CA FINAL SCM PE   JUNE 2020 EXAMS

SCM PE
THEORY
MOST IMPORTANT QUESTIONS

(All important theory topics on which case studies questions will be asked in exam)

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About Important Theory Topics -Chapter Wise

This Short-Summary book contains all theory topics on which ICAI may ask case study questions.

There are only 40 pages containing all important theory topics. If you read just 5 Page per day then you can study this book in 8 days only.

Ignoring theory topics given in this book may be dangerous in exam so better to study this if you have less time.

Pl Note that this book is not a substitute to full book. It is simply prepared for students who has less time to prepare for exam.

About CA Purushottam Aggarwal Sir..

Purushottam Aggarwal is a throughout first class graduate from Delhi University in the year 2005. He is a Fellow member of The Institute of Chartered Accountants of India.

He pursued Both B.Com(H), regular from Maharaja Agrsen College of Delhi University and CA-course simultaneously. **He qualified all levels of CA in just one attempt by appearing for both groups in CA-Inter and CA- Final.**

After professional education, he worked in a reputed CA firm and later on worked in "**Bharat Heavy Electricals Limited**" (A Mahanavratna Company) in managerial capacity for approx. 7 years handling the costing Department.

After getting professional practical experience of Business Environment. He started his academic career. He has been faculty of Cost and Management Accounting in various Management and Professional Institutes. His technique of approaching the subject matter, strategy for preparation of examination and scientific method of teaching are quite popular among the students.

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INDEX TO
STRATEGIC COST MANAGEMENT & PERFORMANCE EVALUATION

Important Theory Topics

CHAPTER 1 - INTRODUCTION TO STRATEGIC COST MANAGEMENT

Topic 1

Value chain Analysis Tool – Using this tool, we identify those activities which add value to product and finally we tie all these activities in a chain (sequence) so that only value creating activities are performed in company. Indirectly it identifies & try to eliminate those activities which do not add value to product.
The Idea of Value Chain Analysis first came in mind of Mr. Michael Porter in 1985 (**Pl Note it is Not Michael Jackson)**

He thought of eliminating non-value adding activities thereby saving cost & creating good value for money for customer. To divide all activities into value adding activities and non-value adding activities, Porter first divided all activities into 2 category

1. Primary activities:- activities which are related to converting raw material into finished goods
2. Secondary activities or Support Activities:- activities which supports primary activities & ensure ease in doing primary activities. For example Employing workers on time so production do not hamper.

Primary activities include

1. Inbound logistic activities:- It is related to receiving of raw material from supplier, storing material & finally distributing raw material for production of different product. It is related to internal that's why it is termed as inbound.
2. Operational activities:- it is related converting inputs into production of product or service
3. Outbound Logistics:- It is related to storage & movement of finished product from production to home of customer.
4. Marketing & Sales:- It is related to advertisement, selling & delivering the product to customer
5. Service:- Any service including after sale service, handling customer complaints & customer support/Training. e.g. replacement of defective product.

Support activities include

1. Procurement of raw material:- These activities includes purchase of raw material required as input for primary activities
2. Technological Development:- It is related to buying advanced machines, new technology & buying new ERP software which will help in in transformation of raw material to finished goods
3. Human Resource Management:- It is related to selection, recruitment, training & promotion of employee/labour on time so required manpower of required skill is remains available when required on production time.
4. Firm Infrastructure:- it is related to ensure required fund is available & proper accounting is done for each financial transactions.

Topic 2

Industry Structure Analysis

Michael also wrote an analysis on industry structure whereby it led down 5 points on which we can evaluate "profit making potential" or "Profit improvement strategy" of a company. Suppose in future, You (after becoming CA) decide to do your own business inspite of doing Job then you must identify the industry which has profit making potential and you will be able to make money. That time, These 5 points will help you to identify the profit-potential industry. You just think an industry in your mind and evaluate on all parameters then you will be able to identify whether you will make profit or Not. **Technically it is called Porter's 5 Forces Analysis.**

1. Bargaining power of buyers:- if buyer of your decided industry can reduce your selling price, it means profit potential is low. It means buyers has good bargaining power. For Example if buyer has option to shift to alternative product similar to your product then indirectly he can influence you to reduce selling price. In such case we will say that buyer has good bargaining power.

2. Bargaining power of suppliers:- if suppliers of input can increase my cost, it means profit potential is low. It means suppliers has good bargaining power. For Example if there is only one or limited supplier then supplier can force an organization to buy same quantity input at higher cost.

3. Threat of substitute product:- if there are multiple products which our organization will sell then profit potential is low since customer has option to switch to alternative product.

4. Threat of new entrants:- if new organization has barrier in doing same business because of huge capital requirement & government license requirement then profit potential of industry is high.

5. Intensity of competition amongst firms:- Intensity of competition is high when it is difficult to differentiate products of different organization, when organisations are more or less of same size. If intensity of competition is high then profit potential is low.

Topic 3

Superior performance & competitive advantage?
Answer
If a company desires to make huge profit then it must achieves
1. Superior performance in comparison to its competitors
2. Competitive advantages in comparison to its competitors.

