

HI-TECH PROJECTS

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RECOVERY OF BASE OIL FROM USED OIL/WASTE OIL [3420]

Now-a-days engine oil has become an important factor for automobile and other purposes and since the prices of all petroleum products have gone up. It has become extremely necessary to refine used engine oil which could be reused as original. Keeping this view Defense Research (Materials), Kanpur has developed a very simple process which envisages utilization of sulphuric acid, activated clay and filter aid as the raw materials and the suggested reclaimed economical unit for this industry is 200 tons per annum, and estimated capital outlay is Rs.1.5 lacs. Engine oil becomes contaminated with foreign material in service. In circulating systems, where a substantial quantity of oil is involved, it is desirable to maintain it as clean as possible to provide maximum working efficiency and to keep wear and damage of lubricated parts to a minimum. Reconditioning of a used oil/waste oil may be accomplished by a continuous by pass or batch methods or combination of these. In the continuous system the entire amount of the oil from main pressure line is continuously filtered. In the bypass system a fraction of the total is continuously filtered. Contaminants is a used oiled may be divided into two classes.

1. Products resulting from chemical action, within the system i.e. mainly by products of combustion.
2. Foreign materials which enter the system.

Products resulting from chemical action within the system are as follows:

- i. Carbon and other products of decomposition of oil or of incomplete combustion of fuel.
- ii. Oxidation products (which may be either soluble or insoluble in the oil) due to chemical action at high temperatures.
- iii. Gummy products both soluble and in soluble resulting from polymerization (combining) of unsaturated components in the oil.
- iv. Sulphur compounds:- Formed by sulphur in the oil or fuel foreign material may include some of the following:
 - a) Dirt and dust from the air.
 - b) Metal particles resulting from wear of operating parts of the machine, or left over from machining operation during on overhaul.
 - c) Foundry cores and from castings.
 - d) Water condensed from air moisture or products of fuel combustion, and Fuel dilution.

COST ESTIMATION

Plant Capacity	28 MT/Day
Land & Building (1834 sq.mt)	Existing
Plant & Machinery	Rs. 1.50 Cr
Working Capital for 1 Month	Rs. 3.99 Cr
Total Capital Investment	Rs. 5.60 Cr
Rate of Return	54%
Break Even Point	36%

PAN MASALA AND ZARDA MANUFACTURING IN POUCHES [3421]

Pan masala is a mouth freshener with catechu, chuna, flavouring agents and perfumery compounds etc. It refreshes the mouth and gives the feeling of cold in throat when taken in small amount. Pan Masala tobacco is chewed either with pan or directly without any other thing. Zarda of various grades, specified by different numbers, constitutes different proportions of zarda in tobacco. The higher the grade number of zarda panmasala, the higher it will contain zarda content. Zarda if taken in high dose is injurious to health and gives the feeling of laziness and unconsciousness. Kimam is the sweetened masala, usually taken by peoples who are not in regular routine of chewing tobacco. It is generally a mouth freshener and believed to increase appetite by improving digestion system. The custom of chewing breath fresheners after meals has a very long history, particularly in India. Pan Masala is a balanced mixture of areca nuts (also known as supari), catechu, cardamom, lime, flavouring agents and some natural perfuming materials. It is widely used to remove the bad odour of the mouth by providing a fresh breath and comes in attractive user-friendly packets and containers. Despite its growing demand in rural areas, pan masala is gaining prominence in urban areas of India. Factors like its immense popularity, constantly increasing disposable incomes, convenient packaging, aggressive advertising campaigns by manufacturers and the large-scale switching of consumers from tobacco products to pan masala are currently encouraging the growth of pan masala market. According to IMARC group, the Pan Masala market has reached values worth around INR 31,000 Crores in 2015 growing at a CAGR of 17% during 2008-2015. Among the various types of pan masala available in the Indian market, pan masala containing tobacco represents the dominating type accounting for more than 50% of the entire market. Pan Masala is followed by plain pan masala and flavoured pan masala. The Indian exports of pan masala are dominated by UAE accounting for around one-third of the total export values. UAE is followed by USA, Singapore, Afghanistan, South Africa, Saudi Arabia and Malaysia. Rajnigandha represents the largest manufacturer of pan masala followed by RMD, Pan Vilas and Pan Parag.

COST ESTIMATION

Land (600 sq.mt)	Rs. 79 Lacs
Plant & Machinery	Rs. 90 Lacs
Working Capital for 1 Month	Rs. 1.44 Cr
Total Capital Investment	Rs. 3.25 Cr

Rate of Return	45%
Break Even Point	47%

LPG CYLINDER VALVES MANUFACTURING PLANT [3422]

Valves are a type of mechanical device that are implemented to regulate flow, pressure, or both, within a system. They are an integral aspect of any piping system that requires a fair amount of control. The primary functions of a conventional valve comprise flow control in the form of rate of flow and the direction of flow. Valves are thus used to prevent back flow, and relieving pressure. The various valve types, designs, and models can be functional in specific industrial, commercial, and residential applications. LPG valves may need to be designed especially for maintaining high pressure within the cylinder and to let out the gas at a rate specified and within regulatory permission. These valves are also designed to withstand the possible damage they may take during transportation. An additional cap is often screwed over the valve in order to further reduce the likelihood of gas leakage when the cylinder is not in use. The gas cylinder valve is the primary safety mechanism on a gas cylinder and shall not be tampered with. It is a device used to contain the contents of the cylinder that is under pressure. Cylinder valves are fitted with pressure relief valves of different types (depending on the cylinder) to protect against catastrophic failure of the cylinder valve. Cylinder valves open in an anticlockwise direction and close in a clockwise direction. Valves shall never be opened without a regulator attached. Always open cylinder valves slowly. There are two basic types of LP Gas cylinder valves for vapour service, namely, self-closing, clip-on valves and hand wheel operated valves. They can come with or without pressure relief valves depending on local regulations.

1. Self-Closing, Clip-on Valve. These are typically used for domestic cylinders where low cost and fit for service valves are required. Common types in the market are compact, bayonet, or snap on (snap tight) valves. They can be fitted with excess flow limiters and/or anti-dirt tubes (also called education tubes). Because these valves are open-topped, plastic dust caps are recommended to be fitted during storage and transportation to prevent entry of foreign matter. Performance requirements:
 - i) The valve shall be of the self-closing type, closed by gas pressure in the cylinder assisted by a small stainless steel spring.
 - ii) The valve shall be completely gas-tight and shall have no regulating function that can restrict high filling rates.
 - iii) The 13kg and 50kg cylinder valves

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shall be with a safety relief valve. The 3kg and 6kg cylinder shall be fitted with camping valves. iv) If it is with a safety relief valve, then the safety relief valve shall be of pop-action type and shall have a set pressure of 2.55 MPa.

COST ESTIMATION

Plant Capacity	6000 Nos/Day
Land (3000 sq.mt)	Rs. 1.80 Cr
Plant & Machinery	Rs. 1.81 Cr
W. Capital for 2 Months	Rs. 1.77 Cr
Total Capital Investment	Rs. 5.67 Cr
Rate of Return	32%
Break Even Point	51%

AIR CONDITIONER MANUFACTURING (INDOOR UNITS AND OUTDOOR UNITS) [3423]

An air conditioner is a machine which keeps the air in a building cool and dry. The purpose of an air conditioner is to maintain a comfortable indoor environment. The comfort we are used to is determined by a combination of 3 factors. • Temperature, • Humidity, • Air Distribution. For this reason, the main purposes of air conditioners are to: • Control room temperatures (cooling/heating). • Control room humidity levels (drying, humidifying). • Optimise air flow (circulation, distribution). • Clean the air (filtration). Working principle. An air conditioner collects hot air from a given space, processes it within itself with the help of a refrigerant and a bunch of coils and then releases cool air into the same space where the hot air had originally been collected. This is essentially how all air conditioners work. Many folks believe that an air conditioner produces chilled air with the help of machines installed inside it, allowing it to cool a room so quickly. That might also explain why it consumes so much electricity. In reality, however, that's a misconception. An air conditioner is not a magical device; it just uses some physical and chemical phenomena very effectively to cool a given space. When you switch an AC on and set your desired temperature (say, 20 degrees Celsius), the thermostat installed in it senses that there is a difference in the temperature of the room's air and the temperature that you've chosen. A thermostat constantly monitors the temperature of the system so that it's maintained near a user's desired point. This warm air is drawn in through a grille at the base of the indoor unit, which then flows over some pipes through which the refrigerant (i.e., a coolant fluid) is flowing. The refrigerant liquid absorbs the heat and becomes a hot gas itself. This is how heat is removed from the air that falls on the evaporator coils. Note that the evaporator coil not only absorbs heat, but also wrings out

moisture from the incoming air, which helps to dehumidify the room. This hot refrigerant gas is then passed on to the compressor (located on the outside unit). Being true to its name, the compressor compresses the gas so that it becomes hot, since compressing a gas increases its temperature. This hot, high-pressure gas then travels to the third component – the condenser. Again, the condenser remains true to its name, and condenses the hot gas so that it becomes a liquid.

