

End - Sem Examination

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* Answer of Q. No. 3 (B)

SWOT Analysis

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats and so a SWOT analysis is a technique for assessing these four aspects of your business.

SWOT analysis is a simple tool that can help you to analyze what your company does best right now, and to devise a successful strategy for the future.

SWOT can also reveal areas of the business that are holding you back, or that your competitors could exploit if you don't protect yourself.

The primary goal of SWOT analysis is to aid organizations in creating awareness of the factors in making a business decision.

A SWOT analysis guides you to identify the positive and negative inside your organization (S-W) and outside of it, in the external environment (O-T).

Developing a full awareness of your situation can help with both strategic planning and decision making.

The SWOT method (which is sometimes called TOWS) was originally developed for business and industry, but, it is equally useful in the work of community health and development, education and even personal growth. SWOT is not only the assessment technique you can use but it is one with a long track record of effectiveness.

Positive		Negative	
Internal	Strength	Weakness	
External	Opportunity	Threat	

SWOT Analysis

Strengths		Weakness	
Internal	Factors	Weakness	Threats
Technological Skills		Weak Brands	
Leading Brands		Poor Access to Distribution	
Scale		Low customer retention	
Management		Sub Scale	
Production Quality		Management	
Opportunities		Threats	
External	Changing Customers Tastes	Changing Customer Base	
Factory	Technological Advances	Technological Advances	
	Lower Personal Taxes	Tax Increase	
	Change in Population Age	Change in Population Age	
	New Distribution Channels	Change in Government Politics	

The strengths of this method are its simplicity and application to a variety of levels of operation.

SWOT analysis is most commonly used by business entities but it is also used by nonprofit organizations and, to a lesser degree individuals for personal assessment. Additionally, it can be used to assess initiatives, products or projects. As an example, CIO's could use SWOT to help create a strategic planning template.

Elements of SWOT Analysis

As its name states, a SWOT analysis examines four elements.

Strengths :- Internal attributes and resources that supports a successful outcome.

Weakness :- Internal attributes and resource that work against a successful outcome.

Opportunities :- External factors that the entity can capitalize on or use to its advantage.

Threats :- External factors that could jeopardize the entity's success.

A SWOT matrix is often used to organize the items identified under each of these four elements. A SWOT matrix is usually a square divided into four elements quadrants, with each quadrant representing one of the specific element. Decision-makers identify and list specific strengths in the first quadrant, weakness in the next, the opportunities and lastly, threats.

How to do a SWOT Analysis

A SWOT analysis generally requires decision makers to first specify the objective they hope to achieve for the business, organization, initiative or individuals.

From there, the decision-makers list the strengths and weakness as well as opportunities and threats.

Various tools exist to guide decision-makers through the process, often using a series of questions under each of the four elements. For example, decision makers may be guided through questions such as "What do you do better than anyone else?" and "What advantages do you have?" to identify strengths; they may be asked "Where do you need improvement?" to identify weakness. Similarly, they'd run through questions such as "What market trends could increase sales?" and "Where do your competitors have market advantages?" to identify opportunities and threats.

Example of a SWOT Analysis

The end result of a SWOT analysis should be a chart or a list of a subject's characteristics. The following is an example of the analysis of an imaginary retail employee.

Strengths :- Good communication skills, On time for shifts, Handles customers well, Gets along well with all departments, physical strength, good availability.

Weakness :- Takes lengthy smoke breaks, low technical skill, very prone to spending time chatting.

Opportunities :- Storefront worker, getting customers and assisting them to find products, helping keep customers satisfied, assisting customers post-purchase with items and ensuring buying confidence stocking shelves.

Threats :- Occasionally missing time during peak business due to breaks, sometimes too much time spent per customer post sale, too much time in interdepartment chat.

SWOT Analysis Pros and Cons

SWOT analysis can help the decision-making process by creating a visual representation of the various factors that are most likely to impact whether the business, project initiative or individual can successfully achieve an objective.

Although that snapshot is important for understanding the multiple dynamics that impact success, a SWOT analysis done have limits. The analysis may not include all relevant factors for all four elements, thereby giving a skewed perspective. In addition, because it only captures factors at a particular point in time and doesn't allow for how those factors could change over time, the insight SWOT offers can have a limited shelf life.