To attain both these objectives, company must have following 2 different core-competency as compared to its competitors.
1. Product differentiation:- it occurs when customer feels that product of your company provides them higher quality as compared to your competitors. This is feeling of customer which helps in product differentiation. Product differentiation can be achieved by adopting any of following technique
    a. Company should offer better quality product with same price range of similar products.
    b. Company should innovate its product as early as possible as compared to its competitors.
    c. Company should provide superior customer responsiveness e.g. reduced waiting time, reduced delivery time

After achievement of product differentiation advantage, company may take benefit in 2 way
First way, Keep on increasing selling price till customer is ready to pay & earn huge profit

Second Way, Keep fixed price below premium price and get a huge market share

2. Cost leadership:- a firm enjoys this advantage if its total cost is less as compared to its competitors. Now firm can use this advantage in 2 way

First way, Keep selling price below selling price of competitor and get huge market share.
Second way, Keep selling price equal to selling price of competitor and increase its profit.
An organization can achieve cost leadership in following way

a) Attain economies of scale by producing & selling at high volume
b) Purchase raw material in bulk to get discount from supplier
c) Set up manufacturing unit in an area where government is giving advantage e.g. In Andhra Pradesh, Modi government reimburses salary of 5 employees for first 5 years.

Company must keep a watch on reduction of cost. Cost should not be reduced by compromising quality of product otherwise it may be dangerous for company.

CHAPTER 2 - MODERN BUSINESS ENVIRONMENT

Topic 1

Cost of Quality & its Components?

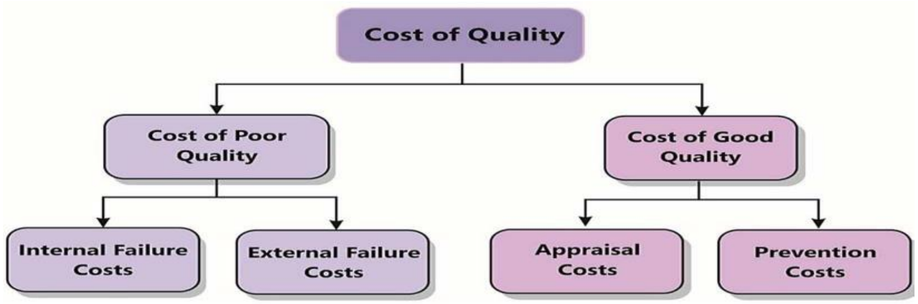
Quality means ability of product/service to meet expectations of customer. Product/service is said to have quality if it provides quality to customer. Quality means a feeling in mind of customer that product is best. Organization has to incur many cost to maintain & even improve quality of product/service.
Hence COQ is sum of cost incurred on preventing production of defective goods, detection of defective goods & rectification cost of defective products.
Earlier it was understood that company need to incur high cost to provide high quality of product but according to COQ concept, Incurring prevention cost may result in less re-work & less scrap hence benefit is higher than cost & finally quality of product gets increased. Company gets its advantage in other forms also e.g. increased market share, greater satisfaction of customer.
Basically COQ aims at preventing production of poor quality product.

Components of COQ

Quality of product can be divided into as “Good Quality” & “Poor Quality”. If Product is of good quality, it means company must have spent money on monitoring of activities related to quality (supervision cost) & must have also spent money on preventing production of defective products.
Cost incurred on monitoring of activities related to quality is technically known as “Appraisal Cost”
Cost incurred on preventing production of defective product is known as “Prevention Cost”

If product is of poor quality then this poor quality (defect) in product can be identified internally within organization before product is dispatched to customer & defect can be identified by customer after he has received & used the product. Now company will have to incur cost to satisfy customer.

If defect is identified internally then company needs to spend cost on rectification. Such cost is technically named as "Internal failure cost". If defect is identified by customer then Company needs to spend cost on replacement of product, repairing goods & re-supplying to customer. Such cost is technically named as "External failure cost"



Cost of poor quality is also known as "Price of Non-Conformance" Means price paid since quality standards are not met.
Cost of good Quality is also known as "Price of Conformance". It means Price paid for meeting quality standards.
Internal failure cost + external failure cost = Cost of failure of control
Appraisal cost + Prevention cost = Cost of Control

Since COQ is also known as PAF Model (Prevention, Appraisal, Failure).

Topic 2

Total Quality Management (TQM)

TQM focuses at ensuring quality work in all functions of organization e.g. product designing, production, marketing, customer service etc. It aims to integrate all functions of organization and focus on

- Meeting customer needs
- Meeting organization objectives
- Eliminating waste
- Increasing efficiency of all staff of all departments.

Initially it was applied in manufacturing unit but now it is applied in service sector & PSU also.
TQM concept was developed jointly by Mr. Deming & Mr. Joseph

Follow Following Six C's for successful implementation of TQM

1. Commitment:- Take commitment (Mental Oath) of all employees regarding continuous quality improvement. All employees should be provided adequate & required training.
2. Culture:- Develop a culture in company whereby everyone is encouraged for creative thinking for quality improvement
3. Continuous improvement:- Communicate to all employees that TQM is a continuous improvement process. It is not one time programme.
4. Co-operation:- All employees involvement is required for successful implementation of TQM

5. Customer Focus:- Customer means both external & internal customer. External customer means person buying the product. Internal customer means employees. TQM should focus on both
6. Control:- company must document current best practice followed and also evaluate benefit of suggested practice thereby having a control over quality standards

