

TOPICS FOR THE PROJECTS WORKS ISC MARCH 2020

Subject	(Teachers)	Topic	Date of submission
PHYSICS	Mr. Avishek Gupta	<p>Topic: Semiconductors & Semiconducting devices.</p> <p>Difference b/w conductors, insulators and semiconductors as per band theory. Energy band diagrams of conductors, semiconductors and insulators. Concept and definition of energy gap. Types of semiconductors i.e intrinsic and extrinsic. Doping of a semiconductor. Types of extrinsic semiconductors with energy band diagrams (detailed explanation). Forward and reverse biasing semiconductor diodes. Concept of barrier width and depletion layer. Diode as a half wave and full wave rectifier.</p>	02.08.2019
CHEMISTRY	Ms. A.Mukherjee	<p>Natural & Synthetic Polymers.</p> <p>Preparation , Structure , Characteristics and uses of 5 Natural & 5 Synthetic polymers.</p>	02.08.2019
BIOLOGY	Mrs.Seema Singh	<p>Diabetes, Cancer, AIDS, Drug Addiction & Community, Endocrine system, Role of micro-organism in industry, Human population mendelian inheritance, Environmental Resistance pest control, Role of Agrochemicals in increasing food production, Genetic disorders, Gene Therapy, Human Genome Project, DNA fingerprinting, Bio- piracy</p> <p>Select any ONE topic</p>	02.08.2019
COMPUTER SCIENCE	Mr. Bimlesh Jha	<p>20 Programs. The program should be based on: 5 questions from Single Dimension Array including linear, Binary search, Bubble, Selection, Insertion and Merge sort, 5 Questions of Double Dimensional Array, 5 Questions on String Handling, 5 Questions on Constructor & passing of objects.</p>	21.07.2019
PHYSICAL EDUCATION	Mr.Gambhir Kumar	<p>Basketball and Badminton</p>	21.07.2019
ECONOMICS	Mrs. Komal Kalsi	<p>A list of suggested Projects is given below:</p> <ol style="list-style-type: none"> 1. Study a Public Sector enterprise with reference to its relevance to the Indian economy and its future prospects . Analyse the trend of its growth for last ten years. 2. Conduct a socio- economic survey of a locality (minimum sample size should be 30 households) with reference to : <ol style="list-style-type: none"> (a) Demographic features. (b) Consumption Pattern – Expenditure on necessities, comforts and luxuries. 	17.06.2019

		<ol style="list-style-type: none"> 3. Compare the contribution made by different sectors of the economy towards GDP growth during the planning period. 4. Prepare a report on the competition in the aviation sector in India with reference to : <ol style="list-style-type: none"> (a) Performance of the public sector and private sector. (b) Operational strategies adopted by budget/low –cost carriers. 5. Make a comparative analysis of lending performance of five commercial banks in the past six years with reference to the changing CRR and SLR. 6. Many thinkers believe that we are rapidly depleting our natural resources. Assume that there are only two inputs (labour and natural resources) producing two goods(wheat and gasoline) with no improvement in technology over time. Show what would happen to the Production Possibility Curve over time as nature resources are exhausted. How would invention and technological improvement modify your answer ? On the basis of this example, explain why it is said “economic growth is a race between depletion and invention”. 7. Make a comparative study of the allocation of financial resources of the Central Government Budget on Agriculture, Defence, Industry and Education in the last ten years. Prepare a report on your observations. 8. Prepare a trend analysis of growth and productivity of any one industry such as:Textile / Automobiles / Electronic and Telecommunication, etc. in India for the past ten years. <p>Select any ONE topic</p>	
ACCOUNTS	Mr.Chandramouli	<p>After completing his graduation Binod suggested his classmate Chandan to form a partnership to start a computer business. Chandan agreed to the proposal and requested to admit his friend Deepak also in the proposed firm. All of them formed a partnership and prepared deed containing the following clauses:</p> <ul style="list-style-type: none"> • Name of the firm will be progressive Computers • Capital of Binod will contribute Rs. 6,00,000, Chandan Rs. 5,00,000 and Deepak Rs.4,00,000 • Profits sharing ratio will be equal irrespective of their capital contribution • Interest on capital is to be allowed @ 8% per annum and will be allowed only when there is a profit • No interest is to be charged on drawings • No partner is entitled to any salary or commission for taking part in firm’s business • Interest on loan @6% p.a is to be allowed on a partner’s loan to the firm. Such interest is to be paid even if there 	02/07/2019

are losses

- Admission of a new partner is not done without the consent of all existing partners

