

# HI-TECH PROJECTS

*(An Industrial Monthly Magazine on New Project Opportunities and Industrial Technologies)*

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# PROFITABLE INDUSTRIES FOR YOU

## STONE PAPER MANUFACTURING [3444]

Stone paper is a shortened form of environmentally friendly inorganic powder rock paper, the name in the paper industry called "synthetic paper". It's a kind of variety processing paper. As the main raw material of calcium carbonate from the earth's most abundant mineral resources combining with polymer materials and various inorganic materials for the auxiliary, stone paper is made by the world's leading advanced technologies which solve the traditional paper-making harm to the environment pollution problems, but also solve the white pollution and plenty waste of oil problems. Inorganic Powder Environmental Protection Stone Paper (hereinafter referred to as Stone Paper) is made by huge storage and wide distribution of limestone mineral resources for main raw material (calcium carbonate content for 70 ~ 80%), combining with the high polymer material of raw materials (content is 20 to 30%), using polymer interface chemical principle and the characteristics of the polymer modification, under treatment of a special technology through the polymer extrusion and blow workmanship. Stone paper not only own the same writing and printing characters of plant fiber paper, but also has the core characters of plastic packing materials. Using 85% 1500-2500 meshes super fine powder of calcium carbonate from limestone combining with 15% additive making into master batch convert into paper or bags through extrusion blown film equipment. Stone paper (also known as rock paper, paper from waste marble, mineral paper, or rich mineral paper) is a paper-like product manufactured from calcium carbonate bonded with high-density polyethylene (HDPE). It is used for stationery, leaflets, posters, books, magazines, bags, packaging, wallpaper, adhesives, tags, in-mould labels, plates, trays, containers and many other uses.

### COST ESTIMATION

Plant Capacity	5 Tons/Day
Land & Building (1600 sq.mt)	Rs. 2.08 Cr
Plant & Machinery	Rs. 12.60 Cr
W. Capital for 3 Months	Rs. 2.29 Cr
Total Capital Investment	Rs. 17.23 Cr
Rate of Return	23%
Break Even Point	62%

## IV FLUID SOLUTIONS MANUFACTURING PLANT LIMITED TO 0.9% NORMAL SALINE, STERILE WATER AND DEXTROSE SOLUTIONS [3445]

Intra venous fluids, in general are used as I.V drips for patients in nursing homes and hospitals suffering from acute dehydration or considerable debilitating

conditions. These I.V fluids replenish the body fluids. Though a number of I.V fluids are there, generally three types of I.V fluids are used in hospitals as I.V drips. They are as follows:- 1. Dextrose injection fluid, 2. Dextrose and sodium chloride injection fluid. Types of IV Fluid. Crystalloid: Balanced salt/electrolyte solution; for msa true solution and is capable of passing through semi permeable membranes. May be isotonic, hypertonic or hypotonic. Normal Saline (0.9% NaCl), Lactated Ringer's, Hypertonic saline (3, 5, & 7.5%), Ringer's solution. However, hypertonic solutions are considered plasma expanders as they act to increase the circulatory volume via movement of intracellular and interstitial water into the intravascular space. Colloid: High-molecular-weight solutions, draw fluid into intravascular compartment via on colic pressure (pressure exerted by plasma proteins not capable of passing through membranes on capillary walls). Plasma expanders, as they are composed of macromolecules, and are retained in the intravascular space. Free H2O solutions: provide water that is not bound by macromolecules or organelles, free to passthrough. D5W (5% dextrose in water), D10W, D20W, D50W, and Dextrose/crystalloid mixes. Blood products: whole blood, packed RBCs, FFP, Cryoprecipitate, platelets, albumin. Essentially all colloids.

### COST ESTIMATION

Plant Capacity	90000 Bottles/Day
Land (3000 sq.mt)	Rs. 2.97 Cr
Plant & Machinery	Rs. 5.50 Cr
W. Capital for 1 Month	Rs. 2.30 Cr
Total Capital Investment	Rs. 11.15 Cr
Rate of Return	43%
Break Even Point	46%

## FIRE EXTINGUISHER BODY AND COMPLETE FIRE EXTINGUISHERS MANUFACTURING PLANT [3446]

Fire extinguishers are divided into four categories, based on different types of fires. Each fire extinguisher also has a numerical rating that serves as a guide for the amount of fire the extinguisher can handle. The higher the number, the more fire-fighting power. The following is a quick guide to help choose the right type of extinguisher. Class A extinguishers are for ordinary combustible materials such as paper, wood, cardboard, and most plastics. The numerical rating on these types of extinguishers indicates the amount of water it holds and the amount of fire it can extinguish. Class B fires involve flammable or combustible liquids such as gasoline, kerosene, grease and oil. The numerical rating for class B extinguishers indicates the approximate number of square feet of fire it can extinguish. Class C fires involve electrical equipment, such as

appliances, wiring, circuit breakers and outlets. Never use water to extinguish class C fires - the risk of electrical shock is far too great! Class C extinguishers do not have a numerical rating. The C classification means the extinguishing agent is non-conductive. Class D fire extinguishers are commonly found in a chemical laboratory. They are for fires that involve combustible metals, such as magnesium, titanium, potassium and sodium. These types of extinguishers also have no numerical rating, nor are they given a multi-purpose rating - they are designed for class D fires only. Class K fire extinguishers are for fires that involve cooking oils, trans-fats, or fats in cooking appliances and are typically found in restaurant and cafeteria kitchens. Some fires may involve a combination of these classifications. Your fire extinguishers should have ABC ratings on them.

### COST ESTIMATION

Plant Capacity	84,000 No/Year
Land & Building (700 sq.mt)	Rs. 1.02 Cr
Plant & Machinery	Rs. 97.50 Lacs
W. Capital for 1 Month	Rs. 36.00 Lacs
Total Capital Investment	Rs. 2.52 Cr
Rate of Return	30%
Break Even Point	62%

## WIRE NAILS MANUFACTURING [3447]

A nail consists of a metal rod or shank, pointed at one end and usually having a formed head at the other, that can be hammered into pieces of wood or other materials to fasten them together. A nail is usually made of steel, although it can be made of aluminum, brass, or many other metals. The surface can be coated or plated to improve its corrosion resistance, gripping strength, or decorative appearance. The head, shank, and point may have several shapes based on the intended function of the nail. Of the nearly 300 types of nails made in the United States today, most are used in residential housing construction. The average wood frame house uses between 20,000 and 30,000 nails of various types and sizes. Nails are divided into three broad categories based on their length. In general nails under 1 inch (2.5 cm) in length are called tacks or brads. Nails 1-4 inches (2.5-10.2 cm) in length are called nails, while those over 4 inches (10.2 cm) are sometimes called spikes. These categories are roughly defined, and there is considerable crossover between them. The nails consist of hard drawn bright mild steel wire with a head, which helps in driving the nail inside. They are made in various sizes. Wire nails are used for roofing, fastening in carpentry and woodwork, fencing, etc. With the rise in construction activities, both commercial

# Best Industries to Start and Grow

and private, the demand for wire nails is bound to increase. Setting up a plant to make wire nails would thus meet this demand. A wire nail having a head and a shank integral with the head, the shank being formed with a tip and having an axis, and the head having a circumferential edge defining a complete circle; characterised in that the centre of the head is radially offset from the axis of the shank. Wire nail is very well known item, as it is very common product, which is normally used in daily life. It is used for fastening purpose. Its use is so wide spread that it has become part and parcel of the life. Wire nails are pin-shaped, sharp objects of hard metal or alloy used as fasteners. They are typically made of steel, often dipped or coated to prevent corrosion in harsh conditions or improve adhesion. Ordinary nails for wood are usually of soft, low carbon or mild steel while those for concrete are harder. Nails are used for various purposes and industries ranging from building and construction to carpentry. There is a tremendous variety of nails, since they are used for so many different purposes. There had been an erratic growth of the indigenous industry from past years. Since the manufacture of wire nails could be undertaken on a small scale or even on a cottage scale, there is a mushroom growth of nail making units in operation. Future of wire nails will directly depend upon building activity in country. As we know that at present country is facing acute housing problem. So, now government is much emphasising on housing development, which naturally will lead to greater demand of wire nail. Thus, as an entrepreneur this project offers an exciting opportunity to you. Wire nail are used to join many things in industries and in other domestic items. The are made of hard carbon wire. They are headed on one end and sharp at another end. The head is used for hammering and sharp end help in penetrating into the object which is to be joined. Wire nail is one hardware that is used mainly in Building construction work, manufacturing boxes for packing etc. due to the increasing population and the necessities attached to it, they are always in demand in the market join small items. A nail consists of three parts the head, shank and the point. It is possible to manufacture nails suitable for various purposes by changing the form of each part, the diameter length, and through a combination of mechanical & chemical processes.

### COST ESTIMATION

Plant Capacity	10 MT./Day
Land & Building (500 sq.mt)	Rs. 1.02 Cr
Plant & Machinery	Rs. 31.28 Lacs
W. Capital for 2 Months	Rs. 02.43 Cr
Total Capital Investment	Rs. 3.94 Cr
Rate of Return	71%

Break Even Point 32%  
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### POWDER & CHEMICAL FOR FIRE FIGHTING EQUIPMENTS (3448)

The global fire fighting chemicals market is expected to reach USD 2.94 billion by 2025, according to a new report by Grand View Research, Inc. Increasing safety concerns has been a major factor driving market growth. Employment of fire fighting chemicals services has increased owing to increasing number of favorable fire safety regulations. Fire fighting chemicals are primarily utilized in fire fighting equipment such as automatic sprinkler systems, fixed and portable fire extinguishers, fire dampers, inert gas systems, and fire retardant bulkhead. These fire suppression chemicals are then sprayed by means of fire extinguisher over the combustion zone, in order to alleviate its temperature and thus eventually extinguish the fire. Potassium bicarbonate is projected to be the fastest growing segment in the chemicals category over the forecast period with an estimated CAGR of 5.1% from 2017 to 2025. Potassium bicarbonate is the only dry chemical certified by National Fire Protection Agency (NFPA) U.S. for use in Aircraft Rescue and Fire Fighting (ARFF). Potassium bicarbonate is also the most preferable dry chemical for use in oil spill incidences on onshore & offshore drilling sites. It is a salty, colorless and odorless chemical. These factors are projected to boost the potassium bicarbonate segment growth over the forecast period. Server rooms are utilized to serve as a data center. These server rooms are kept air conditioned in order to drive out the heat generated by the constant rapid activity of data transferring. However, if in case the air conditioners malfunction it might lead to heating up of the room and also cause a fire hazard. Owing to this factor, fire dampers are utilized to stop the oxygen supply to the room in case of fire occurrence. On account of this factor, fire dampers application segment is expected to show a moderate to high growth rate over the forecast period. In terms of volume, the fire dampers segment had a market share of 20.3% in 2016.