Topic 3

EFQM excellence model

EFQM excellence model

EFQM stands for “European foundation for quality management”. Now It is clear that it is European model of business excellence. It is similar to US Model “Malcolm Baldriage Model”

This model gives 3 tools by which business excellence can be achieved

1. 8 Fundamental Principles – Company should focus on these fundamental
2. 9 Criteria – First 5 criteria helps in understanding “What the company does” and last 4 criteria helps in understanding “what the company achieves”. First 5 criteria are called “enablers” and last 4 are called “Results”
3. RADAR (Results – approaches – Deploy – Assess – Refine)

Following are the 8 fundamental principles which the organisation should focus at

1. Organisation should focus on creating value for customer (Value for money)
2. Organisation should focus on creating sustainable future for all stakeholders
3. Organisation should focus on developing organisation capability (implementing fully automated production instead of semi-automatic production)
4. Organisation should focus on creativity & innovation e.g. Launch New product
5. Organisation should focus on leading with vision & inspiration
6. Organisation should focus on flexibility
7. Organisation should focus on succeeding with talented man-power
8. Organisation should focus on sustaining outstanding results

First 5 criteria referred as “Enablers” are as follow

1. Leadership
2. People
3. Strategy
4. Partnership & resources
5. Process, Product & services

Last 4 criteria referred as “Results” are as follow

1. People Result
2. Customer Results
3. Society Results
4. Business Results

If company implement fundamental principles on "Enablers" then company shall get "Results" e.g. If company implement principle number 5 "innovation" on enabler number 4 "Resources" then definitely company shall find some ways by which quality of final product shall be improved & at the same time cost of resources shall be reduced thereby getting profit as "Business Results"

RADAR – now it is time to check performance of the organisation. Following steps are used to do that

1. R – Results – Decide results which are be achieved e.g. "Increase profit"
2. A – Approach – choose the correct approach e.g. "Innovation in resources"
3. D – Deploy – Implement the choosen approach e.g. "using substitute raw material which is available at less cost"
4. A – Assess – Calculate the result e.g. Check whether cost reduced & at same time, quality of product got improved or not"
5. R – Refine – Re-deploy if desired results are not attained

EFQM excellence model is used by about 30,000 organisations in Europe.

Topic 4

SUPPLY CHAIN MANAGEMENT

It is a chain which comprises of vendors that supply raw material, producers who convert raw material into FG, warehouse that stores FG, distribution center that deliver FG to retailers and finally a retailer who sells FG to ultimate customer.

Every party in this chain is very important aspect. According to Global Supply chain Forum (GSCF), A supply chain management is management of

1. Customer demand:- Knowledge of what customer needs
2. Manufacturing Flow:- Do all activities to produce FG
3. Product commercialization:- launch product to market
4. Customer Order:- Hire logistics & supply FG to customer
5. Returns Management:- Ensure on time replacements & returns, if any
6. Customer relationship:- Good relationship with customer
7. Supplier relationship:- Good relationship with supplier
8. Customer service management:- On time customer service

TYPES OF SUPPLY CHAIN

There are 2 types of supply chain

1. Push Model:- it is old way of producing & selling FG to customers. Business organisation used to forecast sales. Its flow was as below

   Step 1:- Supplier supplies raw material to manufacturer.

   Step 2:- Now Manufacturer (business organisation) used to produce.

   Step 3:- Now Distributor (Warehouse of company) get stock of FG from Manufacturer

   Step 4:- Now Retailer get stock of FG from distributor

   Step 5:- Now customer has to purchase what is available.

2. Pull Model:- it is new way of producing & selling FG to customers. Its flow is as follows
   Under pull model, FG are produced in response to actual demand by customer. The product which is already being sold in the market, is main focus in this model. Business organisation sees actual demand of product & produce similar product with new features in it so as to fit needs of customer

CHAPTER 3 - LEAN SYSTEM & INNOVATION

Topic 1

PERFORMANCE MEASUREMENTS IN JIT SYSTEM

Following are the parameters on which a firm evaluate the success or failure of implemented JIT system

1. Inventory Turnover:- if inventory level of raw material, WIP & FG has reduced and if Inventory turnover of raw material & FG has increased, it means JIT implementation is successful.
2. Setup time:- if machine setup time of company has reduced, it means JIT implementation is successful.
3. Customer complaints:- if number of customer complaints, time taken in responding to customer complaint has reduced, it means JIT implementation is successful. JIT aims at preventing recurrence of customer complaint.
4. Scrap:- Little waste should be generated after implementing JIT. If material scrap rate has reduced to a considerably rate, it means JIT implementation is successful.
5. Cost of quality:- if Appraisal cost, prevention cost, internal failure cost & external failure cost has reduced, it means JIT implementation is successful.
6. Customer service:- if customer is provided on time delivery, if customer is shipped full order & if return & replacement of delivered FG has reduced, it means JIT implementation is successful.
7. Ideas generated:- if number of ideas generated per worker has increased, if number of ideas implemented has increased & if ratio, of number of ideas implemented divided by number of ideas generated, has increased, it means JIT implementation is successful.

Topic 2

KAIZEN COSTING

Kaizen is a Japanese word. It means "change for better". Kaizen costing technique aims at doing small small improvements on continuous basis by involving workers of all levels so that a particular big problem gets resolved.