They started business on 1st april 2011 and the partner contributed the entire share of their capitals by cheques drawn in the firms' name. On the same date they deposited the cheques in the bank. On the same day they purchased 20 computers of Rs.50,000 each. They deposited Rs.20,000 for the electric connection with the electricity board and also deposited Rs.1,50,000 with VSNL for internet and Telephone connection. They spent Rs.40,000 for getting the computer cafe furnished and also spent Rs.6,000 in getting the pamphlets printed and distributed. All payments were to be made by cheques and all the receipts were to be deposited in the bank on the same day.

At the end of the year, the results were:

Purchase of computer stationery	:
92,000	
Revenue from fees received from students	:
5,48,000	
Revenue on account of internet facility	:
4,20,000	
Revenue from sale of computer stationery	:
1,60,000	
Wages paid	:
60,000	
Electricity Charges	:
2,40,000	
Telephone charges	:
73,000	
Entertainment Expenses	:
7,000	
General expenses	:
5,200	
Rent of the Building	:
1,20,000	

Drawings made by the partners were Binod: 50,000, Chandan: 40,000 and Deepak: 20,000

You are required to:

1. Journalise the transactions, post them into the ledger and prepare a trial balance
2. Prepare Trading and Profit & loss Account and Balance sheet taking into consideration that a telephone bill of Rs.6800 is yet to be paid
3. Depreciate furniture by 20% and computer by 30%
4. Calculate profitability ratio and comment on the efficiency of the business if the norms set for gross profit ratio and

		<p>net profit ratio in similar type of business enterprises are 60% and 15% respectively</p> <p>5. Partners want to expand their business. They approached the bank for a loan of Rs.5,00,000. Mention the ratios that the bank manager will take into consideration before granting the loan.</p>											
COMMERCE	Mr.Chandramouli	<p>You are asked to introduce a product or a service in the market with a separate brand name, The segmentations of the product or services to be introduced would be:</p> <table border="1" data-bbox="591 489 1349 924"> <thead> <tr> <th data-bbox="591 489 1002 527">Products</th> <th data-bbox="1002 489 1349 527">Services</th> </tr> </thead> <tbody> <tr> <td data-bbox="591 527 1002 636">Automobiles (launching of a new model of car/ bike)</td> <td data-bbox="1002 527 1349 636">Restaurants</td> </tr> <tr> <td data-bbox="591 636 1002 745">Convenient product (FMCG)</td> <td data-bbox="1002 636 1349 745">Travel Agencies, Holiday Packages</td> </tr> <tr> <td data-bbox="591 745 1002 888">Personal Care (Shampoos, Soaps, Perfumes, Deodorants etc)</td> <td data-bbox="1002 745 1349 888">Coaching Institutes</td> </tr> <tr> <td data-bbox="591 888 1002 924">Cell phones, laptops</td> <td data-bbox="1002 888 1349 924"></td> </tr> </tbody> </table> <p>The project includes complete detailed study of the product/services to be launched.</p> <ol style="list-style-type: none"> 1. Introduction of the company (Define a Name for the company and a brand name for the product) 2. Study of 5 competitors and swot Analysis of the competitors 3. Marketing Mix of the product / service (4 p's Product/ price / place / promotion) <ul style="list-style-type: none"> Product: Specifications of the product, USP (Unique Selling Proposition) Price: Pricing Strategies, price Variations of the different products Place: type of channel distribution to be chosen Promotion: Types of Promotional techniques to be used for the product/ service. 4. Comparison of the product to be launched with its competitors 5. Conclusion 	Products	Services	Automobiles (launching of a new model of car/ bike)	Restaurants	Convenient product (FMCG)	Travel Agencies, Holiday Packages	Personal Care (Shampoos, Soaps, Perfumes, Deodorants etc)	Coaching Institutes	Cell phones, laptops		02/07/2019
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