### COST ESTIMATION

Plant Capacity	1200 Kg./Day
Land & Building (700 sq.mt)	Rs. 1.03 Cr
Plant & Machinery	Rs. 19.75 Lacs
W. Capital for 1 Month	Rs. 15.20 Lacs
Total Capital Investment	Rs. 1.52 Cr
Rate of Return	36%
Break Even Point	55%

### WINE FROM MAHUA FLOWERS AND ORANGE [3449]

Oranges are appreciated as fruit throughout the world. The high productivity

of oranges, approximately 17,618,450 tons annually, especially in southeast Brazil, generates post-harvest losses. An alternative to disposing of the fruit to reduce waste and increase income to farmers is the sale of processed fruit to generate industrial products such as jams, juices, wines and spirits. The use of the fruit as a substrate for producing high added value products has been accomplished; an example is spirits obtained by the fermentation and distillation of fruit 1. Fruit spirits are produced all over the world using various fruits, according to the availability in different countries and seasons. In this way, the current commercialization of known alcoholic beverages obtained from fruit could facilitate the market penetration of such spirits 1. Some fruits that have been used to produce distillates are melons 2, mulberries 3, plums and cherries 4 jaboticaba 5, black mulberries and blackcurrants 1 and pears 6. According to Brazilian law, a fruit spirit is a beverage with an alcohol content between 36 and 54% v/v at 20°C that is obtained from simple fruit alcoholic distillates or by the distillation of fermented fruit. The volatile compound content should be =2000 mg/L of anhydrous alcohol, but never >6500 mg/L 7. The process needed to produce fruit spirit is complex and involves various factors that influence the quality of the final product. However, the main physico-chemical and sensorial differences among spirits are due to the particular composition of their corresponding raw materials (fruit, cereals, vegetables, etc.) and the fermentation process. Market-orientated yeast strains are currently being developed for the competitive production of alcoholic beverages with minimized resource inputs. The term alcohol was first applied to the spirits of wine, ethyl alcohol and now it refers to a series of substances with similar characteristics Ethyl alcohol is the active constituent of all intoxicating liquors obtained by the fermentation of saccharine materials. It is present in the form of esters in several volatile oil. It is now a days prepared in immense quantities, chiefly by fermentation and finds numerous industrial uses and is also being used as a motor fuel. Fruit Juices are fermented and distilled to concentrate the alcohol formed, for the production of potable spirits whose value lies largely in the flavour characteristic of the particular fruit used, the finished liquor purposely betrays its origin. It is different with industrial alcohol, for this must be nearly chemically pure as possible and must bear no marks of the original material. Industrial alcohol is ethyl alcohol, 95 per cent, Ethanol is another name for ethyl alcohol, 95 per cent, ethanol is another name for

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ethyl alcohol. The sources of industrial alcohol must be cheap, otherwise the uses can be worked up to alcohol are sought. Industrial alcohol is itself a raw material for chemicals, it is also a solvent, it is not subject to the federal alcohol tax (9 per cent Gallon 100 proof). In order to prevent the diversion of industrial alcohol to potable use, it is "denatured" by the addition of some material which can not be separated by any physical or chemical process and which renders the alcohol is treated unfit for use as beverage. A large number of different formulas are authorized by government, so that the industrial user may select the particular formula which will have least effect upon his particular process. Under the supervision of Federal inspectors, chemicals processes which require pure industrial ethyl alcohol may be operated. For molasses the process is essentially fermentation, followed by distillation. For corn and other grains, potatoes and similar starch - containing raw material the starch must first be liberated and solubilized because the accumulated non - sugars interfere with crystallization. Cane - sugar molasses differs some what from beet - sugar molasses.

## COST ESTIMATION

Plant Capacity	10000 Ltr/Day
Land (15000 sq.mt)	Rs. 1.03 Cr
Plant & Machinery	Rs. 10.70 Cr
Working Capital for 2 Month	Rs. 04.02 Cr
Total Capital Investment	Rs. 30.52 Cr
Rate of Return	32%
Break Even Point	52%

## BATTERY SMELTING AND LEAD REFINING [3450]

Lead is a highly corrosion resistant, dense, ductile, and malleable blue-grey metal, which has been used for at least 5000 years. In some countries, however, environmental or health consequences have eliminated or reduced its use in cable sheathing, petrol additives. Solder, shot, and pigments.

## COST ESTIMATION

Plant Capacity	60 MT/Day
Land (5000 sq.mt)	Rs. 3.30 Cr
Plant & Machinery	Rs. 1.96 Cr
Working Capital for 2 Month	Rs. 54.87 Cr
Total Capital Investment	Rs. 60.22 Cr
Rate of Return	42%
Break Even Point	32%

## LEAD INGOT AND LEAD OXIDE [3451]

Lead is a highly corrosion resistant, dense, ductile, and malleable blue-grey metal, which has been used for at least 5000 years. In some countries, however, environmental or health consequences have eliminated or reduced its use in cable sheathing, petrol additives. Solder, shot, and pigments.

## COST ESTIMATION

Plant Capacity	60 MT/Day
Land & Building (5000 sq.mt)	Rs. 3.30 Cr
Plant & Machinery	Rs. 1.96 Cr
Working Capital for 2 Month	Rs. 54.87 Cr
Total Capital Investment	Rs. 60.22 Cr
Rate of Return	42%
Break Even Point	32%

## MICA PEARL PIGMENT [3452]

Pearl pigments are special kind of pigments belonging to the group of phosphorescent and fluorescent pigments. Pearl pigments are also known as pearlescent pigments. Pearl pigments have a transparent appearance because of smooth and highly reflective planes. These pigments have a pearly shine when coated with a layer of metallic oxide, in presence of mica. Hence the name 'pearl' pigments. Pearl pigments coating provide a vibrant visual impact and enhances special effects. Generally titanium dioxide coating is used in present of fine mica flake for the manufacturing of pearl pigment coatings. Carbon black powder is added to enhance the shining effect of pearl pigments. Pearl pigments are bad conductor of heat and electricity; can withstand temperature as high as 800 degree C. Pearlescent pigments has high acid and alkali resistance capacity. These properties make them a preferable choice for coating pigments; they are widely used for automobile coating. The pearly gloss of the pearl pigments provides a new color quality to the automobiles. They are extensively used in the manufacture of luxurious cars and other sport vehicles. The artificial luster of the pearl pigments also finds application in the toy making industry. Pearl pigments are mixed with other monochromatic coating mixtures to prepare pearl light coating. Pearl light coating is used in the building and construction industry. Pearl light coatings are also being used to manufacture semi-transparent and transparent plastic materials. Printing industry is also a key end user industry of pearlescent pigments. The different colored and lustrous inks used for printing purposes use pearl pigments. Pearl pigments are safe and non toxic for edible purposes so they are widely used for food packaging.

## COST ESTIMATION

Plant Capacity	3 Ton/Day
Land & Building (2000 sq.mt)	Rs. 2.80 Cr
Plant & Machinery	Rs. 1.00 Cr
Working Capital for 1 Month	Rs. 1.86 Cr
Total Capital Investment	Rs. 5.80 Cr
Rate of Return	44%
Break Even Point	43%

## SURGICAL BANDAGE [3453]

Bandages are used extensively in health care institutions. The uses of bandages range from simple dressing of superficial wounds to holding together fractured

bones or body parts for rehabilitation and recovery. Surgical bandage making project can be initiated as small scale with moderate capital investment. The demand of Surgical Bandage is found all throughout the year. Surgical bandage are the products manufactured from white bleached cotton gauge cloth of suitable quality. Surgical bandage come in roll form in length of 3 to 4 meter. In view of the growth in the health care facilities network, increase in the demand. for various medicines and non-medicine items. It has been realized that surgical. bandage making project is feasible to start. A wide range of products both medicines and non-drug items such as surgical bandage are required as consumables in hospitals and basic health units. The surgical bandages include the manufacture of bandages, rolled bandages, absorbent gauge and medicated gauge. In the field of surgical operations these items are indispensable. There are made of very fine and plain woven cotton cloth. The raw material required for the manufacture of surgical bandages in the bandage cloth is not readily available in the market. According to the needs and requirement for one's own item of manufacture one should arrange with local weavers for the weaving of cotton bandage cloth. Cotton goods are made soft and absorbent by frequent washing with soap and chemical bleaching or drying in the sun. The processing removes the natural oils and waxes of the cotton fibers so that the water proof quality is lost. Generally about 15% of the raw cotton is removed in the treatment to render it suitable for surgical uses and this treatment is essentially the same for both absorbent cotton and the woven gauge.

## COST ESTIMATION

Plant Capacity	2000 Nos/Day
Land & Building	Rented
Plant & Machinery	Rs. 4.87 Lacs
Working Capital for 1 Month	Rs. 9.98 Lacs
Total Capital Investment	Rs. 16.45 Lacs
Rate of Return	74%
Break Even Point	59%

## ORTHOPAEDIC IMPLANTS AND INSTRUMENTS PLATES, SCREWS & NAILS (STAINLESS STEEL, TITANIUM & CARBON FIBER) [3454]

Orthopedic implants can be defined as medical devices used to replace or provide fixation of bone, or to replace articulating surfaces of a joint. In simpler words, orthopedic implants are used to either assist or replace damaged or troubled bones and joints. Orthopedic implants are mainly made from stainless steel and titanium alloys for strength and

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lined with plastic to act as artificial cartilage in order to reduce the stress at the articulating surfaces. Some implants are cemented into place and others are pressed to fit, so that your bone can grow into the implant for strength. Some examples of orthopaedic implants are: orthopaedic plates, orthopaedic nails, and orthopaedic screws. The key factor that guides bone healing is the interfragmentary movement, which determines the tissue strain and consequently the cellular reaction in the fracture healing zone. Thus, the methods of fracture fixation will be evaluated by considering their ability to reduce the interfragmentary movement. To achieve good and acceptable healing results, biomechanical principles should be understood and carefully taken into consideration. Orthopedic implants are mainly made from stainless steel and titanium alloys for strength and lined with plastic to act as artificial cartilage. Few are cemented into place and others are pressed to fit so that your bone can grow into the implant for strength.

#### COST ESTIMATION

Land & Building (5 Acres)	Rs. 5.38 Cr
Plant & Machinery	Rs. 12.41 Cr
Working Capital for 2 Month	Rs. 4.3 Cr
Total Capital Investment	Rs. 23 Cr
Rate of Return	41%
Break Even Point	44%

#### BLENDING AND BOTTLING PLANT OF LIQUOR FROM ENA [3455]

An Overview of the Indian Liquor Industry. The alcohol industry is very important for the government. It generates an estimated Rs. 18,000 crore per annum in spite of the fact that the per capita consumption of liquor in India is the lowest in the world. The total liquor industry is worth Rs. 2,000 crore. IMFL accounts for only a third of the total liquor consumption in India. Most IMFLs are cheap and are priced below Rs. 300 per bottle. Alcohol sales proceeds account for 45% of the total revenue collection in the country. Whiskey accounts for 60% of the liquor sales while rum; brandy any vodka account for 17% 18% and 6% respectively. MNC's share is only 10% and they have been successful only in the premium and super premium ranges. Post WTO the government may have opened India to foreign distilleries, but the duty has been increased from 222% to 464-706%. This is due to the fact that there is a 100% customs duty, 150% contravening duty, local taxes, distributor's margin, retailer's margin and publicity charges. The cost is finally borne by the consumer. Though the government claims that this is being done to protect the domestic liquor industry,

the domestic industry accounts for 99% of the market share.