PRINCICPLES TO IMPLEMENT KAIZEN COSTING

1. It requires small improvements in existing process at reasonable cost
2. It requires collective decision making approach whereby all workers of all areas participate
3. It assumed that there is no limit on level of improvement which can be implemented
4. It requires setting up standards for continuous improvement to attain long term sustainable improvement
5. It aims at eliminating waste & improve productivity

Topic 3

5S APPROACH

5S stands for list of 5 Japanese words which starts from alphabet "S".

1. Seiri
2. Seiton
3. Seiso
4. Sioketsu
5. Shitsuke

5S aims at organizing work space by identifying preventing accumulation of unnecessary items, ensure FIFO for items, clean work space on daily basis, standardize each process & promote among employees "Do without being told". Explanation of each word is as follows

1. Seiri (Sort):- Prevent accumulation of unnecessary items & reduce chances of being confused within unnecessary items
2. Seiton (Set in Order):- Arrange necessary items in "easy to identify" mode so that they can be easily selected for use & finally make smooth workflow. Ensure FIFO for use of necessary items. Place items in accordance with their frequency of their uses
3. Seiso (Shine):- clean the workplace on daily basis so it shines. Workplace should be safe, clean & pleasing to work in.
4. Sriketsu (Standardise):- Maintain high standard in work place & everything is done according to its standard.
5. Shitsuke (Sustain):- Assure worker does work without being told. Training must be given to employees for long term sustain.

Topic 4

TOTAL PRODUCTIVE MAINTENANCE

TPM aims at keeping all equipment in top working conditions so as to avoid breakdowns & delays in manufacturing process. It is a system of improving & maintaining the integrity of production & quality system. It focuses on adding value to the product using best equipment which work in best way.

TPM is implemented in following 4 stages

1. Preparation stage:- under this employees are mentally prepared by ensuring suitable environment & conduction awareness about use of best machines. Fear of employees of losing job should be taken care.
2. Introduction stage:- TPM main rule "Keep all equipment in top working conditions" should be communicated to all stakeholders such as employees, management etc.
3. Implementation stage:- This is done with the help of 8 activities which are referred as 8 pillars of TPM
4. Institutionalizing stage:- now it is time to give awards & recognition.

When we construct a home, first of we make foundation ready and then pillars are prepared so that roof can be built & finally home becomes ready. Same way, to get success in TPM, a firm should focus on 8 pillars of TPM along with "5S" as foundation.

Foundation & 8 Pillars	About	Technique to follow
Foundation:- 5S	TPM starts with 5S. it aims at organizing work place so that problems gets recognized.	Follow Sort, Set in Order, Shine, Standardize & Sustain technique to achieve
Pillar 1:- Autonomous Maintenance	It aims at repairing equipment before breakdown & eliminating defect through active participation.	Firm should clean, lubricant & tightened loose bolts of machine on regular basis
Pillar 2:- Focused Improvement (Kaizen)	It aims at minor improvements which are made on continuous basis.	Make kaizen register showing list of improvements done
Pillar 3:- Planned Maintenance	It aims at pre-planned maintenance of equipment so as achieve zero breakdown at optimum maintenance cost.	Firm should follow preventive maintenance & breakdown maintenance
Pillar 4:- Early Management	It aims at reducing time required for equipment development.	Firm should do engineering & re-engineering processes.
Pillar 5:- Quality Maintenance	It aims at achieving customer satisfaction with highest quality product.	Firm should do customer data analysis to know what customer needs.
Pillar 6:- Education & training	It aims at improving knowledge, skills & morale of employees	Firm should make policies for training of employees
Pillar 7:- Office TPM	It aims at implementing TPM in Office & administration work	Firm should aim at automation of office by analyzing process & procedure followed in office
Pillar 8:- Safety, Health & Environment	It aims at zero accident and zero health damage of employees	Firm should buy safety measures & educate employees about their operation when needed.

Topic 5

IMPLEMENTATION OF SIGMA

There are 2 methods which may be used to implement six sigma in company.

1. DMAIC Method:- It aims to improve existing process to get drastic improvement in producing high quality product. DMAIC stands for

a. D – Define - Define the perfect problem perfect goal & perfect customer requirements
b. M – Measure - Measure the current performance
c. A – Analyze - Analyze the root cause of poor performance
d. I – Improve - Improve the current practice & eliminate root cause of problem
e. C – Control – Control & maintain the new practice

It is 5 steps process. DMAIC is used in following circumstances only

a) There is only one product and only a single process needs to be altered provided competitor's action is stable, technology is stable & customer's behave is stable.

2. DMADV Method:- it aims at developing new process to get drastic improvement in producing high quality product. DMADV stands for
   a. D – Define – Define the perfect problem , perfect goal & perfect customer requirements
   b. M – Measure – Measure & determine customer desired performance
   c. A – Analyze – Analyse the options to meet customer requirements
   d. D – Design – Design detailed process to meet customer requirements
   e. V – Verify – verify the decided process & ability to meet customer requirement.

It is 5 steps process. DMADV is used in following circumstances only

1) Product is not in existence & multiple process needs to be altered and competitor's action is changing, technology is changing & customer's behave is changing.