Answer of Q. No. 2 (A)

E-waste can be classified on the basis of its composition and components. Ferrous and nonferrous metal, glass, plastics, pollutants, and other are the six categories of materials reported for e-waste compositions.

Compositions of E-Waste

E-waste normally contains valuable, as well as potentially toxic materials.

The composition of e-waste depends strongly on factors such as the type of electronic device, the model, manufacturer, date of manufacture, and the age of the scrap.

Scrap from IT and telecommunication systems contain a higher amount of precious metals than scrap from household appliances.

Composition of e-waste is very diverse and differs in products across different categories. It contains more than 1000 different substances, which fall under "hazardous" and "non-hazardous" categories.

Broadly, it consists of ferrous and non-ferrous metals, plastics, glass, wood & plywood, printed circuit boards, concrete and ceramics, rubber and other items.

Iron and steel constitutes about 50% of the e-waste followed by plastics (21%), non-ferrous metals (13%) and other constituents.

Non-ferrous metals consist of metal like copper, aluminium and precious metals ex. silver, gold, platinum, palladium etc.

The presence of elements like lead, mercury, arsenic, cadmium, selenium and hexavalent chromium and flame retardants beyond threshold quantities in e-waste classifies them as hazardous waste.

Components of E-Waste

E-waste has been categorized into three main categories. Viz Large Household Appliances, IT and Telecom and Consumer Equipment.

Refrigerators and Washing Machine represents Large Household Appliances, Personal Computer, Monitor and Laptop represents IT and Telecom while Television represents Consumer Equipment.

Each of these E-waste items has been classified with respect of twenty six common components, which could be found in them. These components from the "Building Blocks" of each item and therefore they are readily "identifiable" and "removable".

These components are metal, motor/compressor, cooling, plastic, insulation, glass, LCD, rubber, wiring/electrical, concrete transformer, magnetron,

textile circuit board, fluorescent lamp, incandescent lamp, heating element, thermostat, BFR-containing plastic batteries, CFC/HCF/HFC/HC, external electric cables, refractory ceramic fibers, radioactive substances and electrolyte capacitors (over LID 25 mm).

1. Radioactive substances, refractory ceramic fibers, electrolyte capacitors (over LID 25 mm), textile and magnetron are not present in any item.
2. Plastic, circuit board and external electric cables are present in majority of items. BFR containing plastic is present in refrigerator, laptop and television.
3. Refrigerators are unique items because of presence of CFC/HFC/HFC/HC, cooling insulation, incandescent lamp and compressor.
4. Heating element is found in washing machine, while thermostat is found in both refrigerator and ~~at~~ washing machine.
5. Fluorescent lamp is found only in laptop.
6. Metal and motor are found in majority of items except refrigerator.
7. Transformer is not found in washing machine and refrigerator.

8. CRT is found in personal computer and TV, while LCD is found in PC and TV.
9. Batteries are found in PC and laptop
10. Concrete is found in washing machine.
11. Rubber is found in refrigerator and washing machine.
12. Wiring | Electrical is found in all the items.

Large household appliance (refrigerator) may consist of electric motor, a circuit board, a transformer, capacitor thermal insulation, switches, wiring, plastic, casing that contains flame retardants etc.

So, They all are the composition of E-waste
& the components of E-waste.

Answer of Q. No 5 (A)

E-waste is usually regarded as a waste problem, which can cause environmental damage if not dealt with in an appropriate way. However, the enormous resource impact of electrical and electronic equipment (EEE) is widely overlooked. The lack of closing the loop for electronic and electrical devices leads not only to significant environmental problems but also to systematic depletion of the resource base in secondary materials.

Modern electronics can contain up to 60 different elements; many are valuable, some are hazardous and some are both. The most complex mix of substances is usually present in the printed wiring boards (PWBs). In its entity electrical and electronic equipment is a major consumer of many precious and special metals and therefore an important contributor to the world's demand for metals.