COST ESTIMATION

Plant Capacity	400 Nos./Day
Land (4000 sq.mt)	Rs. 4.30 Cr
Plant & Machinery	Rs. 3.42 Cr
W. Capital for 2 Months	Rs. 18.40 Cr
Total Capital Investment	Rs. 26.60 Cr
Rate of Return	86%
Break Even Point	21%

PVC PIPE MANUFACTURING, PVC PIPE FITTING AND HDPE PIPE MANUFACTURING [3424]

PVC is a thermosetting plastic. In other words, it can only be softened and molded into form once. If it is softened and remolded a second time it will lose some of its favorable characteristics. Recently, 'Fuseable PVC' has come to market to compete with the fuseable properties of HDPE Pipe. PVC also has a high chemical resistance. While it will react with some chemicals, there are a large number of chemicals it will not react with, making it an excellent product for industrial applications. Because PVC is mostly a 'rigid' pipe product, PVC pipe is an excellent pipe choice for just about any application that does not require a 'flexible' solution. The most common uses for PVC are: Water Distribution, Underground Fire Main Distribution, Gravity Sanitary Sewer Collection, Forcemain Sewerage Transmission, Irrigation Mains, Reclaimed Water Distribution, Electrical & Communications Conduit, Numerous Industrial Applications, PVC Pipe fittings are integral and essential part of PVC piping systems. These are required where ever PVC pipes are used. The efficiency of various PVC piping systems depend largely upon the quality of the fittings used in pipe assembly. The most commonly used PVC pipe fittings are Sockets, Tees elbows, Bends, Joints etc. PVC pipes are fast replacing the conventional metallic pipes in many applications such as electrical conduits, irrigation, sanitary fittings, portable water etc. They are also used in tube wells and due to their chemical resistance properties they find applications in chemical plants too. Over 70% of India's rural population does not have access to safe drinking water. Villagers have to trek for miles to get water. It is estimated that at least 24

million people are living at risk in about 34,000 cholera, endemic villages, and small towns. The magnitude of the problem is so enormous that it is essential to have a high performance and low cost scheme to convey extensively the water now available to as many villages as possible. Such a system is now possible with PVC pipe lines. PVC can replace conventional materials like steel, cast iron and asbestos cement and in advanced countries it has already done so. HDPE pipe market has been witnessing steady rise for the past decade owing to its rise in application in its relevant industry. The product is being actively used across the globe resulting in the quantitative increase in demand which is in turn pushed the revenue generation year on year. In term of types the global HDPE pipe market is segmented into PE80, PE100 pipe. The HDPE pipe market segmented by region include US, Canada, Mexico, Germany, France, UK, Italy, Russia, China, Japan, India, Korea, Australia, Brazil, Middle East and Africa.

COST ESTIMATION

Land (12000 sq.mt)	Rs. 3.25 Cr
Plant & Machinery	Rs. 2.20 Cr
W. Capital for 2 Months	Rs. 2.76 Cr
Total Capital Investment	Rs. 9.16 Cr
Rate of Return	25%
Break Even Point	59%

EUCALYPTUS OIL MANUFACTURING [3425]

Eucalyptus oils are obtained by distillation of the leaves of Eucalyptus and have aromas characteristic of the particular species used. The oils are classified in the trade into three broad types according to their composition and main end-use: medicinal, perfumery and industrial. Of these, the most important in terms of volume of production and trade is the medicinal type, characterized by a high cineole content in the oil. This, and the perfumery type, are discussed below. The so-called industrial oil, produced from E. dives, now has a very small and diminishing market and is not discussed further. The medicinal type of oil may be sold as such, neat, in pharmacies and other retail outlets or in the form of sprays, lozenges, cough sweets and ointments or in formulation with other oils. It is used as an inhalant or chest rub to ease breathing difficulties, as a mouthwash in water to refresh or ease the throat, and as a skin rub to provide relief from aches and pains. Anti-plaque solutions in dental hygiene are a recent application. Although employed for medicinal purposes, the pleasant flavour and fragrance properties of cineole-rich eucalyptus oils play an important role in their acceptance and utilization on such a large scale. Eucalyptus oil is also used

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as a general disinfectant, cleaner and deodorizer about the house. Of the two principal perfumery oils, that from Eucalyptus citriodora is produced in the greatest volume. It differs from the medicinal oils in containing citrinellal, rather than cineole, as the major constituent. The oil is employed in whole form for fragrance purposes, usually in the lower cost soaps, perfumes and disinfectants, but also as a source of citrinellal for the chemical industry. The citrinellal obtained by fractionation of the crude oil may be used as such as an aroma chemical or converted to other derivatives intended for fragrance use. The only other perfumery oil produced in any quantity is that from E. staigeriana. No single chemical predominates in the oil and it is used in whole form for perfumery purposes. It has a lemon-type character. Eucalyptus oil is extracted from fresh or partially dried leaves and young twigs, and undergoes steam distillation. You can make oil from eucalyptus leaves on your own, saving you money and allowing you a fresh supply of the oil. Eucalyptus oil is a pure essential oil that has practical and industrial uses, as well as healing properties. It comes from a fast-growing evergreen tree native to Australia, with global eucalyptus oil production mainly from Eucalyptus globulus or "Blue Gum."

COST ESTIMATION

Plant Capacity	500 Kgs/Day
Land & Building (1500 sq.mt)	Rs. 88 Lacs
Plant & Machinery	Rs. 80 Lacs
W. Capital for 2 Months	Rs. 2.82 Cr
Total Capital Investment	Rs. 4.62 Cr
Rate of Return	27%
Break Even Point	56%

SPLIT AIR CONDITIONER MANUFACTURING [3426]

An air conditioner is a machine which keeps the air in a building cool and dry. The purpose of an air conditioner is to maintain a comfortable indoor environment. The comfort we are used to is determined by a combination of 3 factors. • Temperature. • Humidity. • Air Distribution. For this reason, the main purposes of air conditioners are to: • Control room temperatures (cooling/heating). • Control room humidity levels (drying, humidifying). • Optimise air flow (circulation, distribution). • Clean the air (filtration), Working principle. An air conditioner collects hot air from a given space, processes it within itself with the help of a refrigerant and a bunch of coils and then releases cool air into the same space where the hot air had originally been collected. This is essentially how all air conditioners work. Many folks believe that an air conditioner produces chilled air with the help of machines

installed inside it, allowing it to cool a room so quickly. That might also explain why it consumes so much electricity. In reality, however, that's a misconception. An air conditioner is not a magical device; it just uses some physical and chemical phenomena very effectively to cool a given space. When you switch an AC on and set your desired temperature (say, 20 degrees Celsius), the thermostat installed in it senses that there is a difference in the temperature of the room's air and the temperature that you've chosen. A thermostat constantly monitors the temperature of the system so that it's maintained near a user's desired point. This warm air is drawn in through a grille at the base of the indoor unit, which then flows over some pipes through which the refrigerant (i.e., a coolant fluid) is flowing. The refrigerant liquid absorbs the heat and becomes a hot gas itself. This is how heat is removed from the air that falls on the evaporator coils. Note that the evaporator coil not only absorbs heat, but also wrings out moisture from the incoming air, which helps to dehumidify the room. This hot refrigerant gas is then passed on to the compressor (located on the outside unit). Being true to its name, the compressor compresses the gas so that it becomes hot, since compressing a gas increases its temperature. This hot, high-pressure gas then travels to the third component – the condenser. Again, the condenser remains true to its name, and condenses the hot gas so that it becomes a liquid.

COST ESTIMATION

Plant Capacity	400 Nos/Day
Land (4000 sq.mt)	Rs. 4.30 Cr
Plant & Machinery	Rs. 3.42 Cr
W. Capital for 2 Months	Rs. 18.40 Cr
Total Capital Investment	Rs. 26.60 Cr
Rate of Return	86%
Break Even Point	21%

FRUIT JUICE OF MANGO, ORANGE, SWEET LIME, LIME, PINEAPPLE PLANT IN TIN CANS [3427]

There are two main types of fruit juice. On the one hand there is a so-called "direct or notfrom concentrate (NFC) juice" and on the other hand the one produced from the "juice concentrate". Both have 100% non-diluted fruit content. The term "direct or NFC juice" or "made from fruit concentrate" on the label explains how the juice was produced. The juice is either contained in cloudy or clear bottles after juicing or stored for later filling in sterile tanks. This is the usual on-farm method. In order to get a fruit juice concentrate, the freshly squeezed juice will be dehydrated under vacuum conditions, until the juice is reduced to about one-

sixth of its volume. After reconstitution with clean drinking water there will be a fruit juice with 100 percent fruit content again. The use of concentrate must be noted on the product label. The processing of concentrate has no relevance in on-farm fruit juice production. For an industrial juice producer it has several advantages, which are crucial due to the low consumer prices of rediluted juice. The manufacturers can achieve higher storage capacities, and they can spread the filling evenly over a longer period and thus compensate for years with poor fruit harvest through storage reserves. Packaged juice market has charted a high growth trajectory, thanks to its easy availability, anytime-anywhere consumption, and convenience. Within the beverages market, the fruit-based beverages category is one of the fastest growing categories, and has grown at a CAGR of over 30 percent over the past decade. As of March 2013, the Indian packaged juices market was valued at Rs 1,100 crore (~USD 200 million) and projected to grow at a CAGR of ~15 percent over the next three years. The packaged fruit juices market can be divided into three sub-categories: fruit drinks, juices, and nectar drinks. Fruit drinks, which have a maximum of 30 percent fruit content, are the highest-selling category, with a 60 percent share of the market. Frooti, Jumpin, Maaza, etc. are the most popular products in this category. Fruit juices, on the other hand, are 100 percent composed of fruit content, and claim a 30 percent market share at present. In contrast, nectar drinks have between 25 and 90 percent fruit content, but account for only about 10 percent of the market. The rising number of health-conscious consumers is giving a boost to fruit juices; it has been observed that consumers are shifting from fruit-based drinks to fruit juices as they consider the latter a healthier breakfast/snack option. Dabur is the market leader in the Indian packaged juices market with its brands Real and Real Activ. Other players include Parle, Fresh Gold, and Godrej. Some of the other brands of fruit juices and drinks include Frooti, Appy, Mazza, Minute Maid, Slice, Fresh Gold, and Del Monte. Considering the attractiveness of the segment, diversified consumer food companies such as ITC are working towards making a foray into packaged juices.