#### COST ESTIMATION

Plant Capacity	6000 Cases/Day
Land (20000 sq.mt)	Rs. 11.12 Cr
Plant & Machinery	Rs. 9.45 Cr
W. Capital for 3 Months	Rs. 24.32 Cr
Total Capital Investment	Rs. 45.97 Cr
Rate of Return	28%
Break Even Point	33%

#### 2/3 WHEELER AUTO ELECTRONIC SPARE PART MANUFACTURING [3456]

(1) The Basics of a 2/3 wheeler Charging System. On almost every motorcycle you will find a battery, used for providing power for starting the bike and for buffering an amount of electric energy. The battery itself is charged by a generator driven by the engine, and as long as the engine is running there will be a current flowing through the battery. The no load voltage of a fully charged battery is about 13 Vdc. For charging it the charging-system should provide a voltage of about 14.4 Vdc and this should be a constant voltage at all engine-speeds. The generator itself is located in or on the engine, and on most bikes there is a separate regulator-rectifier unit located somewhere on the frame. The reason for this is that almost all motorcycles are equipped with a three-phase AC (Alternating Current) generator, while the electrical system on the bike is a DC (Direct Current) system. The rectifier part inside the regulator-rectifier takes care of converting the AC-current to the DC-current the battery needs. The three-phase AC generator is used so often because it is much more efficient and reliable than a DC-generator. It can produce power for charging the battery even with the engine idling. The regulator part of the regulator-rectifier is used to regulate the output-voltage (to the battery) to the 14.4 Vdc that is needed. A rectifier is an electrical device composed of one or more diodes that converts alternating current (AC) to direct current (DC). A diode is like a one-way valve that allows an electrical current to flow in only one direction. This process is called rectification. Types of rectifiers. The rectifiers are mainly classified into two types: • Half wave rectifier, • Full wave rectifier. Half wave rectifier. As the name suggests, the half wave rectifier is a type of rectifier which converts half of the AC input signal (positive half cycle) into pulsating DC output signal and the remaining half signal (negative half cycle) is blocked or lost. In half wave rectifier circuit, we use only a single diode. Full wave rectifier. The full wave rectifier is a type of rectifier which converts the full AC input signal (positive half cycle and negative half cycle) to pulsating DC

output signal. Unlike the half wave rectifier, the input signal is not wasted in full wave rectifier. The efficiency of full wave rectifier is high as compared to the half wave rectifier. Regulator, It controls the generator output according to the need. It controls the current or voltage.

#### COST ESTIMATION

Plant Capacity	120 Nos/Day
Land & Building (20000 sq.mt)	Rent
Plant & Machinery	Rs. 13 Lacs
W. Capital for 2 Months	Rs. 32.05 Lacs
Total Capital Investment	Rs. 49.06 Lacs
Rate of Return	52%
Break Even Point	67%

#### ASEPTIC FRUIT PULP MANUFACTURING PLANT [3457]

Guava is a pear or round shaped fruit growing in the tropical region. Guava is one of the most common plants abundantly grown in all regions of India. The trees are usually narrow and trunked. There is almost no bark in these trees. The fruit is characterized by white interior. The inside of the fruit is highly fleshy with a number of hard seeds. Guava fruit is one of the richest sources of Vitamin C. this fruit is widely acclaimed all over the world for its delicious taste and vitamin content. There is also a good amount of pectin in this fruit. A good quality commercial pulp is obtained by passing the guava fruit extracts through 0.7mm sieve. India is the home of mangoes. A large number of varieties are found in almost all parts of the country. According to statistics collected by the Fruit Development Adviser, Uttar Pradesh, Tamil Nadu, Karnataka, Bihar and West Bengal lead in mango growing. Among the numerous varieties, 'Safaida' and 'Duschri' of U.P. 'Alphonso' of Ratnagiri, 'Badami' of Mysore, 'Benishan' of East Coast, and 'Raspuri' 'Neelam' and 'Mulgoa' of Tamil nadu and Karnataka are the most important varieties for canning. The 'Bangalora' or 'Totapari' mango which is an assured and heavy annual bearer, and also yields an excellent pulp or juice, is sometimes canned to give a fairly good canned product. Juicy and fibrous varieties are not quite suitable for canning. They are mostly used for making juice, squash, nectar, chutney and pickles. The mango is one of the oldest tropical fruits and has been cultivated by man for over 1000 years, originating apparently in Indo-Burma region. To the large population of Asia, particularly Southern Asia and Malaysia, the mango plays the role as the major fruit of the region, much as the apple looms in importance in North America and Europe. The fruit is eaten in its raw, fresh form when ripe. Unripened fruits are commonly used for preparing jellies, jams and preserves. Mango blends well with numerous processed

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foods, such as ice creams. The pulp of the fruit is soft and tasty (pequant). Some persons not subtle presence of a turpentine like characteristics in some varieties although the aroma is delicately pleasant. It is also used to prepare squash, nectar beverages etc.

## COST ESTIMATION

Plant Capacity	48 MT/Day
Land & Building (6000 sq.mt)	Rs. 3.48 Cr
Plant & Machinery	Rs. 12.00 Cr
W. Capital for 2 Months	Rs. 12.88 Cr
Total Capital Investment	Rs. 29.28 Cr
Rate of Return	33%
Break Even Point	46%

## CRUDE OIL REFINING [3458]

Crude oil, also called petroleum, is a complex mixture of carbon and hydrogen (hydrocarbons), which exist as a liquid in the earth's crust. Crude oil has many compositions, some is black, thick and tar like, while other crude oils are lighter in color and thinner. The carbon and hydrogen in Crude oil are through to have originated from the remains of microscopic marine organisms that were deposited at the bottom of seas and oceans and was transformed at high temperature and pressure into Crude oil and natural gas. This oil and gas migrates upward through the porous rock, as it is less dense than the water which fills the pores. The oil and gas is trapped by a layer of impermeable rock through which they can't flow. Several different types of oil and gas "traps" exist; a common dome formed by folded sedimentary rocks. Crude oil is obtained by drilling a hole into the reservoir rock (sandstone, limestone etc.) and pumping it out. Although all fractions of petroleum find uses, the greatest demand is for gasoline. One barrel of crude petroleum contains only 25-35% gasoline. Transportation demands require that over 50% of the crude oil be converted into gasoline. To meet this demand some petroleum fractions must be converted to gasoline. This may be done by "cracking" - breaking down large molecules of heavy heating oil; "reforming" - changing molecular structures of low quality gasoline, molecules; or "polymerization" - forming longer molecules from smaller ones. Conversion oil Refining. Petroleum products are usually grouped into three categories; light distillate (LPG, gasoline, Naphtha), middle distillate (kerosene, diesel), heavy Distillate and residium (heavy fuel oil, lubricating oil, wax, asphalt). This classification is based on the way Crude oil is distilled and separated into fraction (called distillate and residium).

## COST ESTIMATION

Plant Capacity	25000 Barrels/Day
Land & Building (40000 sq.mt)	Rs. 32 Cr
Plant & Machinery	Rs. 92.50 Cr

Working Capital for 2 Months	Rs. 753 Cr
Total Capital Investment	Rs. 887 Cr
Rate of Return	71%
Break Even Point	18%

## POULTRY AND HATCHERY FARMING [3459]

Poultry farms are increasing steadily. Many government agencies are encouraging poultry farming and even short term training courses are organised regularly. Such farms have generated considerable employment opportunities in semi urban and rural areas. Marketing of poultry birds is expensive and death of birds during transit is the main bottleneck. This compels most of the poultry farms to concentrate on nearby markets even if it means less prices. Instead, if these birds are processed after dressing and packed in tins then transportation is easier, shelf life of the product goes up and the product is more hygienic. Poultry farming means 'raising various types of domestic birds commercially for the purpose of meat, eggs and feather production'. The most common and widely raised poultry birds are chicken. About 5k million chickens are being raised every year as a source of food (both meat and eggs of chicken). The chickens which are raised for eggs are called layer chicken, and the chickens which are raised for their meat production are called broiler chickens. The UK and USA consume more meat and eggs of chicken than other countries of the world. On an average the UK alone consumes more than 29 million chicken eggs everyday. However, in a word commercial poultry farming is very necessary to meet up the demand of animal nutrition (eggs and meat). Commercial poultry farming is also very profitable. And commercial poultry farming business is one of the traditional business ventures.

## COST ESTIMATION

Land (40000 sq.mt)	Rs. 3.20 Cr
Plant & Machinery	Rs. 40.00 Lacs
W. Capital for 2 Months	Rs. 76.70 Lacs
Total Capital Investment	Rs. 4.72 Cr
Rate of Return	28%
Break Even Point	54%

## DAIRY FARMING [HOLSTEIN FRIESIAN COW (HF COW)] [3461]

Holstein Friesians (often shortened as Friesians in Europe, and Holsteins in North America) are a breed of cattle known today as the world's highest-production dairy animals. Originating in Europe, Friesians were bred in what is now the Netherlands and more specifically in the two northern provinces of North Holland and Friesland, and northern Germany, more specifically what is now Schleswig-Holstein Germany. The animals were the regional cattle of the Frisians and the

Saxons. The Dutch breeders bred and oversaw the development of the breed with the goal of obtaining animals that could best use grass, the area's most abundant resource. Over the centuries, the result was a high-producing, black-and-white dairy cow. It is black and white due to artificial selection by the breeders. With the growth of the New World markets began to develop for milk in North America and South America, and dairy breeders turned to the Netherlands for their livestock. After about 8,800 Friesians (black pied Germans) had been imported, disease problems in Europe led to the cessation of exports to markets abroad. In Europe, the breed is used for milk in the north, and meat in the south. Since 1945, European national development has led to cattle breeding and dairy products becoming increasingly regionalized. More than 80% of dairy production is north of a line joining Bordeaux and Venice, which also has more than 60% of the total cattle. This change led to the need for specialized animals for dairy production. Until this time, milk had been produced from dual-purpose animals. The breeds, national derivatives of the Dutch Friesian, had become very different animals from those developed by breeders in the United States, who used Holsteins only for dairy production. Breeders imported specialized dairy Holsteins from the United States to cross with the European black and whites. For this reason, in modern usage, "Holstein" is used to describe North or South American stock and its use in Europe, particularly in the North. "Friesian" denotes animals of traditional European ancestry, bred for both dairy use. Crosses between the two are described by the term "Holstein-Friesian"

