

PROJECT WORK – 2018-19

CLASS X II

PROJECT WORK [SUBMISSION DATE: 2nd JULY, 2018]

ECONOMICS

[SEQUENCE:- Name, Contents, Acknowledgement, Introduction of Project Work- All the topics to be mentioned, Objectives of Project Work, Detailed matter, Conclusion, Bibliography]

- TOPIC I**
- (i) Explain Cardinal and Ordinal Utility Analysis covering following points in detail:-
Cardinal Utility Analysis:- meaning of utility, total utility, marginal utility, their formulas, relationship of TU and MU, Law of Diminishing Marginal Utility, its assumption (schedule and diagram) consumer's equilibrium-one commodity model (schedule and diagram), Law of Equimarginal Utility (statement and schedule) and conditions of consumer's equilibrium using marginal utility.
 - (ii) Ordinal Utility Analysis:- Indifference curve -its meaning and properties (including MRS and DMRS and its meaning), indifference map, consumer's budget line, consumer's equilibrium condition to be explained with the help of diagrams.
 - (iii) Each topic must be supported with necessary schedule and diagram. Your one passport size photograph in school uniform should be pasted on the cover page of the file.

TOPIC II

Prepare a Report on the basic understanding of the functions of Commercial Banks, credit creation process with limitation. The regulatory role of the Central Bank, its functions and the way it controls the flow of credit needs to be explained. A brief mention may be made of quantitative (CRR, SLR, Bank Rate Policy, Repo Rate and Reverse Repo Rate and Open Market Operations) and Qualitative Methods.
Make a comparative analysis of lending performance of five Commercial Banks in the past six years with reference to the changing CRR and SLR.

COMMERCE

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TOPIC-I

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.

Write a report on Banking – latest trends.

Online services- transfer of funds through Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), issue of demand drafts online, meaning and features. Online Payments, e-Banking – meaning and features, advantages and disadvantages.

Mobile Banking – SMS alerts, transfer of funds, making payments – advantages and disadvantages. Debit Cards vs Credit Cards, ATM (Automated Teller Machine) – Meaning; Debit Card and Credit Card: features and differences.

Your Photograph in the organisation should be pasted on the cover page of your file (Date and time must be mentioned on it).

TOPIC-II

Write a report on need for consumer protection; rights of consumers; methods of consumer protection – self-help, legislative measures and consumer associations/NGOs, Consumer Protection Act, 1986.

Collect newspaper/magazine/internet 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?

ACCOUNTS

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TOPIC I

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.

- Develop a case study showing how two or more friends decide to come together and starts a business with a certain amount of capital.
- Prepare their Partnership Deed including interest on capital, partner's salary, commission, interest on drawings, interest on partner's loan and rent paid to a partner.
- 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.
- From this case study developed (which should have at least 15 transactions) pass the journal entries, post them into the ledgers, prepare a Trial Balance and Trading and Profit and Loss Account, Profit and Loss Appropriation Account and Balance Sheet.
- The various expenses, for comparison purposes, could be depicted in the form of bar diagrams and pie charts.
- Calculate relevant accounting ratios like liquidity, solvency, activity and profitability giving their formulae and computation (all this could be part of the viva-voce).
- The ratios could also be shown graphically and/ or pictorially (bar diagrams and pie charts) and if possible, could be compared with the ratios of the industry.

TOPIC II

- Preparation of a Cash Flow Statement with the help of audited / unaudited / imaginary Balance Sheets of a company for two consecutive accounting years or two consecutive quarters of an accounting year could be taken along with at least five additional information (depreciation, purchase / sale of fixed assets, dividend paid / proposed, tax paid / proposed, amortization of intangible assets, profit or loss on sale of fixed assets including provision for depreciation on them and profit or loss on sale of investment).
- The results of the operating, investing and financing activities could be shown graphically and / or pictorially (bar diagram and pie charts.)
- Your one passport size photograph in school uniform should be pasted on the cover page of the file.