COST ESTIMATION

Plant Capacity	9600 Ltr./Day
Land (25000 Sq.ft)	Rs. 1.19 Cr
Plant & Machinery	Rs. 1.95 Cr
W. Capital for 2 Months	Rs. 3.86 Cr
Total Capital Investment	Rs. 7.30 Cr

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Rate of Return 40%
Break Even Point 43%

BIODEGRADABLE DISPOSABLE CUTLERY PLANT [3428]

Biodegradable disposable flatware and utensils manufactured from wood-based or plant-based raw materials, including materials that may be traditionally discarded such as sawdust, plant stalks, seed or grain hulls or the like. The process includes the use of a resin made from the discarded materials to form disposable utensils and flatware. Today consumption of Disposable products is breaking records. Disposable products are easy to handle, economical and can be disposed easily. With the changing lifestyle of Mankind, the use of disposable products is raising like anything. Plastic Disposable products are very popular because it can be carried easily and very low in prices too. The products include food containers and tableware – like plates, bowls, meal trays and cups – which decompose within 30-60 days after being discarded. The company sources processed bagasse from other organizations. This material is then moulded, dried, heated, and given other final touches. Heat-induced pressing during the manufacturing process gives structural strength to the cutlery. Additionally, the inter-fibre bonding makes the products water and oil resistant. It is a completely natural process and involves no binders, additives, coatings or chemical residues, resulting in a nontoxic, harmless and healthy alternative to plastic. The cutlery also does not impart colour, odour or taste to food. The products are microwave-safe and have an estimated shelf life of two years. Users cannot wash the tableware or containers after use; they have to be discarded.

COST ESTIMATION

Plant Capacity 882 Kg/Day
Land & Building (2000sq.mt) Rs. 2.60 Cr
Plant & Machinery Rs. 1.04 Cr
W. Capital for 2 Months Rs. 60.96 Lacs
Total Capital Investment Rs. 5.39 Cr
Rate of Return 21%
Break Even Point 63%

MICA PEARL PIGMENT [3429]

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 shinning 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. Pearl pigment was innovated in the later part of the twentieth century. In the initial stages it was extracted from fish scales. However with the development of technology, titanium dioxide and mica flakes replaced fish scales in the manufacturing process of pearl pigments. The largest consumer of pearl pigments is the paint and coating industry. The paint and coating industry accounts for more than half of the market share of pearl pigments by volume. The printing industry is the next largest consumer of pearl pigments. Although North America is the largest market for pearlescent pigments, Asia Pacific is the fastest growing market for pearl pigments. Increase in the automobile manufacturing activities in countries such as Japan, South Korean, China and India has fuelled up the demand for pearl pigments in the Asia Pacific region. The demand for this pigment decreased drastically in Europe due to the economic slowdown in most of the European countries. However the economic condition is improving in Europe so the demand for pearl pigments can be estimated to rise. Germany and Italy are the largest pearl pigment markets in Europe owing to their large automobile market. Pearl pigments are more preferred over other pigments such as chromium and cadmium containing pigments. Pigments containing heavy metals such as chromium, cadmium, lead

and mercury are highly toxic and hazardous. The U.S. Environmental Protection Agency banned the use of heavy metal containing pigments as they are harmful to human and the environment. This elevated the demand for pearl pigments, as they are non-toxic and eco-friendly. The popularity of green building in the world has further increased the usage of pearl pigments for manufacturing of paints and coatings for buildings. Some of the key manufacturers of pearl pigments are Millennium Chemicals, Inc., BASF SE, Heubach GmbH, L'Arca Srl and The Dow Chemical Company.

COST ESTIMATION

Plant Capacity 2 Ton/Day
Land (1500 Sq.ft) US\$ 2.86 Lacs
Plant & Machinery US\$ 1.16 Lacs
W. Capital for 2 Months US\$ 4.06 Lacs
Total Capital Investment US\$ 8.23 Lacs
Rate of Return 31%
Break Even Point 46%

LIQUID SULPHUR BLACK DYE [NO 3430]

Sulfur dyes are most commonly used dyes manufactured for cotton in terms of volume. They are cheap, generally have good wash-fastness, and are easy to apply. Sulfur dyes are predominantly black, brown, and dark blue. Red sulfur dyes are unknown, although a pink or lighter scarlet color is available. The most important member of the class is Sulfur Black 1. It is produced by the reaction of 2, 4-dinitrophenol and sodium sulfide in hot water. Like many sulfur dyes, details on the chemical reactions are poorly understood. It is accepted that the sulfide reduces the nitro groups to aniline derivatives, which are thought to form indophenol-containing intermediates that are further crosslinked by reaction with sulfur. The result are insoluble, high molecular weight species. Sulfur Black 1 is imperfectly understood, and the material is probably heterogeneous. It is speculated to be a polymer consisting of thianthrene and phenothiazine subunits. Sulfur dyes are water-insoluble. In the presence of a reducing agent and at alkali pH's at elevated temperature of around 80°C, the dye particles disintegrate, which then becomes water-soluble and hence can be absorbed by the fabric. Sodium sulfide or sodium hydrosulfide are suitable reducing agents. Common salt facilitates the absorption. After the fabric is removed from the dye solution, it is allowed to stand in air whereupon the dye is regenerated by oxidation. The regenerated parent dye is insoluble in water. Oxidation can also be effected in air or by hydrogen peroxide or sodium bromate in a mildly acidic solution. The low water solubility is the basis of the

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good wash-fastness of these dyed fabrics. These dyes have good all round fastness except to chlorine bleaches. Because the dye is water-insoluble, it will not bleed when washed in water and will not stain other clothes. The dye, however, may have poor fastness to rubbing. The dyes are bleached by hypochlorite bleach. The sulphur dyes have been in use as cotton dyes for over ninety years. As far as the application is concerned the sulphur dyes are akin to the vat dyes since they are water insoluble substances which first must be reduced to a soluble form by means of sodium sulphide, which is applied to cotton fibre and the dye being regenerated by oxidation (in air). This group of dyes is produced by heating relatively simple aromatic substance with sulphur or a sulphur compound where by aromatic rings are by disulphide or disulphoxide bridges. These links are converted by the action of sodium sulphide into -SNa groups, smaller water soluble molecules being produced. On oxidation in air the molecules are linked together once more as sulphides.

COST ESTIMATION

Plant Capacity	12 MT./Day
Land (3000 Sq.ft)	Rs. 3.89 Cr
Plant & Machinery	Rs. 1.53 Cr
Working Capital for 1 Month	Rs. 4.05 Cr
Total Capital Investment	Rs. 9.58 Cr
Rate of Return	36%
Break Even Point	43%

VEGETABLE DEHYDRATION PLANT [3431]

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, 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	32 MT/Day
Land & Building (8000 Sq.ft)	Rs. 4.80 Cr
Plant & Machinery	Rs. 5.00 Cr
Working Capital for 1 Month	Rs. 16.31 Cr
Total Capital Investment	Rs. 26.41 Cr
Rate of Return	39%
Break Even Point	36%

DOMESTIC REVERSE OSMOSIS FILTER'S CARTRIDGES AND HOUSING MANUFACTURING UNIT (PP MELT BLOWN FILTER CARTRIDGE, CARBON BLOCK FILTER CARTRIDGE, GAC FILTER CARTRIDGE, PP STRING WOUND FILTER CARTRIDGE, TFC SPIRAL WOUND MEMBRANE AND CARTRIDGE HOUSING) [3432]

Reverse Osmosis is a process in which dissolved inorganic solids (such as salts) are removed from a solution (such as water). This is accomplished by household water pressure pushing the tap water through a semipermeable membrane. Reverse Osmosis is a technology that is used to remove a large majority of contaminants from water by pushing the water under pressure through a semi-permeable membrane. To understand the purpose and process of Reverse Osmosis you must first understand the naturally occurring process of Osmosis. Osmosis

is a naturally occurring phenomenon and one of the most important processes in nature. It is a process where a weaker saline solution will tend to migrate to a strong saline solution. Examples of osmosis are when plant roots absorb water from the soil and our kidneys absorb water from our blood. Below is a diagram which shows how osmosis works. A solution that is less concentrated will have a natural tendency to migrate to a solution with a higher concentration. For example, if you had a container full of water with a low salt concentration and another container full of water with a high salt concentration and they were separated by a semi-permeable membrane, then the water with the lower salt concentration would begin to migrate towards the water container with the higher salt concentration. A few impurities found in tap water that can be removed with Reverse Osmosis filtration technology: • Fluoride, • Lead, • Chlorine & Chlormamine, • Pesticides, • Detergents & more, • Nitrates & Sulfates. In this Water pressure is used to force water molecules through a very fine membrane leaving the contaminants behind. Purified water is collected from the "clean" or "permeate" side of the membrane, and water containing the concentrated contaminants is flushed down the drain from the "contaminated" or "concentrate" side. The average RO system is a unit consisting of a sediment/chlorine pre filter, the reverse-osmosis membrane, a storage tank, and an activated-carbon post filter. Reverse osmosis removes salt and most other inorganic material present in the water, and for that reason, RO lends itself to use in places where the drinking water is brackish (salty), contains nitrates or other dissolved minerals which are difficult to remove by other methods.