## COST ESTIMATION

Plant Capacity	50 Ltr/Day
Land & Building (100 Sq.yard)	Rented
Plant & Machinery	Rs. 86 Th.
Working Capital for 1 Month	Rs. 52 Th.
Total Capital Investment	Rs. 4 Lacs
Rate of Return	35%
Break Even Point	38%

## PROCESSING OF FRUITS AND VEGETABLES BY WASHING & CUTTING AND PRESERVATION BY DEHYDRATION [3462]

In India, Dehydration of fruits and vegetable has a bright prospects over other foods because India has diverse geographical and climatic conditions and produces a wide range of fruits and vegetables throughout the year. Here almost all type of fruits and vegetables are grown all over the country. These fruits and vegetables are valuable foods. They are a rich source of calcium,

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phosphorus, iron and vitamins. Dehydrated fruits & vegetables include a no. of articles mainly, fruit juices, dehydrated fruits and vegetables, squashes, cordials, Beverages, jam, jellies, marmalades, chutney, sauces, pickles, vinegar, pectin etc. Dehydration is at present defined industrially as drying by artificially produced heat under carefully controlled conditions of temperature, humidity, and air flow. The term 'dried' is applied to all dried products regardless of the method of drying. Fruits and vegetables are dried to enhance storage stability, minimize packaging requirement and reduce transport weight. Preservation of fruits and vegetables through drying based on sun and solar drying techniques which cause poor quality and product contamination. Energy consumption and quality of dried products are critical parameters in the selection of drying process. An optimum drying system for the preparation of quality dehydrated products is cost effective as it shortens the drying time and cause minimum damage to the product. To reduce the energy utilization and operational cost new dimensions came up in drying techniques. Among the technologies osmotic dehydration, vacuum drying, freeze drying, superheated steam drying, heat pump drying and spray drying have great scope for the production of quality dried products and powders. The keeping quality of a food material is greatly influenced by its water content. Fruits and vegetables containing high percentage of water deteriorate more rapidly than cereals, and root crops. Preservation of foods by sun drying is perhaps the oldest method known. Fruits like figs, amla, mango banana, coconut etc. and vegetables like tapioca, chillies, peas, turmeric and ginger are preserved by sun drying. The use of machinery for drying and the development of the dehydration industry are comparatively recent and like canning dehydration is assuming increasing importance as a process of good preservation.

### COST ESTIMATION

Plant Capacity	4 Ton/Day
Land & Building (1000 sq.mt)	Rs. 1.15 Cr
Plant & Machinery	Rs. 1.00 Cr
Working Capital for 2 Months	Rs. 5.38 Cr
Total Capital Investment	Rs. 7.65 Cr
Rate of Return	34%
Break Even Point	40%

### POLYETHYLENE WAX (PE WAX) (OXIDIZED IN POWDER FORM) [3463]

Polyethylene wax (PE wax) is an important constituent in the formulation of coating ink, adhesive etc. It can be made in two grade emulsifiable and non emulsifiable waxes. The differences

between both the grades are relation to the molecular weight. Industry considers a wax to be fatty solid with varying degrees of lubricity and plasticity. The technology in the coatings and ink field has grown over the years and the wax industry has changed with it. Natural waxes were first used in coating and ink industries, natural waxes may of vegetables, animal origin. The most prevalent of these waxes is Carbauba, which is still widespread in use. Carbauba wax is obtained from the leaves of a species of palm. When less expensive petroleum waxes became suitable, formulators discovered new characteristics which made these waxes unique among raw materials. Paraffin is obtained from the wax tailings remaining in the stills after the distillations of pure petroleum. Paraffins quickly became the additive of choice and entered into the greatest variety of formulations than any other waxes. Micro crystalline waxes also belong to this class. These are obtained by dewaxing heavy lubricating oils and petroleum residues. Over the years, many of the so-called synthetic waxes entered the market. Most prevalent of these materials are Fisher-Tropach waxes. More recently, the waxes of choice are Polyethylene waxes, with molecular weights of 1000 to 3000, odourless, tasteless and nontoxic. Today, Polypropylene waxes with melt points around 1500+C are being used in high bake and low gloss applications. The use of synthetic waxes have become much more widespread over the past two decades with the advances made with micronising techniques. One of the main Wax types used today are the low molecular weight polyethylenes both homopolymers and their partially oxidised derivatives. Low molecular weight would be defined by a number average ranging from 2000 to 5000 approximately. This level is, of course, considerably higher than paraffins, microcrystallines and F-T Wax. This difference renders them tougher and this in conjunction with their varying hardness and slip characteristics makes them ideal additives in inks and coatings. Use level could be roughly described as concentrations ranging from 0.25 to 5% on solids.

### COST ESTIMATION

Plant Capacity	10,000 Ton/Year
Land (10000 sq.mt)	Rs. 5.85 Cr
Plant & Machinery	Rs. 8.00 Cr
Working Capital for 1 Month	Rs. 7.93 Cr
Total Capital Investment	Rs. 22.43Cr
Rate of Return	21%
Break Even Point	62%

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# Start Your Own Industry

## SILVER RING, EAR RING, BANGLES, CHAINS) [3464]

Gold Jewellery Casting is having great demand and also having a bright future scope. There is a good export potential of these products. Jewellery is broadly defined as "ornament for the body"; it is ornament which can be worn and while this definition is frequently challenged and stretched by what are often referred to as "art jewellers" or "contemporary jewellers", the majority of jewellery can be described as being wearable ornaments, often made from high-value materials such as precious metals and gemstones. The Gems and Jewellery industry in India, like other MSME industries, is a highly fragmented industry. This characteristic of the Gems & Jewellery industry leads to a high share of the unorganized sector as compared to the organized sector. The components of jewellery include not only traditional gold but also a variety of diamond and platinum. The industry also trades in varieties of precious and semi-precious stones.

### COST ESTIMATION

Land & Building	Rent
Plant & Machinery	Rs. 2.80 Cr
W. Capital for 2 Months	Rs. 62.33 Cr
Total Capital Investment	Rs. 65.52 Cr
Rate of Return	39%
Break Even Point	29%

## PARAFFIN WAX FROM SLACK WAX (BY DEOILING CRYSTALLIZATION AND HYDROFINISHING) [3466]

Slack wax is petroleum product; the raw material of paraffin wax. Slack wax is a mixture of oil and wax in yellow or brown color, processed by pressing to decrease the oil content and discoloring by special powders after heating to produce paraffin wax. Slack wax verifies from light to heavy grades based on its melting point. Melting point 50-52 C is categorized in light grades and 53-55 C is heavy grade. All the types of slack wax are used as blending components or waterproofing agents in the manufacture of various industrial products. Hard Paraffin Wax, also known as paraffin wax, is a white to an off-white crystalline purified mixture of solid hydrocarbons derived from petroleum. Paraffin wax is ideally suited for the manufacture of premium quality candles, cosmetic creams & pharmaceutical ointments, petroleum jelly, and as a general purpose lubricant in industry.

### COST ESTIMATION

Plant Capacity	50 MT./Day
Land (10000 sq.mt)	Rs. 5.65 Cr
Plant & Machinery	Rs. 8.30 Cr
W. Capital for 2 Months	Rs. 25.63 Cr
Total Capital Investment	Rs. 40.49 Cr
Rate of Return	27%

Break Even Point 47%

## BENZYL ALCOHOL FROM BENZYL CHLORIDE USING WATER [3467]

Benzyl alcohol (C7H8O) and its esters are found in the essential oils of a wide variety of flowers and in balsams obtained from the exudation of trunks of resinous trees. Benzyl alcohol is one of the few chemicals used extensively not only in perfumery but in totally unrelated fields as well, such as pharmaceuticals, lacquers, etc. Large quantities of benzyl alcohol are therefore manufactured of which only a portion is used in the perfumery industry. Benzyl alcohol has a somewhat weak odour and its main use is as a solvent in perfumes and pharmaceuticals. It is represented by the following structural formula:

### COST ESTIMATION

Plant Capacity	10 MT/Day
Land & Building (4000 sq.mt)	Rs. 2.67 Cr
Plant & Machinery	Rs. 1.30 Cr
Working Capital for 2 Month	Rs. 6.36 Cr
Total Capital Investment	Rs. 10.54 Cr
Rate of Return	24%
Break Even Point	53%

## EPOXIDIZED SOYABEAN OIL (SECONDARY PLASTICIZER) USED IN PVC COMPOUND [3468]

Epoxidized soybean oil, better known by its acronym, ESBO, is a plasticizer used in polyvinyl chloride (PVC) plastics. It serves as a plasticizer and as a scavenger for hydrochloric acid liberated from PVC when the PVC undergoes heat treatment. A few EU surveys have shown fairly high levels of ESBO in foods, in which about 4% were above the current specific migration limit (SML) for ESBO of 60 mg/kg and about 15% of the samples were above 30 mg ESBO/kg food. High migration levels might lead to an intake that exceeds the existing Tolerable Daily Intake of 1 mg/kg body weight/Day. Epoxidized linolein a major component of ESBO. ESBO is manufactured from soybean oil through the process of epoxidation. The reason why vegetable oils are widely used as plasticizers is because the high numbers of carbon-carbon double bonds present in vegetable oils make them a good target for manipulation into some other useful products like in this case - from soybean oil into epoxidized soybean oil. The epoxide group is more reactive than double bond, thus providing a more energetically favorable site for reaction and making the oil a good hydrochloric acid scavenger and plasticizer. Usually a peroxide or a peracid is used to add an atom of oxygen and convert the -C=C- bond to an epoxide group.