Despite all legislative efforts to establish a circular flow economy in the developed countries (EU), the majority of the valuable resource today are lost. Several causes can be identified; firstly, insufficient collection efforts; secondly partly in appropriate recycling technologies; thirdly and above all large and often illegal exports streams of E-waste into region with no or inappropriate

recycling infrastructures in place, large emissions of hazardous substances are associated with this. Unfortunately, these regions with inappropriate recycling infrastructure are often located in developing and transition countries. At the moment the developing and transition countries are striving to implement technologies to deal with the re-cycling of e-waste and to establish circular flow economies.

Besides the direct impact of effective recycling on the resource base of the recycled metals, state of the art recycling operations also considerably contribute to reducing greenhouse gas emissions. Primary production i.e., mining, concentrating, smelting and refining, especially of precious and special metals, has a significant carbon dioxide (CO₂) impact due to the low concentration of these metals in the ores and often difficult mining conditions.

Recycling electronic waste has become an increasingly important environmental issue as the useful life of electronic devices becomes shorter and shorter and the list of electronic gadgets that we use becomes longer and longer.

E-waste recycling benefits are numerous and the need to address these items in the solid waste stream is becoming more urgent.

E-waste may make its way into our yards, mixed in with e-waste, old appliances and scrap metal in recycling industry. Electronic wastes consists of corrective substances like cadmium, harmful toxins and many more.

The importance of E-waste Recyclings

1. Decrease Raw - material Demand

Reclaiming estimable elements from the recycling process can help to decrease the demand for raw materials. It helps conserve essential natural resources most people these days have ~~not~~ started understanding the importance of recycling e-waste and started doing the same.

2. Reduce Greenhouse Gas Emissions

You might know that using a recycled substance can decrease greenhouse gas emission. It is mainly produced while manufacturing new products.

which result in increasing global warming and climate change the more we use recycled products - less the demand for greenhouse gas emissions

3. Protects Environment

Recycling E-waste can help us to keep away harmful materials from the environment. Many toxic acids can merge with the water and form; hence it becomes essential for us to recycle every e-waste efficiently.

When we recycle - e-waste every material is used ideally helping to save raw material, environment and money.

4. Reduce Costs

E-waste recycling is undoubtedly good for the environment but also good for brands. Most countries have incentivized e-waste recycling by lifting the price of dropping off ultimately preventing it many brands are now focusing on recycling and hygiene to benefit mother earth and business.

It lowers the business cost and help to increase employee's morale.

5. Add Safety

Your e-waste like smartphones and tablets can have crucial information which you avoid sharing with any other person.

Many individuals overload that when they dump out the e-waste, then they are exposed to safety risks.

Many consider that removing their crucial data from the device is quite enough, but they need to understand that removing crucial information is not enough. Hence it's beneficial for you to recycle your e-waste instead of dumping it in landfills.

6. Electronic products are composed of valuable materials such as precious metals like gold, silver and platinum along with copper, aluminium, plastic and glass. Through the recycling process, these materials can be reclaimed. Most electronic devices are nearly 100 percent recyclable. It would be poor.

stewardship to landfill these materials.

So, It is very important to recycle the E-waste because it will give you many benefits and will not affect the environment, pollution and human health.

Answer of Q. No 4 (A)

E-waste have a lot of economic and social effects on the society. But firstly the question is - what is E-waste?

E-waste also called as electronic waste is a combination of used or unwanted electronic products that have exceeded their shelf life. Computers equipments, monitors / TVs, all phones, batteries, stereos etc are popular example of items that contain harmful toxic components that need to be recycled properly.

Now the question comes that how is E-waste generated?

Manufactures need to use certain chemical, elements and compounds to synthesize a final consumer product.

R&D, multiple product generations and consumers willing to "upgrade". So creates a constant supply of this type of waste. Items that contain numerous substrical components, generate the largest amount of e-waste.

Recycling of E-waste has Economic Benefits

E-waste business like protree provide employment and generate revenue that stimulates the economy, and e-waste recycling isn't going anywhere.

E-waste recycling also prompts manufacturers to offer buyback incentives.

Customers receive lowered costs when they agree to participate in buyback programs and manufacturers save on the price of reuse material. It is total win-win situation.

E-waste recycling also eliminates the cost of maintaining waste sites and the cost involved with transporting e-waste. Often, e-waste is shipped to overseas dump sites, which costs the taxpayers hefty sums of money.