COST ESTIMATION

Plant Capacity	26100 Nos/Day
Land & Building (4047 Sq.ft)	Rs. 2.28 Cr
Plant & Machinery	Rs. 2.79 Cr
W. Capital for 2 Months	Rs. 63.89 Cr
Total Capital Investment	Rs. 69.32 Cr
Rate of Return	44%
Break Even Point	26%

SANITARY NAPKIN AND BABY DIAPER MANUFACTURING UNIT [3433]

The global market for absorbent hygiene products is over US\$ 50 bn (including wipes). The evolution of hygiene products in Europe and the North America has taken 4 to 5 generations. Feminine care was introduced over 100 years ago. Baby diapers were invented 60 years ago. Adult incontinence products appeared 30 years ago. Feminine hygiene (lady napkins) is hygiene absorbent products engineered to absorb and retain body fluid without

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causing any leakage. The user should always feel dry and comfortable. It consists of an absorbent pad sandwiched between two sheets of nonwoven fabric. There are 3 major types of products, viz, (a) Thick sanitary napkins. (b) Ultra thin sanitary napkins. (c) Panty liners being used in the market. The size of each and their content vary from market to market. The menstrual cycle starts for young women between the ages 11 - 17, frequently around 12-13 years. On average a woman experiences a period every 28th day, 12 - 13 times in a year. A menstrual period normally lasts 3 - 7 days. The loss of fluid in a period is on average half a cup or 65 - 80 ml. The menstrual pattern is influenced by giving birth and contraceptive methods. Menstruation lasts until menopause at the age 45 - 55. The feminine hygiene products market has evolved over more than 100 years to a more than US\$ 17 bn in the following category worldwide.

COST ESTIMATION

Land & Building (2500 Sq.mt)	Rs. 3.28 Cr
Plant & Machinery	Rs. 4.57 Cr
W. Capital for 2 Months	Rs. 2.23 Cr
Total Capital Investment	Rs. 10.64 Cr
Rate of Return	53%
Break Even Point	37%

PCB BOARD FOR LAPTOP AND POWERBANKS [3434]

PCBs are used in both desktop and laptop computers. They serve as the foundation for many internal computer components, such as video cards, controller cards, network interface cards, and expansion cards. These components all connect to the motherboard, which is also a printed circuit board. While PCBs are often associated with computers, they are used in many other electronic devices besides PCs. Most TVs, radios, digital cameras, cellphones, and tablets include one or more printed circuit boards. While the PCBs found in mobile devices look similar to those found in desktop computers and large electronics, they are typically thinner and contain finer circuitry. Power Bank Circuit Diagram: Below is the circuit diagram for our power bank. As we can see its fairly easy to make a power bank with li-ion battery, TP4056 module and a boost converter.

COST ESTIMATION

Plant Capacity	100 Nos/Day
Land & Building (1000 Sq.mt)	Rs. 1.09 Cr
Plant & Machinery	Rs. 1.05 Cr
W. Capital for 1 Month	Rs. 2.76 Cr
Total Capital Investment	Rs. 5.03 Cr
Rate of Return	36%
Break Even Point	48%

PCB BOARDS [3435]

PCBs are used in both desktop and laptop computers. They serve as the foundation for many internal computer components,

such as video cards, controller cards, network interface cards, and expansion cards. These components all connect to the motherboard, which is also a printed circuit board. While PCBs are often associated with computers, they are used in many other electronic devices besides PCs. Most TVs, radios, digital cameras, cellphones, and tablets include one or more printed circuit boards. While the PCBs found in mobile devices look similar to those found in desktop computers and large electronics, they are typically thinner and contain finer circuitry. Power Bank Circuit Diagram: Below is the circuit diagram for our power bank. As we can see its fairly easy to make a power bank with li-ion battery, TP4056 module and a boost converter.

COST ESTIMATION

Plant Capacity	800 Nos/Day
Land & Building (1000 Sq.mt)	Rs. 1.13 Cr
Plant & Machinery	Rs. 1.48 Cr
Working Capital for 1 Month	Rs. 1.68 Cr
Total Capital Investment	Rs. 4.44 Cr
Rate of Return	64%
Break Even Point	37%

CENTRIFUGE LATEX [3436]

Centrifuged Latex is a liquid natural latex that comes directly from the *Hevea Brasiliensis*, or natural latex tree. The latex is concentrated into a 62% dry solids content by use of centrifuges. It can be used as a coating agent, as a base ingredient for natural foam latex, or it can be mixed in with other compounded natural latex products. Centrifuged latex is commercially available in two different varieties, one with high ammonia (above 0.60%) and the other with Low Ammonia (less than 0.30%). It also contains secondary preservatives like TMTD (0.0125%) and zinc oxide (0.0125%). Grading, packing, and making of centrifuged latex are as per specifications prescribed in IS 5430.

COST ESTIMATION

Plant Capacity	12000 Ltr/Day
Land & Building (4000 Sq.mt)	Rs. 1.58 Cr
Plant & Machinery	Rs. 71.00 Lacs
Working Capital for 1 Month	Rs. 3.19 Cr
Total Capital Investment	Rs. 5.57 Cr
Rate of Return	34%
Break Even Point	44%

DEHUSKING RUBBER ROLLER FOR RICE MILL [3437]

Rubber Roller is a rubber or an elastic material covering the core of metal or other material. Rice Dehusking Rubber Roll are precisely made and fitted with the fresh CI drums and aluminium drums. These rolls are specifically used for dehusking of raw rice. Due to the use of these rolls, raw rice get perfectly polished and whiten. Rice (*Oryza sativa L.*) has been the staple food for more than half of the humanity in the world or two-third

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of the World's population. Rice is the seed or kernel of paddy, which is covered by two different layers, namely- bran (inner layer) and husk (outer layer). Literally, paddy becomes rice only when the two layers are removed properly through different milling processes. In the first step, brown rice is extracted by removing hull/husk from the paddy, which contains bran layer still intact around the kernel. In the second step, the bran layer is removed by polishing machine that rubs the grains together under pressure, and the output is the polished white kernel or fine rice, which is ready for cooking. The former process is known as hulling and the latter is known as milling of paddy. But, in short, it is the conversion ratio from paddy to rice, or one can term it as hulling and milling ratio. Therefore, the two terms-1) hulling and milling ratio; 2) conversion ratio, will be used interchangeably throughout this paper. In term of production, India has become the second largest producer of rice in the world (21 per cent of global rice production), next to China. As on 2009, rough total production of paddy was 14, 8260 thousand MT in the country, but, as estimated by USDA, it was 13, 2013 thousand MT. On the demand side, India's domestic consumption was, on an average, 95% of what it produced and was still the third largest exporter of rice, after Thailand and Vietnam, with about 20% of the world's total rice exports in 2006-07. In the recent years, with the growth of population, more pressure on the arable land has been made and this in turn, the need for higher productivity of crops was felt in the country. At the same time, large quantity of foodgrain was reported to be lost due to inefficient milling processes in the country. Therefore, it calls for a better processing technique of rice to prevent processing loss. Generally, rice kernels are often susceptible to breakage due to inefficient milling processes. Therefore, more efficient milling processes are highly recommended for better recovery ratio and quality rice kernel production. It is also identified as one of the most important remedies for preventing post-harvest loss and an issue that is widely recognized around the world.

COST ESTIMATION

Plant Capacity	20 Pairs/Day
Land & Building (700 Sq.mt)	Rs. 94 Lacs
Plant & Machinery	Rs. 53.00 Lacs
W. Capital for 1 Month	Rs. 20.21 Lacs
Total Capital Investment	Rs. 1.79 Cr
Rate of Return	26%
Break Even Point	67%

PASTA PLANT (INCLUDING STEAMED VERMICELLI AND GLUTEN FREE PASTA PLANT)
[3438]

Pasta is a food product made by extruding and drying unleavened dough of wheat flour, and that forms the basis of much Italian cuisine, as well as Chinese, Japanese, Korean, and Southeast Asian cuisines. Macaroni is a dried food product made from semolina and shaped in the form of slender tubes. It is popularly believed that Marco Polo, the 13th Century Italian explorer, introduced pasta to Europe from China. Italian pastas, such as spaghetti and macaroni, are traditionally made from semolina flour derived from durum (extra - hard) wheat. Pasta may be added to soups; boiled and served with a sauce; served cold with other ingredients in a salad; stuffed with meat, cheese or vegetables and then boiled and baked. There are dozens of varieties of Italian pasta, and they are usually named for their sizes and shapes. Pasta is a highly nutritious food. A 56 - gram (2 - oz) serving of pasta has less than 1 - gram (0.04 - oz) of fat, no sodium, no cholesterol, and about 210 calories. The basic forms of pasta products such as spaghetti, lasagna, macaroni, and other types of short goods, have not altered much over the centuries. Similarly, pasta continues to be made using the same ingredients: durum wheat semolina or flour, common wheat farina or flour, or various combinations of these, water and optional ingredients such as egg, spinach, tomato, herbs, etc. Modern processing technology, however, has changed dramatically. The large automated, computer controlled plants that we are familiar with today are very different from the small factories seen in the infancy of the modern pasta processing industry. Large amounts of pasta can now be processed in a day in modern plants that are run by only a few personnel.