Topic 6

BUSINESS PROCESS REENGINEERING

It aims at complete rethinking (reengineering) of each business process to achieve drastic improvements in performance of cost, quality & speed. 4 components of BPR are

1) Fundamental rethinking:- it aims at challenging fundamental questions e.g. "why do we do what we do", "Why do we do the way we do". It focuses on complete rethinking of each business process.
2) Radical redesign:- it aims at redesigning of complete business operations e.g. "if we were a brand new business, how would we operate our company". It focuses at reinventing "what is done" and "how it is done" rather than making some improvements.

3) Dramatic improvements:- Achieving dramatic improvements using fundamental rethinking & redical redesign is main motive of BPR. For example ford company adopted BPR in procurement process which led to reduction in number of employees by 75%.

4) End to End business processes:- It means each individual task in company should be related directly to ultimate objective rather than connected to next activity in the process. For example customer order fulfillment includes activities related to receiving the customer's order, verifying availability of inventory, picking the goods from warehouse & shipping the goods to customer. Reengineering of this activity will involve complete observation of

all process & removal of non-value adding activities because customer is not concerned with number of processes in the organization. He is only concerned with on time delivery of quality goods.

Topic 7

PRINCLIPLES OF BPR

Following principles must be followed for successful implementation of BPR

1) Organise activities in such way that each employee is responsible for final outcome. For example, on a chemist shop, a medical representative takes customer order, translate the order into internal code & ask his subordinate to bring required medicine, makes the bill & delivers medicine to buyer. This way a person is responsible for getting the ordered item to customer & for answering customer questions.
2) Organize some specialized functions specific for customers. In this way firm can provide better service to customer & also reduce cost. For example, an electronic equipment manufacturer promised timely repair of equipment to customer. Now he gave some spare parts inventory to customer & gave him phone number of field service executive to guide on "How to repair on own". Now this executive will visit customer site only when there is complex problem. This way company reduced overhead cost, salary cost & provided better service to customer
3) The department which is producing the information, should process the information i.e. both things should be done in same department. For example if Department A is responsible to receive goods supplied by supplier then Department A should be responsible to check receiving of ordered quantity & should be responsible for making payment to supplier.
4) Focus on making centralized system even if units are located at different locations. For example A company should make centralized purchasing ERP software which is accessible by all units and which has database of all vendors along with previous purchase order details.
5) All functions required for one outcome should be created parallel e.g. in loan application process, decision of one function which will affect loan decision, must be immediately communicated to other functions.
6) Decision Making power should be given to person responsible for performing work e.g. a person who actually does the work, should be given authority to observe his own work & make improvement in that. In this way, non-value adding activities gets reduced or even eliminated. This also changes the role of manager from "controller & supervisor" to "supporter & facilitator".
7) Keep all required data in an online data base so that anyone, who need it, can download & use it. This can be done using networking.

CHAPTER 4 – COST MANAGEMENT TECHNIQUES

Topic 1

COMPONENTS OF TARGET COSTING

1. Value Analysis (VA):- It is reviewing the material composition of existing product so that cost can be reduced without doing any reduction in value of product for customer.
2. Value engineering (VE):- It is use of VA tool on new product. VE aims at reducing cost even before producing. Sometimes it is also known as functional analysis.

THINGS WHICH ARE REVIEWED IN VA & VE

1. Eliminate Non-value adding activities:- It involves detailed analysis of entire manufacturing process with a view to identify non-value adding activities and trying to remove these to get huge reduction in cost. But be alert and ensure that elimination of non-value adding activities does not hamper value added activities in any manner.

2. Changing product design material:- It involves change in designing material. Using a less quality design may be preferred if it provides substantial reduction in cost and little reduction in durability of product.

3. User friendly design:- Design product in such way that it become user friendly e.g. a cartridge for a laser printer is designed is designed in such a way that user can easily insert the cartridge in printer. It simply requires that sides of cartridge are correctly aligned and printer is opened correctly.

4. Think about using substitute material:- it aims at using less expensive components in place of more expensive components in product design. But be alert and ensure that using substitute parts do not lead to rise in other cost and substitute parts is easily available in required quantities.

5. Think about combining steps:- A detailed review of all processes associated with product is done to check possibility of combining some steps i.e. eliminating one or more steps. Technically it is called “Process Centering”

6. Take supplier’s assistance:- it aims at asking supplier to assist in cost reduction efforts. Supplier may guide about new technologies, new type of materials or new way of doing same thing.

Initial VA & VE may not get all possible cost savings thus Kaizen costing technique is used which says to do minor improvements on continuous basis for cost reduction.

Topic 2

USES (IMPORTANCE) OF PLC

1. It can be used as planning tool since it helps in deciding marketing strategies in each stage of product life by providing an idea about competition level and availability of substitute product in market.
2. It can be used as control tool since it allows company to compare performance of product as against similar product launched in past.
3. It can be used as forecasting tool since some products has same life and sales pattern.
4. It helps in appropriate strategy formulation depending on the stages of the product life cycle

Topic 3

IDENTIFICATION OF ENVIRONMENTAL COSTS

Since environmental costs are generally ‘hidden’ in ‘general overheads’ so it is necessary to identify environmental costs so as to control & minimize. It is also crucial to preserve natural resources getting scarce.

An organization has to assess impact of production on environment e.g. a pharmaceutical company has to decide following things w.r.t. production of one its drug

1. How much waste will be created during production process
2. How much packaging is needed for drugs & what % of that is recyclable.