PHYSICS

Select any one for Project Work from the following:

- Topic 1)** Wave Optics
- Topic 2)** Electrons, Photoelectric Effect and Wave Particle Duality.
- Topic 3)** Nuclei, Radioactivity and Nuclear Energy.
- Topic 4)** Capacitance and Dielectrics
- Topic 5)** Electromagnetism

CHEMISTRY

Select any one project work from the following assignment:

- Topic 1)** How plastics have changed the world, both socially and economically.
- Topic 2)** Organic chemistry in Nutrition, Food Science and Biotechnology.
- Topic 3)** Chemicals in medicines: Antiseptics, Antibiotics, Antacids, etc and their uses.
- Topic 4)** Natural Polymers (any five)- structure, characteristics and uses.
- Topic 5)** Amino acids: Peptides, structure and classification proteins structure and their role in the growth of living beings.
- Topic 6)** Nucleic Acid: DNA and RNA- their structure unique nature, Importance in evolution and their characteristics features.

BIOLOGY

Choose any one of the following topics:

- Topic 1)** Genetic disorders
Topic 2) DNA fingerprinting
Topic 3) Role of Microbes in Human Welfare with reference to- (i) Industrial production, Sewage treatment, Biocontrol agents and Biofertilizers

COMPUTER SCIENCE

- Topic 1)** Design a class to perform the following task.
a) To print the Matrix containing the boundary element sorted.
b) To print spiral Matrix.
c) Find product of two Matrix.
- Topic 2)** To convert and print the number into roman number.
Input – 105 Output – CV
- Topic 3)** A company manufactures packing cartoons in 4 sizes ie cartons to accommodate 6 boxes, 12 boxes, 24 boxes and 48 boxes.
Design a program to accept the numbers of boxes to be packed (N) by the user (maximum up to 1000 boxes) and display the breakup of the cartons used in descending order of capacity (ie preference should be given to the highest capacity available) and if boxes are less than 6, an extra carton of capacity 6 should be used.
INPUT : N = 726
OUTPUT : 48 x 15 = 720
 6 x 1 = 6
Remaining Boxes = 0
Total Numbers of Boxes = 726
Total Number of Cartons = 16
- Topic 4)** A Goldbach number is a positive even integer that can be expressed as the sum of the two odd primes.
Note: All even integer numbers greater than 4 are Goldbach numbers
Example: 6 = 3 + 3
 10 = 3 + 7
 10 = 5 + 5
Hence 6 has one odd prime pair and . Similarly 10 has two odd prime pairs ie 3 and 7, 5 and 5.
Write a program to accept an even integer 'N' where N>9 and N<50. Find all the odd prime pairs whose sum is equal to the number N.
INPUT: N = 14
OUTPUT: PRIME PAIRS ARE: 3, 11
 7, 7
- Topic 5)** Design a project using File Handling Concept on the topic Hotel Management System containing the operations that could perform general hotel operation like booking room, searching the room, billing etc.
Note: Output screen of the program to be posted with every Application along with the hand written matter.

PHYSICAL EDUCATION

Prepare a project on any two games under following heads:

- Rules and Regulations
- Interpretation of Laws
- Duties and responsibilities of officials and players
- Measurement and dimensions related to game
- Terminologies Related to Game
- Fundamental Skills
- Strategies and Formation
- Names and Abbreviations of National and International Tournaments
- Diagrams and dimensions of Play Area
- Equipments with diagrams and dimensions of play

S.U.P.W.

- 1- File Work: Write on the following topics:
 - Simple activities in electronics.
 - Preparation of soap and washing soda.
 - Banking and various methods of savings.
- 2- Community Service:

Awareness drive on 'Education for All'. Students must bring a gift pack of one register and a pencil box containing pen, pencil, eraser, ruler and sharpener packed in a cellophane wrapper.
- 3- Project:

Students are required to prepare five cushion covers using different stitches of embroidery, for each.

Or

Students are required to prepare a decorative show piece using Plaster of Paris.