COST ESTIMATION

Plant Capacity	8 Ton/Day
Land & Building (2000 Sq.mt)	Rs. 1.21 Cr
Plant & Machinery	Rs. 2 Cr
Working Capital for 2 Month	Rs. 1.66 Cr
Total Capital Investment	Rs. 4.97 Cr
Rate of Return	28%
Break Even Point	54%

FIRE FIGHTING EQUIPMENTS [3439]

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. Geometric symbol (green triangle). 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. Geometric symbol (red square). 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. Geometric symbol (blue circle). 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. Geometric symbol (Yellow Decagon). 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. Geometric symbol (black hexagon). Some fires may involve a combination of these classifications. Your fire extinguishers should have ABC ratings on them. Here are the most common types of fire extinguishers: Water extinguishers or APW extinguishers (air-pressurized water) are suitable for class A fires only. Never use a water extinguisher on grease fires, electrical fires or class D fires - the flames will spread and make the fire bigger! Water extinguishers are filled with water and are typically pressurized with air. Again - water extinguishers can be very dangerous in the wrong type of situation. Only fight the fire if you're certain it contains ordinary combustible materials only. Dry chemical extinguishers come in a variety of types and are suitable for a combination of class A, B and C fires. These are filled with foam or powder and pressurized with nitrogen. BC - This is the regular type of dry chemical extinguisher. It is filled with sodium bicarbonate or potassium bicarbonate. The BC variety leaves a mildly corrosive residue which must be cleaned immediately to prevent any damage to materials. ABC - This is the multipurpose dry chemical extinguisher. The ABC type is filled with monoammonium phosphate, a yellow powder that leaves a sticky residue that may be damaging to electrical appliances such as a computer. Dry chemical extinguishers have an advantage over CO2 extinguishers since

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they leave a non-flammable substance on the extinguished material, reducing the likelihood of re-ignition. Carbon Dioxide (CO2) extinguishers are used for class B and C fires. CO2 extinguishers contain carbon dioxide, a non-flammable gas, and are highly pressurized. The pressure is so great that it is not uncommon for bits of dry ice to shoot out the nozzle. They don't work very well on class A fires because they may not be able to displace enough oxygen to put the fire out, causing it to re-ignite. CO2 extinguishers have an advantage over dry chemical extinguishers since they don't leave a harmful residue - a good choice for an electrical fire on a computer or other favorite electronic device such as a stereo or TV.

COST ESTIMATION

Land & Building (2500 Sq.mt)	Rs. 3.09 Cr
Plant & Machinery	Rs. 60.50 Lacs
Working Capital for 1 Month	Rs. 1.78 Cr
Total Capital Investment	Rs. 5.63 Cr
Rate of Return	43%
Break Even Point	42%

CALCINED PETROLEUM COKE [3440]

Coke is a fuel with few impurities and a high carbon content, usually made from coal. It is the solid carbonaceous material derived from destructive distillation of low-ash, low-sulphur bituminous coal. Cokes made from coal are grey, hard, and porous. While coke can be formed naturally, the commonly used form is synthetic. The form known as petroleum coke, or pet coke, is derived from oil refinery coker units or other cracking processes. Coke is used in preparation of producer gas which is a mixture of carbon monoxide (CO) and nitrogen (N2). Producer gas is produced by passing air over red-hot coke. Coke is also used to manufacture water gas. Petroleum coke (often abbreviated pet coke or petcoke) is a carbonaceous solid delivered from oil refinery coker units or other cracking processes. Coking processes that can be employed for making petcoke include contact coking, fluid coking, flexicoking and delayed coking. Other coke has traditionally been delivered from coal. This coke can either be fuel grade (high in sulfur and metals) or anode grade (low in sulfur and metals). The raw coke directly out of the coker is often referred to as green coke. In this context, "green" means unprocessed. The further processing of green coke by calcining in a rotary kiln removes residual volatile hydrocarbons from the coke. The calcined petroleum coke can be further processed in an anode baking oven in order to produce anode coke of the desired shape and physical properties. The anodes are mainly used in the aluminium and steel industry. The Petroleum Coke category

consists of two substances; green coke and calcined coke. These two substances are grouped together in a category based on their similarity of manufacturing processes which results in similar physical chemical characteristics and chemical composition. The principal difference is the amount of residual hydrocarbon (also termed volatile matter) in the two products. Petroleum coke (both green and calcined) is a black-colored solid produced by the high pressure thermal decomposition of heavy (high boiling) petroleum process streams and residues. Green coke is the initial product from the cracking and carbonization of the feedstocks to produce a substance with a high carbon-to-hydrogen ratio. Green coke undergoes additional thermal processing to produce calcined coke. The additional processing removes volatile matter and increases the percentage of elemental carbon, which results in a lower potential for toxicity for calcined coke. The green coke must have sufficiently low metals content in order to be used as anode material. Green coke with this low metals content is referred to as anode grade coke. The green coke with too high metals content will not be calcined and is used for burning. This green coke is called fuel grade coke. Petcoke is over 90 percent carbon and emits 5 to 10 percent more carbon dioxide (CO2) than coal on a per-unit-of-energy basis when it is burned. As petcoke has a higher energy content, petcoke emits between 30 and 80 percent more CO2 than coal per unit of weight. The difference between coal and coke in CO2 production per unit energy produced depends upon the moisture in the coal (increases the CO2 per unit energy?—?heat of combustion) and volatile hydrocarbon in coal and coke (decrease the CO2 per unit energy).

COST ESTIMATION

Plant Capacity	666.66 Ton./Day
Land (85000 Sq.mt)	Rs. 55.46 Cr
Plant & Machinery	Rs. 21.26 Cr
W. Capital for 2 Month	Rs. 75.83 Cr
Total Capital Investment	Rs. 154.83 Cr
Rate of Return	11%
Break Even Point	66%

LUBE OIL BLENDING AND GREASES PLANT [3442]

Lube oils generally include all classes of lubricating materials that are applied as fuels. Nearly all of the world's lube oils are made from the more viscous portion of the crude oil which remain after removal of gas oil and lighter fractions by distillation. Much of the variations in physical characteristics and performance qualities of lubricating oils prepared from different crude sources can be accounted for by the millions of variations that can exist in a single large hydrocarbon molecule. In order to minimize variations

and produce products that provide consistent performance in specific applications, four steps are followed in the manufacture of finished lubricating oils from the various available crudes. Selection and aggregating of crudes according to the principal types of hydrocarbon present; distillation of the crude to separate it into fractions containing hydrocarbons in the same sp range; processing to remove undesirable constituents from the various fractions or to convert same of these materials constituents from the various fractions or to convert same of these materials to more desirable materials, and blending to attain the physical characteristics that are required in the finished products and incorporating chemical agents to improve performance.

COST ESTIMATION

Land & Building (5 Acres)	Rs. 5.35 Cr
Plant & Machinery	Rs. 4.17 Cr
W. Capital for 2 Month	Rs. 40.94 Cr
Total Capital Investment	Rs. 50.82 Cr
Rate of Return	65%
Break Even Point	24%

PAPER TUBES MANUFACTURING PLANT [3443]

Paper tubes are defined as cylindrical containers made from cardboard that vary in thickness and size. These containers are used by a multitude of industries for countless applications because of their versatility and cost-effectiveness. For items that can either be rolled into a cylindrical shape or folded up to fit into a cylindrical container, paper tubes are useful containers for distributing, manufacturing, and shipping. Industries that use paper and cardboard for their applications include food, electronics, and automotive. They can be used in any department from distribution, insulation, parts protection, or storage. The paper tubes are broadly classified into a spiral type and a flatwise type. The spiral paper tube is formed by spirally winding a thin paper web around the outer circumference of a mandrel to a predetermined thickness. In contrast, the flatwise paper tube is formed by winding a paper web around the outer circumference of a mandrel in a direction perpendicular to the axis of the mandrel. The flatwise paper tubes are further classified into a multi-layer type with a paper web wound in several layers to a predetermined thickness.

COST ESTIMATION

Plant Capacity	105000 Nos/Day
Land (1000 sq.mt)	Rs. 79.25 Lacs
Plant & Machinery	Rs. 1.01 Cr
W. Capital for 2 Month	Rs. 3.32 Cr
Total Capital Investment	Rs. 5.42 Cr
Rate of Return	72%
Break Even Point	32%

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 Liquid chlorine by electrolysis of brine
 Liquid chlorine by electrolysis of brine
 Liquid floor polish
 Liquid glucose & its by products
 Liquid glucose from maize
 Liquid gold
 Liquid gold (in paste form)
 Liquid oxygen bottling plant
 Liquid shoe polish
 Liquid sulfur trioxide (so3)