There are 4 techniques which are used to identify environmental costs

1. Input – output analysis:- under this technique, waste is identified by controlling input & output e.g. suppose 100 kg of material has been bought & 80kg has been utilized in production process. Now company has to account difference 20 kg. 10% of this 20 kg has been sold as scrap and remaining 90% has been waste. Now company must analyze impact on this waste on environment.

2. Flow cost Accounting:- This technique uses not only material flows but also the organisational structure. It makes material flows transparent by looking at the physical quantities involved, their costs and their value. It divides the material flows into three categories: material, system and delivery and disposal. The values and costs of each of these three flows are then calculated. The aim of flow cost accounting is to reduce the quantity of materials which, as well as having a positive effect on the environment, should have a positive effect on a business' total costs in the long run.

3. Life cycle costing:- under life cycle costing, environmental cost of a product is analysed over life of a product. Company must adopt TQM to reduce lifecycle cost.

4. Activity Based Costing:- ABC allocates internal costs to cost centres and cost drivers on the basis of the activities that give rise to the costs. In an environmental accounting context, it distinguishes between environment-related costs, which can be attributed to joint cost centres, and environment-driven costs, which tend to be hidden on general overheads.

Topic 4

CONTROLLING ENVIRONMENTAL COSTS

After identification of environmental cost, now the task of controlling the cost arises. Following environmental cost are controlled

1. Waste:- Waste of material can be calculated by comparing material bought in and material consumed in production. Waste has environmental cost in terms of lost resources. Fines paid for non-compliance of pollution norms.
2. Water:- Organization spend money on water 2 times i.e. first while buying water and 2nd while disposing extra water. It is important for organization to identify where water is used & how consumption of water can be reduced thereby reducing environmental costs also
3. Energy:- energy cost can be reduced by identifying inefficiencies and wasteful practices thereby identifying cost savings
4. Transport & Travel:- if a business invest in most fuel efficient vehicles then it can save in terms of travel & transport of goods & material.

Consumables & raw materials:- These costs are usually easy to identify and discussions with senior managers may help to identify where savings can be made. For example, toner cartridges for printers could be refilled rather than replaced.

CHAPTER 5 – COST MANAGEMENT TECHNIQUES FOR SPECIFIC SECTORS

There is no theory topic which appears to be important from exam point of view.

CHAPTER 6 – DECISION MAKING

There is no theory topic which appears to be important from exam point of view.

CHAPTER 7 – PRICING DECISION

Topic 1

PRICING STRATEGIES UNDER DIFFERENT MARKET STRUCTURES

Market means a place buyers and sellers comes in contact for purchase & sale of goods & services.
Market structure refers to number of firms operating in the market & nature of competition among them.

There are 4 types of market structure in an economy. First of all, a seller has to recognize the market structure in which it is selling since pricing gets affected by market structure.

1. Perfect Competition:- A market is said to be perfectly competitive market if
    a. there are large numbers of buyers & sellers in the market
    b. all firms are selling similar product
    c. selling price of all firms is almost similar
    d. any new firm can easily starts selling in the market (No restrictions at all)
    e. Every firm earns a reasonable profit just to ensure its survival

    If organization is selling in this market then it has to choose same price at which others are selling. If firm's price is more than prevailing market price then no one will buy from this firm. Firm cannot charge less price since it will in itself become dangerous for its survival.

2. Monopoly Market:- A market is said to be monopoly if
    a. There is only one seller in the market
    b. Product is very unique (No similar product is being sold in the market)
    c. Firm has full right to charge high price
    d. New firm cannot enter into market
    e. Firm earns super profit

    If organization is selling in this market then it has to right to charge high price & can easily earn super abnormal profit

3. Monopolistic Market:- it refers to a market situation in which there are many firms who are selling closely related product but their product is differentiated based on quality of product they provide. Its features are
    a. Number of sellers are more than one but less than numbers of sellers in perfect competition.
    b. Product are closely related but product is differentiated based on quality of product

c. Price little lower than prevailing maximum price in market, can maximize profit
d. Firm earns abnormal profit which attracts new customers

If organization is selling in this market then it should charge a price little less than prevailing maximum price so as to maximize profit.

4. Oligopoly Market:- A Market is said to be oligopoly market if
   a. There are few large sellers in the market e.g. suppose a market has 50 competitors and Top 3 firms dominates 90% market share then such a market is oligopoly market.
   b. Product is similar product but differentiated on the basis of quality of product.
   c. Pricing policy should be in accordance with pricing of competitors. Each firm must consider potential impact of increase or decrease in selling price since market may shift towards the lower price.

Following pricing policies are adopted in oligopoly

1) Predatory pricing policy:- Predatory pricing is setting your price below your costs to drive other firms out of the market. You force your competitors to lower their prices and you make a loss until your rival leaves the market. The firm makes a loss in the short run but after their rivals leave the market they have less competition and so are able to raise their prices.

2) Limit-Pricing strategy OR Forestalling price strategy:- Limit pricing can occur because an established firm can benefit from economies of scale and doesn't have to deal with startup costs. The firm sets their prices above their costs but below the predicted costs of a new firm, meaning they'd make a lot. The firm still makes a profit but smaller than they otherwise would.