### COST ESTIMATION

Plant Capacity	12 MT/Day
Land & Building (4000sq.mt)	Rs. 2.72 Cr
Plant & Machinery	Rs. 1.61 Cr
Working Capital for 2 Month	Rs. 4.13 Cr
Total Capital Investment	Rs. 8.76 Cr
Rate of Return	42%
Break Even Point	41%

## ELECTRONIC ENERGY METER [3469]

The energy meter is an electrical measuring device, which is used to record Electrical Energy Consumed over a specified period of time in terms of units. Every house, small factory, business establishment, shops, offices etc. need at least one energy meter to register power consumption. The supplier of electrical raises the bill on the basis reading shown by this meter. The producer of electricity sale the electricity to the electricity boards and boards have to sale this energy to the consumer. Consumer needs to pay the amount against the bill raised by the supplier. The data generate by the energy meter is the base to raise the bill by power supplier. Because of massive rural and urban electrification programme of Government, there is a good demand for this product. This product is available in single phase and three phases at different current rating as per customer's requirement. Though, newly developed electronic energy meter is also available in the market but in view of simple technology involved to manufacture this product and for replacement of spare parts, the present demand and future prospect of this product is reasonably good. An Electronic Energy Meter (EEM) functionally outperforms the traditional Ferraris wheel meter. One important advantage of EEM is that in non linear loads, its metering is highly accurate and electronic measurement is more robust than that of the conventional mechanical meters. The Power companies benefits from EEM in three significant ways. 1. It reduces the cost of theft and corruption on electricity distribution network with electronic designs and prepayment interfaces. 2. Electronic energy meter measures current in both Phase and Neutral lines and calculate power consumption based on the larger of the two currents. 3. EEM improves the cost and quality of electricity distribution. Types of Energy Meters with respect to Technology. Electro-Mechanical Energy Meters. These energy meters are obsolete now but some countries are still using it due to its cheapness and robustness. They are also called as Disk meter because a disk is present inside the Energy Meter which rotates when current flows through it. This rotation is captured by the dial and enhance its readings as per the amount



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of current flow. The dial of the Disk Meter shows only kWh usage since the time of Energy Meter installation. They came in both 3 phase and single phase types. Current rating for 3 Phase Disk Type Energy Meter is normally up to 100 Amps. A simple 3 phase disk type energy meter is present in the diagram below: Digital Energy Meters. Digital Energy Meters are the 2nd generation of Energy Meters. These meters digitally measure the energy and other factors like voltage, current, instantaneous Power and show them on a LCD. They can store energy consumption data up to 2 years' in EEPROM. Digital Energy Meters came in single phase and 3 phase both types. Single phase type digital energy meters normally just display and store MDI and Energy units and that's all. On the other hand, digital 3 phase energy meters give tariff based energy units storing as well. As the rate of the unit is more at Peak Load times than at off peak load times. So, Energy meters must store energy units in two slots i.e. peak slot (T1) and off peak slot (T2) to differentiate the timing of electricity usage. This is the reason that they are also called as TOD (Time of Day) Energy meters.

## COST ESTIMATION

Plant Capacity	400 Nos/Day
Land & Building (1400 sq.mt)	Rs. 1.39 Cr
Plant & Machinery	Rs. 1.14 Cr
Working Capital for 2 Month	Rs. 1.61 Cr
Total Capital Investment	Rs. 4.55 Cr
Rate of Return	69%
Break Even Point	37%

## ETHANOL FROM RECTIFIED SPIRIT [3470]

Commonly called alcohol has been described as one of the most exotic oxygen containing organic chemicals known because of its unique properties as solvent, beverage, combustible liquid, germicide and as building block or chemical intermediate for a host of organic chemicals. As a beverage it has been produced and utilized unknowingly as early as 4000 years ago by Pharaohs in Egypt. In India ethyl alcohol has been conventionally and economically produced by fermentation of a byproduct of sugar industry i.e. molasses. Although ethyl alcohol can also be produced from other carbohydrate containing materials by fermentation such as sugar, cassava (tapioca), rice, wheat, barley and other grains, the economics led to its production from molasses, because of its easy availability at a low price. A flourishing distillery industry grew for production of both potable and industrial alcohol from molasses. After price and distribution decontrol of molasses, its price shot up. The price of molasses increased from Rs. 200 per tone to anywhere between

Rs.1500 to Rs. 4500 per tonne. However, the molasses price has come down. The price of molasses fluctuates now. The price came down to as low as Rs. 50 per tone and increased some times back during lean period to Rs. 1000 per tone. The average molasses price however is around Rs. 200-300 per tone. Ethyl alcohol is available as an azeotropic constant boiling liquid in which the content of ethyl alcohol is about 95%. Distillation of this 95%. Distillation of this 95% alcohol can not make it more concentrated as the boiling point of this mixture is less than that of 100% ethyl alcohol. Alcohol can be used as motor fuel with considerable success. For all the uses of ethyl alcohol mentioned above 95% alcohol can be used except for as MOTOR FUEL. The ethyl alcohol should be anhydrous or 100% for its use as a component for blending in motor fuel. (a) Product characteristics and specification (b) Market survey (c) Manufacturing process (d) Plant capacity, raw materials and utilities (e) Project implementation and schedule (f) Project economics including project cost, production cost, profitability, cash flow statements, breakeven point, payback period and internal rate of return. Ethanol is a generic name for Ethyl Alcohol which can be produced by fermenting sugarcane molasses or juice. It is a volatile, flammable and colourless liquid. Ethyl Alcohol has three principle usages: 1. Portable – Portable alcohol is used in varying ratios and blends in the production of liquor. There are two main grades of portable alcohol and they are: a) Rectified Spirit or RS, which has a purity of 95%. b) Extra Neutral Alcohol is produced by redistilling RS and is used in the production of portable 2. Industrial – Industrial Alcohol is produced by denaturing alcohol with bitterants and thereby making it unfit for human consumption. This form of alcohol is called Special Denatured Spirit. 3. Fuel Ethanol – This grade of alcohol is also termed as Anhydrous Alcohol. Usage of ethanol-blended gasoline began in the late 1970s. Environmentally, the use of ethanol blends has assisted in reducing carbon monoxide emissions. In the United States, one out of every eight gallons of gasoline sold contains ethanol. Most of this ethanol is purchased as blends of 10% ethanol and 90% gasoline, known as E10, and is used as an octane enhancer to improve air quality.

## COST ESTIMATION

Plant Capacity	30 KL/Day
Land (12000 sq.mt)	Rs. 8.95 Cr
Plant & Machinery	Rs. 7.00 Cr
Working Capital for 2 Months	Rs. 7.00 Cr
Total Capital Investment	Rs. 24.55 Cr
Rate of Return	15%
Break Even Point	66%

## SORBITOL 70% FROM MAIZE STARCH & DEXTROSE MONOHYDRATE (DMH FROM MAIZE STARCH) WITH A CAPACITY OF PER DAY 100 MT. (SORBITOL 70%) & 25 MT. (DMH) [3471]

Sorbitol, a polyol (sugar alcohol), is a bulk sweetener found in numerous food products. In addition to providing sweetness, it is an excellent humectant and texturizing agent. Sorbitol is about 60 percent as sweet as sucrose with one-third fewer calories. It has a smooth mouthfeel with a sweet, cool and pleasant taste. It is non-cariogenic and may be useful to people with diabetes. Sorbitol has been safely used in processed foods for almost half a century. It is also used in other products, such as pharmaceuticals and cosmetics. D-Sorbitol, CH<sub>2</sub>OH(CHOH)<sub>4</sub>CH<sub>2</sub>OH (D-glucitol, L-gulitol), is a hexahydric alcohol with a 6-carbon atom straight-chain that contains six hydroxyl groups, and has a molecular weight of 182.17. It exists as a white, odorless, crystalline solid. Because of a negative heat of solution, sorbitol has a cooling effect when tasted. The hexitol has about two-thirds the sweetness of sugar. Sorbitol was first isolated by the French chemist Joseph Boussingault in 1872 from the fresh juice of mountain ash berries. It has since been found in many natural products such as edible fruits (apples, plums, peaches, cherries, etc.), berries of mountain ash, hawthorn and Sorbus domestica, tobacco, algae, and red seaweed. In spite of its wide occurrence, natural materials are not a good commercial source of sorbitol, and it is made synthetically. The content of sorbitol in grapes is insignificant and advantage is taken of this situation by using a sorbitol assay of grape wines as a means of detecting adulteration with other fruit wines or apple cider. A French chemist first discovered sorbitol in the berries of the mountain ash in 1872. It occurs naturally in a wide variety of fruits and berries. Today it is commercially produced by the hydrogenation of glucose and is available in both liquid and crystalline form.

## COST ESTIMATION

Land (40000 sq.mt)	Rs. 30.50 Cr
Plant & Machinery	Rs. 15.00 Cr
W. Capital for 2 Months	Rs. 11.37 Cr
Total Capital Investment	Rs. 59.87 Cr
Rate of Return	19%
Break Even Point	61%

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 Cold storage for fruits & vegetables  
 Cold storage for fruits, vegetables and pulses  
 Cold storage for potato (1,00,000 bags) 50 kg/bag