Liquid sulphur black dye
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Melamine formaldehyde powder	carboxylic acid (natca)	acetic acid and hydrogen (35%) using sulphuric acid as a catalyst	Polyurethane foam
Menthol based project	Naphthalene balls	Perfume (lemon & others)	Polyvinyl acetate
Menthol bold crystals from flakes	Naphthalene balls & phenyl (integrated unit)	Perfume spray deodorant	Polyvinyl acetate based adhesive
Menthol bold crystals from menthol flakes	Natural mineral water by reverse osmosis process	Pest control liquid used for white ants termite	Potassium carbonate (solid) from potassium chloride solution
Menthol crystal & mentha oil	Neoprene based adhesive	Pesticide and insecticide	Potassium chloride from muriate of potash (mop)
Menthol crystal & menthol oil	Nickel plating brightner (primary or carrier brightner & secondary brightner)	Pesticide preparation using neem fruit & seeds (margosa)	Potassium dichromate/ bichromate
Menthol crystals and menthol oil	Nickel sulphate	Pet bottles from preform	Potassium hydroxide caustic potash from potassium chloride solution 18%
Mercuric oxide	Nicotine from tobacco waste	Pet preform from resin for pet bottles	Potassium iodate
Metal polish soap	Nicotine sulphate from tobacco waste	Petroleum jelly	Potassium iodate (by electrolysis process)
Metal pre treatment chemicals	Nitro benzene	Phenol	Potassium iodide (i.p.)
Metallic stearate by precipitation & fusion process	Nitro cellulose sanding sealer/ laquer	Phenyl (black) in liquid form	Potassium nitrate
Metallic stearate by precipitation and fusion process	Nitro musk	Phenyl acetic acid	Potassium nitrate
Methane gas by sodium acetate & soda lime	Nitrogen & oxygen gas plant	Phosphate and mixed fertilizer (npk)	Potassium per oxy di sulphide
Methanol (hplc grade)	Nitrous oxide	Phosphating solution	Potassium permagnate
Methyl acetyl ricinolate	No-carb paste	Phosphoric acid	Potassium permanganete
Methyl chloride	Non-ionic surfactant (wetting agent)	(purification) from crude	Potassium persulphate
Methyl cinnamate	Npk fertilizer	Phosphoric acid (purification) from spent acid	Potassium silicate
Methyl stearate	Npk mixed fertilizer (molasses based)	Phosphoric acid (purification) from spent acid	Potassium silicate by ion exchange process
Methyl vinyl ether	Octanol (octyl alcohol) from molasses	Phosphoric acid from rock phosphate	Potassium stearate
Methylene blue	Oleoresin from chilly and ginger (extraction)	Phosphoric acid manufacturing and purification (manual process)	Potassium sulphate
Metol	Omega three	Phosphorus by chemical process	Potassium sulphate (cap:200 tpd)
Metol from hydroquinone & methylamine	Ortho nitro phenol	Photo emulsion for rotary screen printing	Potassium sulphate (fertilizer grade)
Metronidazole	Ossein from animal bone	Phthalic anhydride	Potassium sulphate Cap: 200 tpd
Micanite	Oxalic acid from molasses	Phthalic anhydride	Power alcohol
Micro nutrient mixture	Oxalic acid from rice husk	Phthalocyanine blue	Power alcohol & imfl from molasses
Mineral water	Oxalic acid from sugarcane	Phthalocyanine pigments	Precipitated silica
Mineral water and pet bottling plant	Oxalic acid from tree bark	Phyto chemicals	Printing inks (various types)
Mineral water in bottles, glass and pouches	Oxalic acid from waste vegetables	Pigment emulsion for textile	Processing of datura stramonium into hyosyamina & atromin
Mini cement plant (by rotary kiln process)	Oxygen and nitrogen (liquid) plant	Pigment gum	Production of ena,rectified spirit and ethanol (cap: 60,000 ltr/day)
Mixed fertilizer	Oxygen and nitrogen gas plant	Plant growth reagen based chlorothyltrimethyl ammonium chloride	Production of lime and precipated calcium carbonate
Mono calcium phosphate (animal feed grade and ip grade)	Oxygen and nitrogen plant	Plant growth reagen based chlorothyltrimethyl ammonium chloride	Production of lime putty (on hydrated lime base and on white cement base)
Mono chloro benzene	Oxygen carbon dioxide and argon gas	Plant harmones based on 2,4-dichlorophenoxy	Propylene glycol
Mono ethylene glycol from molasses	Oxygen gas	Plaster of paris bandages	Psa based nitrogen.generator
Monocalcium phosphatge (mcp) and dicalcium phosphate (dcp)	Oxygen gas plant	Plastic waste reprocessing	Pvc resin from ethyl alcohol
Monochloro acetic acid	Oxygen gas plant (air separation method)	Plasticine (modelling clay)	Pyridine & its derivatives
Monochloro acetic acid from ethanol and chlorine	Oxygen gas producing plant	Poly propylene oxide	Quartz based industries (quartz powder, silica sand, silica ramming mass & fused silica)
Monochlorobenzene	Oxygen lancing pipe	Poly vinyl acetate	Rapid fast dyes (only process)
Monocrotophos (technical)	Oxygen/carbon dioxide gas cylinder	Poly vinyl acetate emulsion	Reactive dyes & printing paste
Monosodium glutamate	Packaged drinking water (packed in 330 ml cup, 500 ml pet bottle, 1500 ml pet bottle and 20 ltr. jar)	Polyaluminium chloride	Reactor (chemical)
Mosquito & flies repellent agarbatti (incense sticks)	Para amino benzoic acid	Polyaluminium chloride (liquid and Powder)	Reclamation of nickel spent catalyst from vanaspati industry
Mosquito coil	Para amino phenol	Polyester resin (g.p.grade, laminate grade, electrical grade)	Reclamation of spent bleaching earth
Mosquito coil & mat	Para chloro nitro benzene	Polyol from propylene oxide	Reclamation of used engine oil (by clay & vacuum distillation process)
Mosquito mat	Para toluene sulphonic acid	Polyol used for polyurethane	Recovery of lead from disposed lead acid battery
Mosquito repellent vaporiser (liquid mosquito destroyer)	Para-octyl phenol	Polystyrene	Rectified spirit from mahua
Mother tincture & bio chemic medicines	Pectin from apple pomace	Polyurethane releasing agent	
N-acetyl thiozolidine-4 carboxylic acid (natca)	Pectin from citrus/lemon		
N-acetyl thiozolidine-4-	Pectin from mango peel		
	Pectin from orange peels		
	Pectin from raw papaya		
	Peracetic acid from glacial		

