The application should be designed user friendly.
3. Write an interactive C++ program to Program to enter velocity, acceleration and time and print final velocity using the formula : $v = u + a * t$

4. Write an interactive program to count the number of words and characters in a sentence entered by a user
5. Write an interactive program to identify if an input is a symbol, digit or character.
6. Write an interactive Program to enter a sentence and output the number of uppercase & lowercase consonants, uppercase & lowercase vowels in sentence.
7. Write an interactive Program to find the sum of either of the diagonals of a 4 x 4 matrix.
8. Write an interactive C++ program using Structures to calculate the total and average of scores of a selected student. The program should prompt the student to input the stu_id. This stu_id is checked against the stu-ids' and make sure it really exists. Calculate the total and average, if the scores in assignemnt1 (out of 10 marks), assignment2 (out of 10 marks), mid-term score (out of 30 marks), and final score (out of 50 marks) are given.
9. Write an interactive C++ program to display a table that represents a Pascal triangle of any size. Hint: In Pascal triangle, the first and the second rows are set to 1. Each element of the triangle (from the third row downward) is the sum of the element directly above it and the element to the left of the element directly above it. See the below given example Pascal Triangle of size=5:

```

1
1 1
1 2 1
1 3 3 1

```

10. Write an interactive program in C++ language to create an application similar to “NOTEPAD”. Write a program, mynotepad.cpp, which reads words from any file having extension “.txt” and displays each word on a line by itself. A word is defined as any sequence of characters separated by a blank, a tab, or a newline. Note that this definition for a word considers punctuation as part of the word. This program should have features like cut, copy, paste, write and search. The application should be designed user-friendly.

SUBJECT: IP

Design an E-Business application that offers an interface to search and view Mobile details from SMARTMOBILE table in the database. If the user decides to buy them its details get added to the Order Table and internally the SMARTMOBILE recorded is updated (minus qty ordered) in the table. When user clicks at **Submit** button, then a message box informs the user about number of toys ordered and total bill amount; Upon clicking **Exit** button, the application is closed.

SPECIFICATION :

- In search criterion, if name is selected then the label with text “Enter lower limit” changes to “Enter Name” and the Label with text “Enter upper limit” and the text field become disabled. Otherwise (in case Price or Age is selected as Sort Criterion) then lower limit and upper limit text fields apply to the selected criterion.
- After obtaining the search Criterion, search should be performed in the SMARTMOBILE table and the mobile List box should get filled accordingly.
- The Order Qty text field is enabled only when the CLICK ME check box is ticked.
- The Mobile details get added to MOBILE ORDERED table only after Confirm Order Button is pressed for the Mobile.

Text Book Reference: Page No. : 540, Lab Q. 16

Create a HTML data entry web form to illustrate Text Box, Label, Checkbox, Option Button, List Box and command button. Students may use other HTML controls.

Text Book Reference: Page No. : 345, Lab Q. 3

Note: Student may carry educational/software CD which is attached with the text book. They may install NetBeans IDE from the CD or they can download from the internet.

SUBJECT: PAINTING

Prepare two thematic painting in half imperial sized sheet based on daily life subjects and color it in a balanced color scheme .