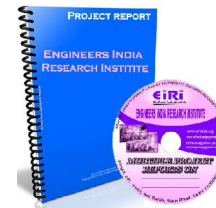
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containing copper and cobalt from mines	bandages	Brake oil (brake fluid)	Extraction of essential oils/ natural extracts oil
Copper beryllium alloy springs	Anesthesia (all types) used in hospitals (by inhalation, local & general)	Calcium base grease	Extraction of jasmine essence
Copper extraction from slag by electronic process	Band-aid (johnson & johnson type)	Camphor	Extraction of large cardamom oil
Copper foil	Disposable baby diaper	Candles (semi automatic)	Extraction of oil from oil seed expander extrusion technology)
Copper ingots, rods making & wire drawing	Disposable needles for syringes	Cardamom oil	Extraction of wild apricot (chulli) oil
Copper phthalocyanine blue & green	Disposable plastic cups, glass etc.(by using automatic thermoforming machine)	Cardmom oil (cap:20 kg/ day)	Fat liquor sulphated oil
Copper phthalocyanine crude (cpc)	Disposable plastic cups, glasses etc.	Castor oil	Fish oil
Copper plant	Disposable plastic razor	Castor oil & its derivatives	Food grade lubricant or grease
Copper plating on metallic parts by electroless dipping method, copper brightening colouring & lacquerint	Disposable Plastic Syringes (2 Ml. & 5 Ml. Size) (Cap: 40,000 Nos/Day)	oleoresin, turkey red oil, dco, hco, sebacic acid, 12-hydroxy stearic acid	Fractional distillation of crude oil
Copper powder	Disposable plastic syringes & needles	Castor oil derivative	Fractional distillation of essential oil & medicinal plant extract
Copper powder by electrolytic process	Disposable plastic syringes (2 ml and 5 ml size)	oleoresins	Fuel oil from jatropa (jatropa bio-diesel oil extraction from jatropa seed)
Copper powder from copper scrap	Disposable plastic syringes (sterilised)	Chilli oil	Garlic oil & powder
Copper products from copper scrap	Disposable plastic syringes, needles & needle tube plant	Citronella oils	Geraniol citronellal & hydroxy citronello
Copper rod wire drawing and pvc wire & cables	Disposable surgical caps & masks	Clove oil	Ginger oil, sandalwood oil & nagarmotha oil
Copper smelting plant	Hair Extension Manufacturing Unit (Hair Vig)	Compressor oils	Grease manufacturing
Copper strip coil from scrap	Integrated surgical cotton	Concentrate of rose, jasmine & lily etc.	Ground nut oil mill
Copper sulphate	Integrated surgical rubber goods industry	Core oil from cashewnut shell	Ground nut processing
Copper tubes and pipes from scrap	Sanitary napkins disposal paper bags (biodegradable)	Crude oil refining (refining of edible oils)	Hair removing wax
Copper wire drawing and Enamelling plant	Surgical adhesive plaster	Crude oil refining	High temperature grease
Copper wire drawing and super enamelling	Surgical cotton & bandage	Curcumin & turmeric oil from turmeric	Integrated wax complex
Copper wire rods from copper scrap	Surgical cotton plant	Cutting oil	Ionone from lemon grass oil
Copper/brass sheets, circle & utensils	Surgical cotton, roller bandage and crepe bandage	Decolourisation of refined rice bran oil (edible grade)	Jasmine & lilly flower oil
Electric wire (double cotton coated) aluminium and copper	Surgical disposable gloves (dipped rubber goods)	Dehydrated castor oil	Jatropha bio-diesel
Enamelling of copper wire	Surgical examination gloves	Dhoop batti	Jatropha biodiesel oil extraction from jatropa seed
G.i.wire and barbed wire	<b>SURGICAL GLOVES DIPPING PLANT</b>	Dot-4 brake oil	Kesh kala tel (vasmol or godrej keshkala tel type)
Melting of copper and rolling process	Surgical methylated spirit	Edible oil extraction and refining	Lemon grass oil production
Melting of copper and rolling process for getting circles	Thermocole based disposable glass, cups & plates	Edible oil manufacturing 200 tpd	Liquid paraffin
Metal separation (copper, tin, lead) from soent wash acid	<b>EIRI can prepare any Detailed Customised Project Report. Mail request at: eiritechnology@gmail.com</b>	Essential oils distillation unit (basil & cornmint)	Lube oil & grease
Paper coated aluminium and copper wire	<b>Edible Oils, Essential Oils &amp; Lubricating Oils Industry</b>	Essential oils from wood flex and chips (cyperus wood oil, rose wood oil, sandal wood oil)	Lube oil & grease from used engine oils
Re-rolling copper and brass sheet and rods	Aerosol	Essential oils manufacturing	Lube oil blending greases plant
Super enamelled aluminium and copper wires (from bar/rod)	Agarbatti & allied	Ethanol (bio fuel) from rice straw	Lube oil blending with greases
Super enamelled copper wire (from copper cathode rod)	Agarbatti perfumery compound	Eucalyptus oil	Lubricating oil
Super enamelled copper wire (from copper scrap)	Air/oil/fuel filter	Eugenol from cinnamon leaf oil	Lubricating oil repacking and manufacture of greases
Tmt rolling mill (cap.12000 Ton/month)	Ajowan extraction from ajowan seeds	Eugenol from cinnamon oil	Margarine butter (low cholestrol) from vegetable oil
Zinc & copper sulphate	Bees wax manufacture	Extra high temperature lubricating grease (2500-30000C)	Marorphali powder and oil (powder and extraction of oil frommarorphali)
Zinc and copper sulphate from brass ash	Bees wax refining & bleaching	Extraction & distillation of essential oils, oleoresins, flavours & fragrances	Menthol crystals
<b>Disposable/SurgicalProduct</b>	Bio-diesel from algae	Extraction of essential oils (by super critical method)	Menthol oil & crystal
Absorbant cotton (surgical cotton)	Blending of lube oil (blending of lubricating oils & manufacturing of greases)	Extraction of essential oils (cardamom, jeera, ajowan, ginger oils, etc. & packaging of ground spices)	Micro crystalline wax
Absorbent cotton and surgical			Mineral turpentine oil (m.t.o.)from petroleum (superior kerosene oil or other material)

(expeller process) Neem oil captive consumption in production of neem coated urea (plant capacity 2.00 mt per day) Neem oil plant (20mt seed processing per day) Oil drilling starch Oil filling plant Oil from artemisia herbs Oil seed & procurement, processing, preservation and storage Oil service of cars Oil soap Oils and storage Oilseeds procurement, processing, preservation and storage Oleo-resin from spices Olive oil plant Palm kernel oil extraction from palm kernel expeller Palm oil Palm oil crushing unit Palmrosa oil from grass Paraffin wax from slack wax Peppermint oil Phenyl pine oil based & black and white Pouches filling and packaging of edible oil Rajnigandha oil Re-refining of used engine oil Reclamation of hydraulic oils Reclamation of transformer oils Reclamation of used engine oil (by vacuum distillation process) Reclamation of used engine oils Refined oil- sunflower oil, groundnut oil, staff flower oil & cotton seed oil Refined vegetable oil Refining of palm oil, sunflower oil & groundnut oil Refining of palm oil, sunflower oil and cottonseed oils Rice bran oil (rbo) Rose crystals Rose oil Rust prevention lubricating oil Rust prevention oils Seed oil extraction unit Seeds grading and processing Silicon grease Silicone oil Silicone oil manufacturing Smokeless candle Solvent extraction & re-refining (soyabean) (cap 250mt/day & 50 mt/day oil refining) Solvent extraction & re-refining (soyabean) (capacity 250 mt/	day & 50 mt/day oil refining) Solvent extraction of rice bran oil Solvent extraction plant (oil cake based) Soya oil and cattle feed from soyabean Spice oil & oleoresins Spice oils or oleoresins (extraction of essential oil (cardamon, jeera, ajowan, ginger oil & other spice) Sunflower oil Synthetic almond oil Synthetic ghee Synthetic musk Synthetic wax Teflon grease Transformer oil Turbine oil Turmeric oil extraction from dry turmeric Turmeric oil oleoresin Vanaspati unit Vegetable oil extraction & refining Virgin coconut oil Wax crayons Wax emulsion for textiles Wetting oil (non ionic) Wire drawing lubricant	Automotive components (auto gears) Battery charger Battery plates Black/white t.v. picture tube Bread boards Business process outsourcing (bpo) Cable jelly compound Camera Capacitors Capacitors (aluminium electrolytic tantalum electrolytic ceramic) Carbon electrode used for battery cell Carbon potentiometers Carbon/metal film resistors Cassettes Tapes (cover) Ceiling fan Ceiling fans (stainless steel) Ceramic insulator Choke & patti Choke & starter Choke used for fluorescent lamps Chokes & starters Colour television (tv) Commutator for electric motor Compact disc Compact disc player (audio/video) Compact fluorescent lamps Compact fluorescent lamps with assembling Compact fluorescent lamps with assembly Computer assembly Computer hardware Computer keyboard Computer peripherals Computer printers Computer ribbon Computer ribbon cartridges Computer ribbon reinking or refilling Computer stationery Computer stationery & imported hardware parts Computer terminals Computerised washing machine (automatic) Condenser for motor using mpp film Control panel boards Cooling coil for air conditioners Copper rod wire drawing & pvc wire & cables Copper strip coil from scrap Cordless telephones Ct current coils used in transformers of refrigerators Ct/pt electronic meter Cyberkiosk D.g. sets Data centre Data processing centre	Dish antenna and cable tv network Display coolers Display system (led type) Distribution transformer Distribution transformer and repair Distribution transformer manufacturing and reconditioning Distribution transformer manufacturing and repairing unit Domestic electrical appliances-room cooler, washing machine, water heater, electric room heater Dry cell E waste recycling (electronic waste viz. crt, circuit board, mobile phones, picture tube, pc, tv, laptop, refrigerator etc.) E-rickshaw E-rickshaw (5 nos/day) E-waste Eht transformer Eht transformer for b&w t.v. & transformer for voltage, stabilisers Electric arc furnace & rolling mill Electric bulbs Electric control panel Electric energy meter Electric fans Electric horn for automobile Electric lamp/gls (incandescent lamp) Electric mixer Electric motor winding (for fan, mixies etc.) Electric motors upto 10 hp. rewinding of all types of motors, water pumps Electric scooter Electric steam iron Electric switches Electric switches plugs sockets & other accessories Electric water heater Electric water heater Electric wire (double cotton coated) aluminium and copper Electrical & electronic panel meters (analogue & digital, ammeters voltmeters etc) Electrical appliances Electrical appliances and spare parts Electrical choke Electrical fans Electrical fixtures Electrical modular switches Electrical motor Electrical panel Electrical panel board
<b>Electrical, Electronic, Computer And Software With Infotech Projects</b>			
	Aac & acsr aluminium conductors Air conditioners & parts (window type) Air conditioners (a.c) Air conditioners and parts Air conditions, led tv, washing machines & refrigerators integrated unit Aluminium alloy conductor Aluminium cable Aluminium electrolytic capacitors Armoured cables Assembly of pcb (printed circuit board) Audio cassette assembling & recording Audio cassettes duplicating recording Audio cassettes plane & recorded Audio magnetic heads Audio magnetic tape Audio tape deck system Audio/video cassettes Auto bulbs Auto electrical parts (armature) Auto wire outer (outer for auto wire) Automatic voltage stabilizer		

Market Overview Cum Detailed Techno Economic Feasibility Report on all Projects are available contact:

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## Highly Profitable Projects for New Entrepreneurs “EIRI Market Overview Cum Detailed Techno Economic Feasibility Reports”