flowers Rectified spirit from molasses & mahua flowers Rectified spirit from rice straw Red oxide paint/primer (anti corrosive) based organic red pigments Removal of antimony from lead scrap Repacking of chemicals Repacking of laboratory chemicals Resorcinol Rhodium plating on gold jewellery Rock phosphate upgradation and process plant Rosin sizing agent Safety seal for lpg cylinders Sagol Salicylic acid Saline and injection water Santonin Sennosides from senno leaf Shoe polish Silica gel (blue self indicating process) Silica ramming mass Silicon from rice husk Silicon from silica (semi conductor grade) Silicone compound Silicone emulsion Silicone resins Silicone spray silver brazing foil Silver extraction from waste hypo solution (x ray film and cinema film) Silver extraction from x-ray film Silver nitrate Silver parts for ceramic capacitor single super Silver refining by electrolysis Single super phosphate Single super phosphate & mixed fertilizer (npk) Single super phosphate & sulphuric acid Single super phosphate (s.s.p) & sulphuric acid Soda ash Soda ash (sodium carbonate) Soda ash from natron Soda ash plant (from solution brine) Soda water bottling plant (carbonated beverage) Sodium alginate Sodium alginate Sodium aluminate Sodium aluminium sulphate Sodium benzoate Sodium bicarbonate (baking soda) from soda ash Sodium bisulfite Sodium carbonate & silica	Sodium chloride Sodium chromate Sodium cyclamate Sodium dichromate Sodium dichromate & sodium sulphate as by products Sodium fluoride Sodium formaldehyde sulfoxylte Sodium formate Sodium hexa meta phosphate Sodium hydro sulfite Sodium hydrogen sulphide 30% solution Sodium hydrosulfite Sodium hydrosulfite (by sodium formate process) Sodium hypo chloride (bleach liquor) Sodium iso propyl xanthate Sodium lauryl ether sulphate Sodium lauryl sulphate Sodium lauryl sulphate & sodium lauryl ether sulphate Sodium meta silicate Sodium nitrate Sodium petroleum sulphonate Sodium petroleum sulphonate (emulsifier) Sodium sesqui carbonate from soda ash Sodium silicate Sodium silicate by hydro thermic process using quartz and caustic lye Sodium silicate from (1) paddy silk husk, (2) silica Sodium silicate from quartz and caustic lye Sodium silicate from quartz and caustic lye Sodium silicate from silica & soda ash Sodium silicate from silica and soda ash Sodium silicate from silica sand & soda ash Sodium stannate Sodium sulphate Sodium sulphide by barium sulphate process Sodium sulphide from ammonia & sodium chloride Sodium sulphide from sodium sulphate Sodium sulphide from sodium sulphate Sodium sulphide from sulphur and caustic soda Sodium sulphite Sodium tripoly phosphate Softener (cationic, anionic & non ionic) Solvent extraction method for curcumin Spirit from pine apple Stannous chloride Stannous oxalate	Starch & allied products from maize Stearates manufacture Stearates manufacture (calcium, Aluminium, Magnesium, Zinc) Stearic acid Submerged arc welding flux (fused and agglomerated type) SUCCINIC ACID PRODUCTION Sugarcane wax from press mud Sulfamic acid pure crystal and other grade (gp,sr & tm grade) Sulfanilic acid in powder form Sulphamic acid (descalant & technical grade, s.r.grade) Sulphur dusting powder Sulphur 80% wdg Sulphur 80wdg powder and sulphur 90 wdg powder (both) Sulphur black dye Sulphur blue dye (colour index 7) Sulphur crystals/lumps Sulphur dioxide (liquefied) from sulphur lumps Sulphur from pyrites & slag Sulphur powder from sulphur crystal/lumps Sulphuric acid Sulphuric acid from dcda process Super phosphate (s.s.p) Superabsorbent polymer (poly acrylic acid based) Surface floor and car polish Synthetic iron oxide (yellow) Synthetic red & yellow iron oxide from iron filling & pickle liquor Synthetic red iron oxide Synthetic zeolite Tamarind kernel powder Tannic acid Tannic acid Tartaric acid Tartaric acid from tamarind leaves Textile marker pen/tube Tgpc (tetra gold potassium cyanide, 57%) Titanium dioxide Toilet cleaner Toluene and sbp from crude naphtha Tooth paste Transformer oil Tri calcium phosphate Tri ethylene glycol (teg) Tri sodium phosphate Trichloro ethylene Trimethyl ammonium chloride Triphenyl phosphite (t.p.p) Ultramarine blue	Undecenoic acid Undecyenic acid Unsaturated polyester for rexine Urea fertilizer plant Urea formaldehydes & melamine formaldehyde powder Vat dyes Vinyl acetate monomer Vitamin c Vitamin e Washing soap and powder Waste water treatment plant for industrial sector in india (only market survey) Water chilling plant Water chilling plant Water proofing chemical Water treatment chemicals Water treatment plant Wax emulsion Wax emulsion for construction Wax emulsion for paper industry Wax floor polish Weedicide Wettable sulphur White oil Wire drawing lubricant Wire enamels Xanthates Yellow dextrin Zeolite Zeolite-a (for detergent) Zinc oxide by french process Zinc and copper sulphate from brass ash Zinc borate Zinc chloride Zinc oxide Zinc oxide Zinc oxide by french process Zinc phosphate Zinc phosphating by cold process Zinc silicate Zinc stearate Zinc stearate production line (direct method) cap: 500 ton/year Zinc sulphate Zinc sulphate (micronutrients from crops) Zinc sulphate for agricultural grage Zinc sulphate heptahydrated Zinc sulphate micronutrient for fertilizers Zinc sulphate monohydrate Zinc sulphate monohydrate Zinc sulphate monohydrate (2% crystal & 33% powder)
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<p>Aluminium Industry and Aluminium Extrusion, Wire Drawing, Aluminum Ingot, Aluminum Products, Cans, Sheet, Extruded Products, Profiles, Doors, Powder, Foil, Cone, Slug, Tubes, Bars, Conductor, Alloys, Coils, Extruded Rods, Sheets</p> <p>Aac & acsr aluminium conductors Aluminium alloy plant Aluminium foil Aluminium & aluminium alloys from aluminium scrap to make utensils (induction furnace melted) Aluminium & pvc curtain walls/windows/doors/partitions/ external cladding (acp) & s.s.hand rails Aluminium alloy Aluminium alloy conductor Aluminium alloy ingots Aluminium alloy wheel rims Aluminium alloy wheels Aluminium and aluminium alloy from scrap Aluminium beverage cans Aluminium bottle manufacturing (cold extrusion of aluminium) Aluminium brass, copper scraps sheets trading Aluminium cable Aluminium cans for beer packaging Aluminium cans for capacitors Aluminium caps for injection vials Aluminium chloride Aluminium chloride from aluminium ore Aluminium coil coating for acp and roofing industry Aluminium coil coating for acp and roofing industry Aluminium cold rolling mill for sheets & circles Aluminium composite panels (acp) Aluminium composite panels (acp) without coil coating Aluminium conductors Aluminium door, windows & fittings Aluminium door, windows, railings and fitting (with anodizing and powder coating) Aluminium doors & windows (aluminium fabrication)</p>	<p>Aluminium doors and windows Aluminium doors, windows, railing and fittings (with anodizing & powder coating) Aluminium electrolytic capacitors Aluminium end caps for electric fluorescent bulbs/ tubes Aluminium extrusion Aluminium extrusion from scrap Aluminium extrusion plant capacity:10 ton/day Aluminium fabrication (door, windows, slider etc.) glass plant and anodizing Aluminium fabrication (door, windows, slider etc.), glass plant and anodizing Aluminium fluoride Aluminium foil Aluminium foil (ultra thin soft grade) Aluminium foil container (afc) of different sizes Aluminium foil cutting & roll making Aluminium foils Aluminium furniture & hardware Aluminium gravity casting Aluminium hot & cold rolling mill Aluminium hydroxide gel Aluminium ingot by bauxite Aluminium ingots from aluminium scrap Aluminium ingots from bauxite Aluminium ingots from bauxite ore using aluminium melting furnace & rolling mill Aluminium ingots of various grades from aluminium scraps Aluminium label printing Aluminium notch bar/cubes/ shots manufacturing unit from scrap cap:20 tpd Aluminium oxide (activated alumina balls) Aluminium power cable Aluminium printing plate for offset machine Aluminium rolling mill for manufacturing aluminium circles required for pressure cookers, non stick cookware & circles Aluminium sheet rolling mill Aluminium shots and knoched bars</p>	<p>Aluminium silicate (precipitated) chemical process (not natural) Aluminium sulphate (non ferric) Aluminium sulphate (non ferrous) (17%-18% alumina content) in granules (2 mm to 4 mm) and flakes Aluminium trihydrate from bauxite in atmospheric digesters, at-110 deg celcius cap-50 tpd Aluminium utensils Aluminium utensils & school boxes Aluminium utensils and circles Aluminium window and door fabrication unit capacity 35,000 sq.mtr window per year Aluminium wire drawing Aluminium wire drawing and super enameling for winding Aluminium wire drawing and super enamelling Aluminium/copper cable lugs Bus body fabrication Door hinges (mild steel and stainless steel) Door hinges (mild steel & stainless steel) Door lock/pad lock Ferro silicon by smelting process G.i.wire and binding wire Mig wire Sheet manufacturing Sheet metal components Sheet metal parts/components Sheet metal products (ferrous/ non ferrous) Upvc windows from upvc profiles Wire drawing and galvanizing (by cold proess) with nuts & bolts Wire drawing and galvanizing by cold process Wire drawing lubricant Wire drawing powder Wire enamels Wire mesh (netting) & wire drawing Wire mesh and gauge Wire mesh from steel wire rolls Wire nails Wire nails & wire drawing Wire rope slings</p> <p>Beer and Wine Industry Alcoholic drinks from ethyl alcohol by mixing of various flavours (flavoured alcohole</p>	<p>beverages) Beer & wine Beer from potato Beer from potatoes Beer industry Beer industry (with government facility) Beer plant Beer Plant (Export Oriented Unit) Bottling of whisky Bottling plant (whisky, brandy, rum, vodka, gin) from rectified spirit/ena Fatliquor for leather applications using (chlorinated paraffin wax) Gluten free beer Imfl & country liquor Imfl (whisky) & country liquor Imfl (whisky) from potatoes Imfl wine, brandy, whisky, champagne Indian made foreign liquor (imfl) Kinnow Winery Liquor bottling plant Paper labels for beer bottles coated by high speed fully automatic machine Sodawater bottling plant (carbonated beverage) Whisky (hard drink) Whisky (imfl) Wine from banana Wine from dates Wine from mahua flowers Wine, brandy, whisky & champagne</p> <p>Bakery and Baking Products, Biscuits, Cakes, Pies, Pastries, Cookies, Breads, Baking Powder, Rusk, Buns, Toasts, Cheese Cake, Lecithin, Eggless Cake and Desserts Automatic biscuit making plant export oriented unit Automatic bread and biscuit unt (modern bakery plant) Baker's yeast Bakers yeast Bakery and biscuits equipments fabrication Bakery gel (translucent semi solid paste) Bakery industry Bakery unit (pastries, bread, buns and cake, etc) Bakery unit (pastries, bread, buns, cake, toffee etc.) Bakery unit (rusk,</p>
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<p>pastries,bread, buns cake, toffee, etc. Bakery unit (rusk,pastries, bread, buns cake,bread,buns cake, toffee etc.)1.2 tons/ day Bakery, namkeen and confectioneries Baking powder Baking soda Biscuit industry Biscuit manufacturing cap:20 ton/day Bread Bread & biscuit plant Bread & biscuits Bread and biscuit plant (bakery industry) Bread boards Bread plant Bread rusks Cookies making (bakery industry) Egg powder</p>	<p>cashew fruit apple Coffee roasting of green coffee beans Cold drink Cold drinks (soft drinks) Food grade lubricant or grease Grape juice Grape wine Instant coffee Instant tea Instant tea & coffee (premixed with sugar and milk) with organic coffee premix and sugar free coffee premix composition Mango juice Mango juice bottling plant Mango processing & canning (mango pulp) Mango processing (mango pulp, juice & slicies) Manufacture of juice concentrate of dried mahua flower Orange juice Pectin from citrus,lemon and orange Phyto tea Pineapple juice canning Pineapple juice preparation & packaging Pineapple pulp and juice Pineapple, tomato fruit juice and other products Rts juice plant Soft drink concentrate Soft drinks (non carbonated) Soft drinks (non carbonated) mango, litchi, pineapple flavours frooti type in tetrapack Soft drinks essences Soft drinks in tetra pack & pouches Soft Drinks Manufacturing Sugarcane juice in tetrapack Tea & coffee processing and packaging Tea & coffee processing and packaging Tea boutique Tea industry Tea packaging Tea packaging & distribution (marketting) Tea packaging industry Tea plantation and processing</p>	<p>Tea processing and packaging Cables viz Cable Industry, Cable Manufacturing, Aluminium Cable, Copper Cable, PVC Cables, Armoured Cable, Electrical Cable, Cable Tray, Power Cable, Metal Cable Tray, Teflon Cables, Optical Fibre Cable etc</p>	<p>made by cold process saponification) Recycle waste black oil using acid and clay Spices grinding Spray drying of menthol and peppermint oil Tomato paste,ketchup, tomato puree and tomato powder Tomato processing unit</p>
<p>Beverages, Non Carbonated Drinks, Tea, Coffee, Non Alcoholic, Cold Drink, Soft Drinks, Juices like apple, litchi, orange, pineapple, banana, mango, cashew, guava, kinnow, grape and allied</p>	<p>Aeropress coffee maker Alcohol and vodka from potato Alcohol drinks from ethyl alcohol by mixing of various flavours Alcohol from broken rice Alcohol from molasses Alcohol from potato Alcohol, beer, starch, liquid glucose, dextrose, sorbitol, vitamin-c Alcoholic beverages & venegar from coconut water Alcoholic drinks from ethyl alcohol by mixing of various flavours (flavoured alcohole beverages) Banana, apple & other fruit chips Bottling plant country liquor from rectified spirit Calcium carbonate filler masterbatch Cashew fruit juice from</p>	<p>Abc cable factory Abc cable factory (acsr aluminium conductor and cable factory) Cable tray manufacturing Cable tray manufacturing Copper and aluminium wire and cable manufacturing unit Copper sulphate from copper ash/scrap Copper wire and pvc cable Copper wire manufacturing for house and industrial applications (pvc wire and cables) G.i.wire and barbed wire Hospital disposable products like surgical gown, drape, apron, shoe cover etc. Manufacturing double glazed upvc windows with argon fill Master batches (coloured, pvc,ldpe,hdpe) Pvc compounding plant for cable grades Pvc solvent cements (upvc & cpvc) Wpc pvc foam board line cap:350 kg/hr</p>	<p>Coconut & Coconut Products, Coconut Shell Products, Coconut Plantation, Coconut Water, Coconut Sweets, Coconut Oil, Coconut Cream, Coconut Milk, Mattresses, Desiccated Coconut (DC), Coconut Milk Powder, Shell Charcoal, Shell Powder etc.</p>
<p>Activated carbon from coconut sheel/wood/coal & lignite Coconut & its products Coconut fibre Coconut milk powder (dehydrated) Coconut oil from copra Coconut plantation Coconut processing complex (coco oil, coco flour, coco cream, coco water, decinated coconut etc.) Coconut products & by products process complex Coconut shell powder Coconut squash & jam Coconut sweet (watery) Coconut water (coco jal) packed Fruit juice (mango, guava, banana, grape, orange, apple) & pulp, jams, jellies, squashes, chutney, sauces, ketchup, coconut water etc. Processing & utilisation of coconut Project Reports To Start New Industry on Coconut Rasgulla Manufacturing And Canning Teak plantation Tender coconut water Tender coconut water and sugar cane juice preservation in pet bottles Virgin coconut oil</p>	<p>Chillies viz. Red Chilli Powder, Modern Chilly Powder, Chilly Oil, Chilli Sauce, Tomato Chillies, Green Chilli, Drying of Red Chillies, Spice (Chilli) Oleoresin</p> <p>Chilli oil Dextrose saline (i.v.fluid) (40000 bottles/day) Menthol oil from leaves and menthol crystals (peppermint) Mini Oil Plant Suitable For Groundnut Oil And Cotton Seed Oil Natural oil based soaps & shampoos (bars and liquids)</p>	<p>Chillies viz. Red Chilli Powder, Modern Chilly Powder, Chilly Oil, Chilli Sauce, Tomato Chillies, Green Chilli, Drying of Red Chillies, Spice (Chilli) Oleoresin</p>	<p>Activated carbon from coconut sheel/wood/coal & lignite Coconut & its products Coconut fibre Coconut milk powder (dehydrated) Coconut oil from copra Coconut plantation Coconut processing complex (coco oil, coco flour, coco cream, coco water, decinated coconut etc.) Coconut products & by products process complex Coconut shell powder Coconut squash & jam Coconut sweet (watery) Coconut water (coco jal) packed Fruit juice (mango, guava, banana, grape, orange, apple) & pulp, jams, jellies, squashes, chutney, sauces, ketchup, coconut water etc. Processing & utilisation of coconut Project Reports To Start New Industry on Coconut Rasgulla Manufacturing And Canning Teak plantation Tender coconut water Tender coconut water and sugar cane juice preservation in pet bottles Virgin coconut oil</p>