What poses a threat to Society

→ The issue at large is that because of the toxic nature of electronic

components, our landfills are becoming polluted and these toxins are seeping into underground reservoirs.

This poses an environmental hazard for our habitat and ecosystem.

→ In United States and Europe, E-waste at large is regulated, however many other countries have less stringent regulations.

How can the Recycling Cycle Work?

→ "Buy new items" is the 1st stage in

Social impact of ^{E-waste} Recycling

Social impacts of recycling are simply the consequences the process has on enabling social interactions

(i) Employment

Studies have shown that for every job in waste management there are four jobs in recycling and for every job in collecting recyclables, there are eight jobs

in creating new products from the recyclables.

(ii) Human rights and its ~~same~~ economic repercussion

Informal workers typically carry out their activities under inappropriate conditions, and earn very little in the process. This forces them to introduce their children to working conditions at an early age.

Sticking the employment and human right aspects of the social impact of recycling, the overall financial value of the social impact of recycling can be estimated as \$ 218

Recycling

(iii) Protecting Environment

Recycling e-waste can keep a large of harmful materials out of environment.

For example:- Lighting can leach into waterways it is

Tanishq Chauhan
21C3184
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Chauhan
Date: 20
Page: 20

thrown into land fills but when it is recycled, there lighting can safely be used in products like dental amalgam.

* Answer of Q. No. 4 (A)

Goals of E-Waste Management

Goal 1: Producers collect and recycle discarded appliances as well as provide necessary funding (implementing EPR)

Present Situation Possible Actions What is Needed Results depending on

High costs of compliance and lack of regulation does not create favourable conditions for producers to accept EPR.	Imposing responsibilities on producers to be achieved by producers to e-waste management.	Legislation and enforcement have to be achieved by producers to accept responsibilities.	The willingness of producers to accept responsibilities.
	Ensuring that all producers contribute to achieve targets.	to encourage producers to accept responsibilities.	
	generate information proportionate to its purpose.	EPR must be affordable; costs have to be stated smart.	The presence of sanctions in case producers fail to achieve their targets.

No reliable information on collection and recycling of e-waste.

Generate information on collecting and recycling of e-waste

Producers have to (be able to) provide reliable information on e-waste collected and recycled.

Availability of means to weigh and record waste.

Proper information technology.

Responsibilities are likely to be ~~entirely~~ evaded.

Implementing effective EPR instruments and e-waste legislation.

Monitoring responsibilities must take

The extent to which legislation and enforcement

manageable effort for administration and enforcement

is helping producers to meet targets.

Assessing and if required adapting instruments and legislation.

Effectiveness of monitoring by government.

Goal 2 : All producers own up responsibility and contribute to e-waste management.

Present Situation	Possible Actions	What is Needed	Results are depending on
Little understanding of producers and the numbers of appliances put on the market.	Introducing a system to register new appliances, how producers fulfill their obligations, and to evaluate results.	Monitoring and enforcement must require manageable effort from the government.	The presence of a register in which all producers of appliances are recorded as well as how each producer complies with obligations.
		Producers have to provide reliable information on products put on the market as well as e-waste collected and recycled.	

Goal 3 : Sufficient funding available for collecting and recycling.

Present Situation	Possible Actions	What is Needed	Results are depending on
Only e-waste with sufficient resale value is collected and recycled.	Fund the collection and recycling of all types of e-waste, particularly kinds with hazardous materials.	Funding must be transparent and information made available to the public.	Willingness of consumer and/or producer to pay a fee.

Prices do not take environmentally sound processing into account.

Funds must be sufficient, yet not be excessive and strictly limited its purpose.

Legislation implemented by government to regulate funding.

Direct access of producers to funds should be made impossible.

Funding must be monitored by public bodies.

Goal 4 : Awareness among citizens regarding toxicity and hazards of improper e-waste disposal.

Present Situation	Possible Actions	What is Needed	Results are Depending On
Insufficient knowledge of the environmental impact and health risks of handling e-waste.	Selecting a party responsible for creating awareness (either government and producer).	Use of various types of media to ensure that all layers of the population understand the message.	Effectiveness of the message and the chosen media.
Disposal of appliances is driven by the value of the materials only.	Setting measurable goals.	Smart targets to be achieved must be set by government.	Availability of financial resources.