Electrical panel boards, switch boards, etc of different sizes	Franchise computer education centre	Led lamps & tubes assembling unit	Polyester capacitors
Electrical stamping	Galvanizing process plant for electrical poles	Led light (home and street lights) assembly/ manufacturing plant	Portable generator set
Electrical switch gears and light fittings	Gas based heater for domestic and industrial application	Legal transcription & secretarial services centre (eou)	Portable television (tv)
Electrical switches and accessories (polycarbonate based)	Gas detector (lpg)	Linear ics trainer kit	Power capacitors
Electrical tester & screw driver manufacturing	Generator (battery operated)	Loud speaker	Power inverters
Electrical tubes & auto bulbs	Generator set & pump sets	Lt transformer repairing	Power plant (coal, molasses etc. based)
Electrolyte (like sulphuric acid) for lead acid dry rechargeable 5.5 a.h. battery	H.t. & l.t. insulator, ht air brake switches d.o. fuse, lightening arrestor	Luminar light fitting (indoor & outdoor)	Power plant (gas based)
Electrolytic capacitors	Hardware fitting for transmission line (overhead line material)	Medium voltage switchgear	Power plant (hydro based)
Electromagnetic relay	Headers for transistor ics semi conductor	Metal film resistors	Power plant from bio gas
Electronic assembly unit	Hepa filters	Metallised polypropylene, polyester film capacitor	Power transformers
Electronic choke	Ht & lt insulators	Mica base electronic components	Prestressed concrete electric poles (200 poles per day)
Electronic digital watches	Ht & mv industrial cubical switch board	Mica paper waste paper from mica waste	Printed circuit board manufacturing plant (single, double & multilayer)
Electronic digital weighing machine	Ht air brake switches, d.o. fuse & lightening arrestor	Micro processors trainer kits based on micro processors	Printed circuit board mounting
Electronic energy meter	Ht/lt industrial panels	Mini computer (personal computer)	Printed circuit board mountings for cfl (compact fluorescent lamps)
Electronic energy meter and flasher	Ice cream stabilizer	Miniature circuit breaker (mcb)	Processing of low grade tungsten ore
Electronic fire alarm	Ignition coil for automobile	Miniature watch batteries (button cell)	Pvc wire and cable
Electronic gas stove lighters	Induction heater	Mixer/grinder (mixi)	Radio taxi (on line taxi service)
Electronic manufacturing service (ems) facility in assembly of pcb and components	Industrial refrigeration manufacture	Mobile (transit) concrete mixer plant	Reconditioning of picture tube
Electronic pressure indicators, electricals, electronic liquid level indicators, electronic temperature indicator, digital tachometer	Information moving display (led type)	Mobile battery & accessories	Recovery of gold from p.c.b. & other electronic waste
Electronic quartz clock	Injection moulded energy meter boxes and security seal	Mobile battery, charger & accessories	Refrigerator, air conditioners, washing machine & colour television integrated unit
Electronic speaker	Insurance claim processing centre (eou)	Mobile charger screen protector and mobile housing glass	Refrigerators and air conditioners
Electronic speaker magnet & parts	Integrated circuits	Mono chrome computer monitor	Refrigerators and mini refrigerators
Electronic t.v.tuners & tape deck mechanism	Integrated unit of industrial panel led & cfl bulbs and servo controlled stabilizer	Motor stator, mcb, change over switches & main switches	Resin cast ct & pt (1kv)
Electronic telephone instruments	Intercom	Motor for electric ehicles	Semi conductor device
Electronic toys	Internet based stock trading	Motor start electrolytic capacitor	Semi conductors for transistors & diodes
Electronic watches & clocks	Inverter battery	Moulded case circuit breaker	Servo controlled stabiliser
Electronics speaker and parts	Inverter battery	Multi purpose cold storage	Setting up of a video studio
Epabx/epax system	Inverters 50 hz; 100 to 1000 KVA	Multilayer pcb	Sign board
Epoxy transformers (current & potential)	Jelly filled telephone cables	Multiple relay for low voltage	Silicone release paper
Exhaust fan	L.e.d. bulb & tubes	Multipurpose cold storage & dehydration and canning of fruits/vegetables	Single side and double side printed circuit boards (PCB) manufacturing unit
Fax machines	Laptop computers	Neon indicator	Smart energy meter
Ferro magnese/silico mangnese by electric furnace process	Lead acid battery	Neon sign manufacture	Smoke detectors
Fhp motors	Lead acid battery maintenance free battery	Optical fibre cables	Solar cells
Floppy diskettes	Lead acid battery plates & assembling of battery	Opto mechanical & electrical equipments	Solar electrical panel
Fluorescent lamp starter	Lead battery plates & assembly	Pcb manufacturing (automatic plant)	Solar modules
Fluorescent powder for fluorescent tube	Led bulb and tube	Photo colour lab	Solar photo voltaic system
Fluorescent tubular lamps with introduction to mercury vapour lamp	Led bulbs, tubes, panel light, down light etc.	Picture tube (b/w)	Solar power plant
	Led bulbs, tubes, panel light, downlight, spot light, street light, flood light, bay light manufacturing	Plain paper copier	Solar products
		Plastic film capacitors	Solar water heating panels
			Solder fluxes
			Soldering wire
			Stator and rotor of ceiling fan
			Stereo amplifiers
			Stereo cassette recorders/ players
			Storage battery
			Street light fitting (indoor and

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<p>outdoor) and cfl lamp Street light fittings surge suppressor Tantalum capacitors Teflon coated electric cable Teflon manufacturing Teflon tapes &amp; cables Telemedicine (distance health care) Telephone (push button &amp; cordless) Telephone (push button type) Telephone cords/cables Television (3 d) Television deflection components Television signal boosters Television tuners Toggle switches Torch and tri-light units (integrated plant including miniature bulbs &amp; tubes, egg, plastic moulding and moulds/dies manufacture) Traction batteries Transformer for tv Transformer for voltage stabilizer &amp; eht Transmission plant fabrication unit Transmission power line fitting Transmission tower fitting Tubular poles for electrical transmissions Tv &amp; computer monitor picture tube Tv audio equipment cabinets &amp; their assembling unit Tv news channel Uninterrupted power supply (ups) Variable frequency Variable voltage ac drive Video camera Video cassettes (complete manufacturing &amp; assembling) Video cassettes recorder (vcr) Voltage regulator for automobiles Voltage stabilizer &amp; tv gain booster Voltage stabilizers Water heater geyser (electric based) Water heater geyser (gas based) Water heater, immersion,</p>	<p>tubular heater Wax &amp; chemical coated, braided tinsel wire Welding cable and hose Welding electrodes Wind energy Wind energy power project Wire wound potentiometers Wire wound resistance Xlpe armoured cables</p>	<p><b>Fisheries And Aquaculture, Fish Processing, Fish And Marine Products, Fish Farming, Aquaculture, Prawn Farming, Shrimp Farming, Fish Meal, Fish Canning, Fish Feed &amp; Fish Preservation</b></p>	<p>Frozen french frise Instant food mix (idli mix, dosa mix, sambar mix, vada mix, gulabjamun mix, dhokla mix etc.) Milk processing plant 5000 ltr/day (pasteurized milk, flavoured milk, plain dahi &amp; misti dahi) Papain extraction industry Pasta roduction plant (short pasta) Project report milk processing plant 5000 ltr/day (pasteurized milk, flavoured milk, plain dahi &amp; misti dahi) Rice mill with rice bran oil extraction (solvent extraction) Sea food processing industry Tomato, guava and mango pulp cap:10 ton per hour Tomato, guava and mango pulp Cap:10 ton per hour Wheat flour mill Potato Processing Greem &amp; Red Aloevera Plantation and Processing Onion Dehydration Plant</p>
	<p><b>ENTERTAINMENT, MEDIA AND LEISURE BASED PROJECTS</b></p>	<p>Fish Net Production HDPE Fish Net Fish Processing Fishmeal And Fish-Oil Factory Of Capacity To Handle 100 Ton Of Raw Material In A Day</p>	<p><b>Formaldehyde, Urea Formaldehyde, Melamine Formaldehyde Powder, Phenol Formaldehyde Resin, Sodium Formaldehyde, Naphthalene Formaldehyde, Dye Fixing Agent, Formaldehyde Methanol Sort By:</b></p> <p>Caustic soda (sodium hydroxide (NaOH) by electrolytic process Di-methyl phthalates (dmp) Formaldehyde resin (urea, phenol, melamine &amp; their modified resins) Formaldehyde resin (urea, phenol, melamine) Formaldehyde resins (phenol (pf), melamine (mf) &amp; urea (uf) resins) Melamine formaldehyde Melamine formaldehyde resin Pet resin from ethylene glycol and terephthalic acid Sodium hydro sulfite (cap-6000 Tons/year)</p>
	<p>Amusement park Amusement park cum water park E-Car (4 Wheeler) It park Multiplex with cinema pvr (4 screen)</p>	<p><b>Food Processing Industries, Food Technology, Food Science &amp; Technology, Food Industry, Food Industry, Agro Food Processing, Food Processing Projects, Food Processing Packaging</b></p>	
	<p><b>Fasteners, Wire Nails, High Tensile Fasteners, Nuts, Bolts, Washers, Rivets, Clips, Hooks, U-Clamp, Nails, Screw, Centre Bolts, Mild Steel Fastener, Clasps, Hook, Stainless Steel Fastener, Paper Clip, Drawing Pin, Wire Drawing And Wire Nail</b></p>	<p>Agrolactor soya milk Aloevera cultivation &amp; processing Chakki flour mill Chana Dall and Besan Plant Food products (integrated units) Food colour Food colour &amp; roasted groundnut gram peas etc. in pouches Food dehydration (fruits &amp; vegetables) Food flavours (whisky), vodka, grape, butter scotch) Food grade grease or lubricant Food grade lubricant or grease Food park Food parlour Food processing and training centre Food processing industry Food processing unit (garlic, pine apple canning &amp; tomato processing) Food products complex (dehydrated onions, garlic powder &amp; flakes, cattle feed, tomato powder, tomato products, canned fruits &amp; vegetables, tomato puree, groundnut oil, refined oil, dehydrated grapes etc. Food products manufacturing (integrated complex)</p>	
	<p>Billets from steel scrap Cold rolling of steel strips Fasteners (nuts &amp; bolts) used in oil and gas Fasteners (nuts and bolts) used in oil and gas Hardware iron door fitting (tower bolts, aldrops, hinges and handles etc) Integrated scrap yard M.s.billets M.s.fasteners and s.s. fasteners Prefabricated steel framed building manufacturing plant Re-bar and steel sections Stainless steel sinks Steel billets from steel scrap &amp; sponge iron Steel transmission line towers and rolling mill to produce steel sections</p>		
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* Technology of Gums, Adhesives & Sealants with Formulations	950/-95	* Modern Packaging Technology for Processing Food, Bakery, Snack Foods, Spices and Allied Food Products	900/- 90	* Technology of PVC Compounding & Its Applications	900/- 90
* Hand Book of Adhesives with their Formulae (2ndEdn.)	900/-65	* Food Packaging Tech.	900/- 90	* Polymer & Plastic Technology	950/-90
* Adhesives Technology & Formulations Hand Book	975/- 98	* Tech. of Printing Inks	1150/-115	* H.B. of Fibre Glass Moulding	450/-45
* Technology of Glue & Adhesives with Adhesives Bonding & Formulations	1100/-110	* Packaging Technology	1150/-115	* Techn. of Reinforced Plastics	750/-75
* Complete Hand Book on Adhesives and Adhesion Tech. with Project Profiles	900/- 90	* Corrugated Boxes	1100/-110	* Plastic Additives Technology	950/- 95
<b>SMALL SCALE INDUSTRIES, STATIONERY, PAPER, INKS, CANDLES &amp; EXPORT BUSINESS</b>		<b>PAINT, VARNISH, SOLVENTS, POWDER COATING &amp; LACQUERS</b>		* Technology of PET Bottles, Preform and PET Recycling	850/- 85
* Start Your Own Export Business (How To Export)	450/- 45	* Paint Pigment Varnish & Lacquer Manufacturing	450/- 45	* Modern Technology of Extrusion & Extruded Prod.	800/- 80
* Start Your Own Small Business and Industry	350/- 35	* Paint Varnish Solvents & Coating Technology	800/- 80	* Technology of Synthetic Resins & Emulsion Polymers	975/-100
* Candle Making Processes & Formulations Hand-Book	750/- 75	* Paint, Pigment, Solvent, Coating, Emulsion, Paint Additives & Formulations	950/- 95	* Technology of Plastic Additives with Processes & Packaging	900/- 90
* Stationery, Paper Converting & Packaging Industries	400/- 40	* Technology of Coatings, Resins, Pigments & Inks Industries	975/-100	* Complete Technology Book On Identification Of Plastics And Plastic Products Materials	975/-100
* Modern Inks Formulaes & Manufacturing Industries	325/- 35	* Mfg. Tech. & Formulations H.B. on Thinners, Putty, Wall & Indu. Finishes & Synthetic Resins	900/- 90	* Identification Of Plastics & Other Plastic Process Industries	950/- 95
* Profitable Businesses to Start for Entrepreneurs	400/- 40	* Technology of Synthetic Resins & Emulsion Polymers	975/-100	* Complete Technology Book Of Plastic Processing And Recycling Of Plastics With Project Profiles	1250/-125
* Modern Small & Cottage Scale Industries	650/- 65	* Technology of Paints and Coating with Formulations	1750/-175	* Complete Hand Book Of Blow Moulding Plastics Technology With Project Profiles	975/- 98/-
* Profitable Small Cottage Tiny & Home Industries (2nd Edn.)	900/-90	* Powder Coating Technology	750/- 75	* Modern Technology Of Injection Moulding, Blow Moulding, Plastic Extrusion, Pet & Other	975/-100
<b>BIO FUEL, BIO GAS &amp; BIOPROCESSING</b>		* Paint Technology Hand Book with Formulations (Acrylic Emulsion, Powder Coating, Leveling Agents, PU Ink Binders, Dispersing Agents, Formaldehyde, Polyester Resin, Acrylic Binders and PU Coatings)	1100/- 110	<b>BEE-KEEPING &amp; HONEY PROCESSING</b>	
* Technology of Bio-Fuel (Ethanol & Biodiesel)	975/-100	* Complete Hand Book on Paints, Varnish, Resins, Copolymers and Coatings with Manufacturing Process, Formulations/Tech	900/-90/-	* Tech Book On Beekeeping And Honey Products With Project Profiles	975/- 98
* Mod.Tech.of Bioprocessing	1475/-150	* Manufacture Of Nitrocellulose Lacquers, Pu Lacquer, Vacuum Metallizing Lacquers And Other Lacquers With Formulations And Project Profiles	750/- 75/-	* Complete Technology Book on Honey Processing and Formulations (Harvesting, Extraction, Adulteration, Chemistry, Crystallization, Fermentation, Dried Honey, Uses, Applications and Properties)	1100/- 110
* ModTech.of BioGas Production	1975/-	<b>PLASTIC/POLYMER PROCESSING, COMPOUNDING, INJECTION MOULDING, ROTATIONAL MOULDING, PLASTIC FILM, FIBRE GLASS, PLASTIC WASTE RECYCLING, MOULDS, PET &amp; RESINS, ADDITIVES INDUSTRIES</b>		* Modern Bee Keeping & Honey Processing	375/- 40
<b>SWEETS, NAMKEEN &amp; SNACK</b>		<b>MOULDING, ROTATIONAL MOULDING, PLASTIC FILM, FIBRE GLASS, PLASTIC WASTE RECYCLING, MOULDS, PET &amp; RESINS, ADDITIVES INDUSTRIES</b>		<b>STARCH MANUFACTURING</b>	
* Tech of Sweets (Mithai)	1050/-110			* Technology of Starch Manufacturing (Applications, Properties and Composition) with Project Profiles	
* Technology of Sweets (Mithai), Namkeen and Snacks Food with Formulae	1750/- 175			1100/- 110	
* Mfr. of Snacks Food, Namkeen, Pappad & Potato Products	900/- 90				