TERMS AND CONDITIONS

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* Complete Hand Book on Adhesives and Adhesion Tech. with Project Profiles 900/- 90		* Packaging Technology 1150/-115		* Technology of PET Bottles, Preform and PET Recycling 850/- 85	
SMALL SCALE INDUSTRIES, STATIONERY, PAPER, INKS, CANDLES & EXPORT BUSINESS		* Corrugated Boxes 1100/-110		* Modern Technology of Extrusion & Extruded Prod. 800/- 80	
* Start Your Own Export Business (How To Export) 450/- 45		PAINT, VARNISH, SOLVENTS, POWDER COATING & LACQUERS		* Technology of Synthetic Resins & Emulsion Polymers975/-100	
* Start Your Own Small Business and Industry 350/- 35		* Paint Pigment Varnish & Lacquer Manufacturing 450/- 45		* Technology of Plastic Additives with Processes & Packaging 900/- 90	
* Candle Making Processes & Formulations Hand-Book 750/- 75		* Paint Varnish Solvents & Coating Technology 800/- 80		* Complete Technology Book On Identification Of Plastics And Plastic Products Materials 975/-100	
* Stationery, Paper Converting & Packaging Industries 400/- 40		* Paint, Pigment, Solvent, Coating, Emulsion, Paint Additives & Formulations 950/- 95		* Identification Of Plastics & Other Plastic Process Industries 950/- 95	
* Modern Inks Formulaes & Manufacturing Industries 325/- 35		* Technology of Coatings, Resins, Pigments & Inks Industries 975/-100		* Complete Technology Book Of Plastic Processing And Recycling Of Plastics With Project Profiles 1250/-125	
* Profitable Businesses to Start for Entrepreneurs 400/- 40		* Mfg. Tech. & Formulations H.B. on Thinners, Putty, Wall & Indu. Finishes & Synthetic Resins 900/- 90		* Complete Hand Book Of Blow Moulding Plastics Technology With Project Profiles 975/- 98/-	
* Modern Small & Cottage Scale Industries 650/- 65		* Technology of Synthetic Resins & Emulsion Polymers 975/-100		* Modern Technology Of Injection Moulding, Blow Moulding, Plastic Extrusion,Pet & Other 975/-100	
* Profitable Small Cottage Tiny & Home Industries (2nd Edn.)900/-90		* Technology of Paints and Coating with Formulations 1750/-175		BEE-KEEPING & HONEY PROCESSING	
BIO FUEL, BIO GAS & BIOPROCESSING		* Powder Coating Technology 750/- 75		* Tech Book On Beekeeping And Honey Products With Project Profiles 975/- 98	
* Technology of Bio-Fuel (Ethanol & Biodiesel) 975/-100		* 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		* Complete Technology Book on Honey Processing and Formulations (Harvesting, Extraction, Adulteration, Chemistry, Crystallization, Fermentation, Dried Honey, Uses, Applications and Properties) 1100/- 110	
* Mod.Tech.of Bioprocessing1475/-150		* Complete Hand Book on Paints, Varnish, Resins, Copolymers and Coatings with Manufacturing Process, Formulations/Tech 900/-90/-		* Modern Bee Keeping & Honey Processing 375/- 40	
* ModTech.of BioGas Production1975/-		* Manufacture Of Nitrocellulose Lacquers, Pu Lacquer, Vacuum Metallizing Lacquers And Other Lacquers With Formulations And Project Profiles 750/- 75/-		STARCH MANUFACTURING	
SWEETS, NAMKEEN & SNACK		PLASTIC/POLYMER PROCESSING, COMPOUNDING, INJECTION MOULDING, ROTATIONAL MOULDING, PLASTIC FILM, FIBRE GLASS, PLASTIC WASTE RECYCLING, MOULDS, PET & RESINS, ADDITIVES INDUSTRIES		* Technology of Starch Manufacturing (Applications, Properties and Composition) with Project Profiles 1100/- 110	
* Tech of Sweets (Mithai) 1050/-110					
* Technology of Sweets (Mithai), Namkeen and Snacks Food with Formulae 1750/- 175					
* Mfr. of Snacks Food, Namkeen, Pappad & Potato Products 900/- 90					

SPICE, SEASONING, CONDIMENTS & COLD STORAGE	MINERAL AND MINERALS	ORGANIC FARMING & FOOD/NEEM
* 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	RUBBER CHEMICALS, COMPOUNDS	FISH FARMING & FISHERY PRODUCTS
* 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	TEXTILE AUXILIARY & CHEMICALS
NON WOVEN TECHNOLOGY	* 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	AYURVEDIC/HERBAL MEDICINES	* Tech of Textile Chemicals with Formulations 1450/- 145
PHARMACEUTICALS & DRUGS	* 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, Ear1575/- 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
LEATHER & LEATHER PRODUCTS	STAINLESS STEEL, NON FERROUS METALS, BILLETS & ROLLING MILL	DISINFECTANTS, CLEANERS, PHENYL, DEODORANTS, DISHWASHING DETERGENTS ETC.
* 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
BIOTECHNOLOGY	* Processing Technology of Steels and Stainless Steels 1900/-190	COFFEE & COFFEE PROCESSING
* 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
CERAMICS & CERAMIC PROCESS	* Mfg Tech of Non-Ferrous Metal Products 1750/- 175	ONION CULTIVATION/PROCESSING
* H.B.of Ceramics & Ceramics Processing Technology 1975/- 200	FOOD ADDITIVES/CHEMICALS AND SWEETENERS & FOOD EMULSIFIERS	* 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	BUILDING MATERIAL & CHEMICALS
TREE FARMING	* 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	DISPOSABLE MEDICAL PRODUCTS	TEXTILE, GARMENTS, DYEING...
MUSHROOM PROCESSING	* 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	SOYA MILK, TOFU & SOY PRODUCTS	* Technology of Textiles (Spinning & Weaving, Dyeing, Scouring, Drying, Printing and Bleaching) 900/- 90
BIOFERTILIZERS & VERMICULTURE	* 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	BAKERY, CONFECTIONERY, BISCUITS, COOKIES, BREAKFAST, PASTA & CEREALS
BIODEGRADABLE PLASTICS AND POLYMERS	PRODUCTS FROM WASTE	* 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
FROZEN FOOD/FREEZE DRYING	WINE PRODUCTION	* 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	CASTING TECHNOLOGY	* Confectionery, Chocolates, Toffee, Candy, Chewing & Bubble Gums, Lollipop & Jelly Products 1750/-175
BEER, VODKA, BEVERAGE, WHISKY	* 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	PULP & PAPER TECHNOLOGY	TECHNOLOGY OF FIBRES
* 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
	FLOUR MILL (ATTA MAIDA, SUJI)	
	* Start Your Own Wheat Flour Mill (Atta, Maida, Suji, Bran & Besan) 900/- 90	