

**CLASS-XII**  
***PROJECT TOPICS***  
***Patuli***

**SCIENCE**

## **PHYSICS**

All students are required to complete their ISC project. They may compile the required data, diagrams, pictures, graphs, structure, pie charts, histograms etc. For the completion of the suggested topics. The Project should include Title, theoretical discussion, Conclusion, Acknowledgement and Bibliography.

### **THE SUGGESTED TOPICS ARE:**

1. Semiconductor,
2. Electromagnetic induction,
3. Robotics,
4. Laser,
5. Black hole,
6. Nanotechnology,
7. Communication system,
8. Generators,
9. Optical Telescope,
10. Astrophysics and cosmology,
11. Thermodynamics,
12. Photoelectric effect.

## **CHEMISTRY**

All student are required to complete their ISC project, They may compile the required graphs, data, structure, pie charts, histograms, diagrams etc for the completion of the suggested topics. The projects should include Title, introduction/purpose, contents, presentation, conclusion, acknowledgement and Bibliography.

### **THE SUGGESTED TOPICS ARE:**

- i)** Amino acids: Peptides, Structure and classification, proteins structure and their role in the growth of living beings.
- ii)** Chemicals and chemical processes in forensic studies.
- iii)** Explosives - preparations and their uses.
- iv)** Chemicals in medicines: antiseptics, antibiotics, antacids etc. and their uses.
- v)** Nucleic Acid: DNA and RNA – their structure. Unique nature, Importance in evolution and their characteristic features.
- vi)** Types of dyes – methods of preparation, characteristics and uses.
- vii)** Natural polymers (any five) - structure, characteristics, uses.
- viii)** Preparation of soap, nail polish, boot polish, varnish, nail polish remover, shampoo and scents.

## **BIOLOGY**

All students may compile data, diagram, statistics, newspaper cuttings (relevant), flowchart for completion of the suggested topics for ISC biology. The projects should include Title, introduction/purpose, contents, presentation, conclusion, acknowledgement and Bibliography.

### **SUGGESTED TOPICS ARE:**

1. Analysis of DNA fingerprinting
2. Gene therapy.
3. Phenylketoneuria
4. Legal aspects of biopiracy
5. Lac operon
6. Utility of Cryopreservation
7. Sex linked inheritance diseases
8. Mangrove Ecology
9. Assisted Reproductive Technology
10. Biotechnology in Agriculture
11. Mendelian inheritance

**COMMERCE**

# **ECONOMICS**

## **PROJECT 1:**

Prepare a report on the competition in the aviation sector in India with reference to:

- a. Performance of public sector and private sector
- b. Operational strategies adopted by budget/ low cost carriers

## **DETAILS**

- I. Define aviation sector- its history and importance in Indian economy, name of the aviation sectors operating in India
- II. Difference between public and private aviation sector- its performance, priorities, facilities etc
- III. Select any two public sector and three private airlines and give details about each (1-2 pages each)- its history, management, future prospects, economic performance etc.
- IV. Name the low cost carrier(airline) and discuss about its operational strategies
- V. Give a comparative analysis of all the 5 airlines discussed above- say market share, no of airbuses etc
- VI. Conclusion

## PROJECT 2:

Make a comparative analysis of lending performance of five commercial banks in the past six years with reference to the changing CRR and SLR.

### Details

- I. Define bank- its background
- II. Explain central bank and commercial bank, differentiate between them
- III. Discuss functions of central bank
- IV. Functions of commercial bank
- V. Process of credit creation
- VI. Discuss various methods through which RBI controls credit creation
- VII. Define CRR and SLR , give table showing these rates for the last 10 years
- VIII. Select any two public and three private commercial banks – discuss about each and its lending performance for the last 6 years.
- IX. Comparative analysis of all the 5 banks and its lending performance
- X. conclusion



## COMMERCE

### **Select any two projects**

Mark allocation for each Project (10 marks)

1) Collect newspaper/magazine clippings of five cases filed by consumers in the **Consumer Court**.

Find out the rights violated, and the redressal mechanism used.

What was the outcome of each case?

2) Visit a **Commercial Bank**. Find out the procedure to open a savings account.

Find out the details of various Agency and General utility services provided by the bank.

3) Select any business undertaking. Study the selected business in terms of ownership, capital and profitability.

Make a **S.W.O.T.** analysis and present it in tabular form.

### **Hints / Guidelines For The Project Work :**

1) - Consumer Protection Act 1986 – definition / meaning

- Consumer Court- meaning

- Rights of Consumers

- Consumer Redressal

- Detail description about any five cases filed by the consumers in the consumer court and compensation given/outcome of each case.

- Conclusion

2) - Select any one bank. For example –State Bank of India (SBI), Punjab National Bank (PNB), etc

- In brief about SBI - owner , founded , headquarter , number of branches , merger of banks currently into SBI
- Savings Account – meaning
- Procedure of opening savings account – in detail- steps ; documents required – address proof, pan card, Aadhar card
- Explain agency services
- Explain general utility services
- Conclusion

3) - Select any one sector.