<b>SPICE, SEASONING, CONDIMENTS &amp; COLD STORAGE</b>	<b>MINERAL AND MINERALS</b>	<b>ORGANIC FARMING &amp; FOOD/NEEM</b>
* Technology of Spices and Seasoning of Spices with Formulae 975/- 98	* Hand Book of Minerals and Minerals Based Industries 975/- 100	* Hand Book of Organic Farming and Organic Foods with Vermi-Composting & Neem Product 1100/-
* Technology Of Spices (Masala) And Condiments With Project Profiles (Cultivation, Uses, Extn, Composition etc) 1100/-110	<b>RUBBER CHEMICALS, COMPOUNDS</b>	<b>FISH FARMING &amp; FISHERY PRODUCTS</b>
* Spices & Packaging with Formula 900/- 90	* Rubber Chemicals & Processing Industries 400/- 40	* Hand Book of Fish Farming and Fishery Products 650/- 65
* Start Your Own Cold Storage Unit 900/- 90	* Modern Rubber Chemicals, Compounds & Rubber Goods Technology 1500/- 150	<b>TEXTILE AUXILIARY &amp; CHEMICALS</b>
<b>NON WOVEN TECHNOLOGY</b>	* Technology of Rubber & Rubber Goods Industries 900/- 90	* Textile Auxiliaries & Chemicals with Processes/Formula 1050/- 105
* Complete Tech. of Nonwovens Fabrics, CarryBags, Composite, Geotextiles, Medical Textiles, Fibres, Felts, Apparels, Spunlace and Absorbent Nonwoven 1175/- 120	<b>AYURVEDIC/HERBAL MEDICINES</b>	* Tech of Textile Chemicals with Formulations 1450/- 145
<b>PHARMACEUTICALS &amp; DRUGS</b>	* Ayurvedic & Herbal Medicines with Formulae 750/- 75	* Modern Technology of Textile Auxiliary and chemicals with formulations 1100/- 110
* Tablets, capsules, Injectables, Dry Strups, Oral & External Preparations, Eye, Ear ....1575/- 155	* Hand Book of Ayurvedic Medicines with Formulations 900/-90	* Textile Processing Chemicals, Enzymes, Dye Fixing Agents and Other Finishes with Project Profiles 1275/- 125
<b>LEATHER &amp; LEATHER PRODUCTS</b>	<b>STAINLESS STEEL, NON FERROUS METALS, BILLETS &amp; ROLLING MILL</b>	<b>DISINFECTANTS, CLEANERS, PHENYL, DEODORANTS, DISHWASHING DETERGENTS ETC.</b>
* Hand Book of Leather & Leather Products Technology 850/-85	* Modern Technology of Non Ferrous Metals and Metal Extraction 1100/-110	* Manufacture of Disinfectants, Cleaners, Phenyl, Repellents, Deodorants, Dishwashing Detergents with Formulae 900/- 90
<b>BIOTECHNOLOGY</b>	* Processing Technology of Steels and Stainless Steels 1900/-190	<b>COFFEE &amp; COFFEE PROCESSING</b>
* Hand Book of Biotechnology 900/-90	* Modern Technology of Rolling Mill, Billets, Steel Wire, Galvanized Sheet, Forging & Castings 2500/-250	* Coffee & Coffee Processing 525/- 53
<b>CERAMICS &amp; CERAMIC PROCESS</b>	* Mfg Tech of Non-Ferrous Metal Products 1750/- 175	<b>ONION CULTIVATION/PROCESSING</b>
* H.B.of Ceramics & Ceramics Processing Technology 1975/- 200	<b>FOOD ADDITIVES/CHEMICALS AND SWEETENERS &amp; FOOD EMULSIFIERS</b>	* Onion Cultivation, Dehydration, Flakes, Powder, Processing & Packaging Technology 975/- 98
* Modern Tech Of Ceramic Products With Composition 1100/- 110	* Modern Technology of Food Additives, Sweeteners and Food Emulsifiers 1575/- 156	<b>BUILDING MATERIAL &amp; CHEMICALS</b>
<b>TREE FARMING</b>	* Technology of Food Chemicals, Pigments and Food Aroma Compounds 1100/- 110	* Technology of Building Materials & Chemicals with Processes 950/- 95
* Hand Book of Tree Farming 800/- 80	<b>DISPOSABLE MEDICAL PRODUCTS</b>	<b>TEXTILE, GARMENTS, DYEING...</b>
<b>MUSHROOM PROCESSING</b>	* Technology of Disposable Medical Products 1750/-175	* Mod. Tech. of Bleaching, Dyeing, Printing & Finishing of Textiles 750/- 75
* Hand Book of Mushroom Cultivation, Processing & Packaging 975/- 98	<b>SOYA MILK, TOFU &amp; SOY PRODUCTS</b>	* Technology of Textiles (Spinning & Weaving, Dyeing, Scouring, Drying, Printing and Bleaching) 900/- 90
<b>BIOFERTILIZERS &amp; VERMICULTURE</b>	* Technology of Soya Milk, Tofu, Hydrolyzate, Allied Soyabean Products with project Profile 975/- 100	* Garments Manufacturing Tech. 900/- 90
* Biofertilizers & Vermiculture 900/-100	* Technology of SOYBEAN Products with Formulae 1100/- 100	<b>BAKERY, CONFECTIONERY, BISCUITS, COOKIES, BREAKFAST, PASTA &amp; CEREALS</b>
<b>BIODEGRADABLE PLASTICS AND POLYMERS</b>	<b>PRODUCTS FROM WASTE</b>	* Technology of Biscuits, Rusks, Crackers & Cookies with Formulations 975/- 98
* Modern Technology of Biodegradable Plastics and Polymers With Processes (Bio-Plastic, Starch Plastics, Cellulose Polymers & other) 975/- 100	* Technology of Products from Wastes (Industrial, Agriculture, Medical, Municipality, Organic & Biological) By Panda 900/- 90	* Hand Book of Confectionery with Formulations 900/- 90
* Production of Biodegradable Plastics & Bioplastics Tech 1500/-150	* Products from Waste Technology Hand Book 1100/- 110	* Breakfast, Dietary Food, Pasta & Cereal Products Tech 1150/-120
<b>FROZEN FOOD/FREEZE DRYING</b>	<b>WINE PRODUCTION</b>	* Modern Bakery Products 900/- 90
* Frozen Food Processing & Freeze Drying Technology 1000/- 100	* Technology of Wine Production and Packaging 1750/- 175	* Modern Bakery Technology & Fermented Cereal Products with Formulae 1250/-125
* Frozen Food Products 900/- 90	<b>CASTING TECHNOLOGY</b>	* Confectionery, Chocolates, Toffee, Candy, Chewing & Bubble Gums, Lollipop & Jelly Products 1750/-175
<b>BEER, VODKA, BEVERAGE, WHISKY</b>	* Casting Technology H.Book 750/- 75	* H.Book of Bakery Industries 950/-95
* Beer, Cereal Based Beverages, Soy Beverages, Fruit Wine, Vodka, Tea Beverages & Beverages 1100/- 110	<b>PULP &amp; PAPER TECHNOLOGY</b>	<b>TECHNOLOGY OF FIBRES</b>
* Mfg Tech Hand Book Of Gin, Rum, Whisky, Distillery Spirits, Brandy, Fruit Spirits, Flavours, Maturation & Blending With Other Alcoholic Beverage 1250/- 125	* H.B.of Pulp & Paper, Paper Board & Paper Based Tech. 1150/- 120	* Fibres With Manufacturing Processes & Properties With Project Profiles 975/- 100
	<b>FLOUR MILL (ATTA MAIDA, SUJI)</b>	
	* Start Your Own Wheat Flour Mill (Atta, Maida, Suji, Bran & Besan) 900/- 90	