Topic 2

PRICE CUSTOMIZATION

Sometimes price of a product changes depending upon multiple factors as written below

1) Price changes due to change in requirement of customers:- For example, customer want more memory option in smartphone e.g. 16GB & 32GB. Price will change due to this
2) Price changes due to past behave of customer:- if customer pays on time then he may be offered products at less price
3) Price changes due to demographics:- pricing policy based on age or social status of customer e.g. railway given concession in fare to senior citizen
4) Price changes due to time differential:- e.g. if customer takes subscription of data usage for higher period then he may be offered at less price

Topic 3

PRICE SENSTIVITY

Mr. Thomas Nagle has identified 9 factors which a firm should consider while deciding price. Price sensitivity is related to study the impact on customers demand if price is changed (Either increased or decreased). If price sensitivity is higher then firm will avoid to increase price since higher prices may shift the customer to competitors.

1) Unique value effect:- if product is unique then price sensitivity is low.
2) Substitute awareness effect:- if buyers is aware of substitute products then price sensitivity is high. Firm should think twice before increasing price
3) Difficult comparison effect:- if buyer feels difficulty in comparing 2 alternatives then price sensitivity is low
4) Total expenditure effect:- if expenditure on a product is low as compared to income of customer then price sensitivity is low
5) End-benefit effect:- if expenditure on a part of a product is low as compared to total cost of product then price sensitivity of that part shall be low e.g. if customer will be less price sensitivity for price of fan which is used in CPU.
6) Shared Cost effect:- if buyer is able to share the product with other then price sensitivity will be low.
7) Sunk investment effect:- if product is used along with asset previously bought then price sensitivity will be low
8) Price quality effect:- if buyer has high perceived value for a product then price sensitivity will be low. High perceived value means customer feels high satisfaction.
9) Switching Costs Effect – the higher the product-specific investment a buyer must make to switch suppliers (monetary and non-monetary), the less price sensitive that buyer is when choosing between alternatives.

Topic 4

VALUE BASED PRICING METHODS

Now in modern market, it is a new way to price the product. Price is decided based on value perceived by customer. This method helps in removing price-war which aims at reducing pricing strategy to attain huge market share & profit. Perceived value means "What the customer feels about product". This method needs intensive market research. There are 2 methods under this

1. Objective value method OR True Economic value method:-
    a. This methods aims at measuring the benefits that product is intended to deliver to customer as compared to benefits that other product is intended to deliver whether customer recognize the difference in benefits or not.
    b. For example:- if a company wants to decide TEV of its new computer then price of next best computer plus value of additional features provided by company, shall become TEV of its computer.
    c. TEV = Cost of next best alternative + Value of performance differential
    d. Value of performance differential means value of additional features provided by company.

2. Perceived value method:-
    a. This method aims at pricing the product based on value that customer understands the product deliver to him. Price is based on what the customer is ready to pay.
    b. Price is fixed in such a way that it remains below the perceived value of customer and remains higher the cost incurred by organization. It is beneficial for both buyers & sellers.

Topic 5

PRICING METHODS FOR NEW PRODUCTS

This method is adopted when a new product is launched in the market since it is difficult to estimate their demand. This method aims at making experiments w.r.t price of product. For example a company may choose 3 different market having same sales potential. It may fix 3 different prices in each market i.e. high price, low price and price having reasonable profit margin. By doing this company can identify what the consumer is ready to pay.

New Products are divided into 3 categories

1. Revolutionary products
    a. It is new product for market
    b. It has potential to create its own demand
    c. It can replace existing product or technology
    d. Product is very unique.
    e. These products are called market leader
    f. They enjoy premium price due to its innovation or new technology e.g. pen drive classes
2. Evolutionary products
    a. A product introduced with upgraded version having additional features known as E.P.
    b. Pricing – on the basis of cost benefit analysis e.g. camera, mobile phone
3. Me too product
    a. These products emerge due to success of R.P or E.P.
    b. Similar to existing products
    c. Use of technology similar to R.P or E.P.
    d. Pricing depends upon market factors such as demand supply of product. Me-too products are price takers as the price is determined by market forces.

Skimming Pricing

1. It is applicable for new product to the market.
2. High price at initial stage.
3. Demand is uncertain for such life of product.
4. High price to low price as it develops.
5. High price is fixed to cover high promotional expenditure.
6. As market develop, price becomes competitive, i.e.; closure to the cost due to new manufacture (competitor) enter in market.
7. E.g. Mobile (only one in beginning now so many)
8. Price is inelastic during early stage till product is well established in market.

Penetration pricing

1. Applicable for new product to be introduced (first time) by company.
2. Low pricing policy at initial stage.
3. Low price purpose to enhance (grab) the market.
4. Low profit at initial stage but higher profit at later stage.
5. As product develop, price increase.
6. Penetration pricing policy can be adopted at any stage of Product Life Cycle (PLC).
7. Main purpose to popularize the product.
8. Penetration pricing is adopted when
    a. When demand of product is elastic to price i.e. price has power to drive demand e.g. Reliance Jio adopted this technique in popularizing Jio Fibre internet.
    b. When increased production volume may reduce cost of product due to economies of scale then in such situation firm tend to increase demand by reducing price.

c. When it is desired to put entry barrier for a new entrant & thereby avoid competitors to share market share.

Predatory Pricing and Penetration pricing are not one & same thing. Predatory pricing is loss leading pricing method under which product or service is sold at very low price with an intention to drive competitors out of market or creating entry barriers to new entrants.