Forexample – Communication- Micromax ,

Automobile – Maruti Suzuki , etc

- Ownership (Micromax) – name of the owner, company founded, founder, headquarters , area served , products , services
- Capital – equity stake , valuation , revenue of the company
- Profitability – net profit for the past few years (analysis) ; measures undertaken to enhance revenue
- SWOT – meaning
- Analysis of Micromax company

- Strengths -
- Weaknesses -
- Oppurtunities -
- Threats –
- Conclusion

[Common - Bibliography, Acknowledgement]

Projects selected should be illustrated with black and white or colour pictures, graphs, drawings, etc. should be bordered and tagged neatly, each page - if possible.

**Writing should be in black ink only.** For headings use stencils or calligraphy handwriting – if possible.

# **BUSINESS STUDIES**

Page 1- Name-

Class-

Section-

Subject-

UID No-

Page 2- Project I

Topic- Analyse the recruitment process in any two companies of your choice. List the loopholes if any and give suggestions for improving the process (You may also make a comparative study of the recruitment process)

Page 3- Index

## **PROJECT I**

Page 4	Company I- CADBURY (Introduction)
Page 5	Meaning and Definition of Recruitment
Page 6	Characteristics of Recruitment
Page 7	Sources of Recruitment
Page 8	Internal Sources-Promotion, Transfer etc.
	External Sources- Advertisement, Campus recruitment etc.
Page 9	Difference between Internal and External Sources of recruitment
Page 10	Merits of recruitment

Page 11	Demerits of Recruitment
Page 12	E-Recruitment
Page13	Benefits and Limitations of E-Recruitment
Page 14	Sources of E-Recruitment
Page 15	Loopholes of Recruitment
Page 16	Conclusion
Page 17	Company II NESTLE (Introduction)
Page 18	Meaning and Definition
Page 19	Characteristics of Recruitment
Page 20	Sources of Recruitment
	Internal Sources
	External Sources
Page 21	Difference between Internal and External Sources
Page 22	Merits
Page 23	Demerits
Page24	E-Recruitment
Page25	Benefits and Limitations of E-Recruitment
Page26	Sources of E-Recruitment
Page 27	Loopholes of Recruitment
Page 28	Comparative Study (CADBURY & NESTLE)
Page 29	Suggestions for Improving the Recruitment Process of both the Companies
Page 30	Conclusion
Page31	<b>PROJECT II</b>
	Make a comparative study of any two E-Business in terms of their nature, size, product and services offered, functioning and policies.

Page32	E-Business –Meaning and Definition0
Page33	E-Business I-FLIPKART(Introduction)
Page 34	Nature of Business
Page 35	Size of Business
Page 36	Products
Page 37	Services
Page 38	Functionary
Page 39	Policies
Page 40	Conclusion
Page 41	E-Business II-AMAZON(Introduction)
Page 41	Nature of Business
Page 42	Size of Business
Page 43	Products
Page 44	Services
Page 45	Functionary
Page 46	Policies
Page47	COMPARATIVE STUDY OF BOTH COMPANIES (Flipkart & Amazon)
Page 48	Conclusion
Page 49	Bibliography
Page50	Acknowledgement

## FEW LIST OF COMPANIES:

SBI AND ICICI
OIL & NATURAL GAS AND BHARAT PETROLEUM
CADBURY AND NESTLE
FLIPKART AND AMAZON
BMW AND BENTLEY

NOTE- The choice of companies for the Project is yours. However, both the companies should be of same category given above.

Eg- SBI AND ICICI (Correct)

SBI AND BMW (Incorrect)

## ACCOUNTS

**Topic 1-** Preparation of journal / sub-division of journal, Ledger, Trial balance and Financial statements of a partnership form of business on the basis of a case study.

(i) Develop a case study showing how two or more friends decide to come together and start a business with a certain amount of capital.

(ii) Prepare their partnership deed including interest on capital, partner's salary, commission, interest on drawing, interest on partner's loan and rent paid to partner.

(iii) Write in detail, their transactions during the year : purchases - cash and credit, sales - cash and credit, expenses, purchase of fixed assets and depreciation charged on them, any outstanding expenses, prepaid expenses, accrued income, drawing bills of exchange, accepting bills payable etc.

(iv) From this case study developed ( which should have at least 20 transactions), pass the journal entries, post them into the Ledger, prepare a trial balance and the trading and profit and Loss account, profit and loss appropriation account and Balance sheet.

(v) The various expenses, for comparisons purpose, could be depicted in the form of bar diagram, pie charts.



(vi) Calculate relevant accounting ratio like liquidity, solvency, activity and profitability - giving their formulae and computation.

(vii) The ratios could also be shown graphically and /or pictorially (bar diagrams, pie Charts) and if possible, could be compared with the ratios of the industry.

**Topic 2** - Preparation of common size and comparative income statement of profit and loss and balance sheet of a company by taking into account its audited /unaudited /imaginary financial results of two consecutive quarters of an accounting year or of two consecutive accounting years.

(i)The comparison has to be made in the form of common size and comparative income statement and Balance sheet.

(ii) The comparison could also be shown graphically and / or pictorially (bar diagram, pie charts)