CHAPTER 8 – PERFORMANCE MEASUREMENT & EVALUATION

Topic 1

TRIPLE BOTTOM LINE (TBL) MODEL

This concept is also known as "TBL" or "3BL" or "3P". This concept was developed by Mr. John Elkington. He was born in 1949 and he is alive today. From childhood he was an environment lover. He wrote many books regarding to businesses improvement. He is described as "true Green Business Guru". In 2008, his name was among "1000 Most influential people" in London.

In 1994 he developed a concept called TBL in which he focused on "people" & "planet" along with "profit" of company. He emphasized on looking at social & environmental performance rather than simple financial performance. This approach focused on making each manager responsible for environment. TBL has 3 dimensions

1) Social (People):- It is related to motivation, incentive, health & safety of employees & use of fair & beneficial practice towards labour. It focuses on "Do something for people". It is proven fact that a company which ignore their people is subjected to "Higher economic profit" and "Lower profit"

2) Environmental (Planet):- It is related to use of fair & safe environmental practices & measurement of impact on resources such as air, water, waste emissions etc. IT focuses on "Look after your planet". It is proven fact that a company which focuses on environment gets a powerful image in mind of people which lead to several benefits.

   Unilever company took a pledge to reuse 100% of its plastic packaging by 2025.
   Coca-cola company pledges to achieve major recycling initiative by 2030.

3) Economic (Profit):- It is related measuring economic success of company & improving it. It focuses on "Don't Forget to earn profit".

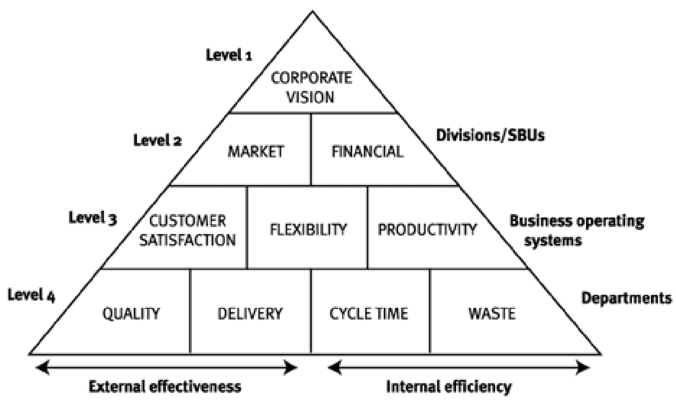
Trick to learn :- SEE i.e. S for Social, E for environmental & E for economic.

Topic 2

Performance Pyramid Model

Traditional performance measurement models mainly focused on financial aspect e.g. ROI, RI, EVA & SVA. These did not pay attention to non-financial measurement which became reason for birth of “Performance Pyramid” Model.

This model was developed by Cross and Lynch in 1991. It focused on linking vision of company with day-to-day operations of the company. Performance pyramid model also known as “SMART” model. “SMART” means strategic measurement and reporting technique model.



It has 4 levels of “SMART” model

1. Level 1 OR TOP Level:- Top of Pyramid shows vision and mission of the organization which describes its ambitions and how will it achieve its vision.
2. Level 2 OR Business Level:- This aims to achieve CSF w.r.t. market-related measures & financial-measures. Marketing & financial success is required utmost to achieve corporate visions
3. Level 3 OR Operating system level:- It has 3 indicators which helps in measuring business operating system. Now Marketing strategies & financial strategies are linked to higher customer satisfaction, increased flexibility to respond to change in market immediately & higher productivity. Productivity means optimum utilization of resources such as men, money & material (3Ms)
4. Level 4 OR Department level:- It has 4 criteria to evaluate performance of departments. Success of strategies are measured at departmental level. It includes quality of product, on-time delivery, less cycle time Less time to produce product) & less wastage (Reduce non-value adding activities) .

Left hand side of pyramid focus on external effectiveness and these are non-financial.
Right hand side of pyramid focus on internal efficiencies of organization & these have financial impact.

This model mainly focus on shareholders by incorporating financial aspect and it also focuses on customer satisfaction but this model does not focus on any other stakeholder e.g. employees, environment which is treated as its limitation.

Topic 3

BALANCE SCORECARD (BSC) AND ITS PERSPECTIVES

Performance pyramid was developed in 1991 it focused on only shareholder and customer and ignored other stakeholders in company. BSC also focused on shareholder & customer but it added internal business & learning & growth perspective also. So BSC is little better than Performance Pyramid.

Mr. Kaplan is a Harvard Business School professor and he is still alive.

Scorecard is like a marksheet of student and when scorecard is used in relation to business, it was termed as "Balanced Scorecard". BSC classified performance measurement of a business into 4 perspectives. It includes financial as well as non-financial aspect.

1. Financial perspective
2. Customer perspective
3. Internal business perspective
4. Learning & Growth perspective

1) Financial perspective:- It encourages identification of high level financial measures which helps in answering the question "How do we look to shareholders?" e.g. Sales growth every year, High ROI etc

2) Customer Perspective:- It encourages identification of high level measures which helps in answering the question "How do customer view us?" e.g. % of Sales from new product, on-time delivery, customer satisfaction etc.

3) Internal business perspective:- It encourages identification of high level financial measures which helps in answering the question "At What must we excel?" e.g. less cycle time, les per unit cost of product etc.

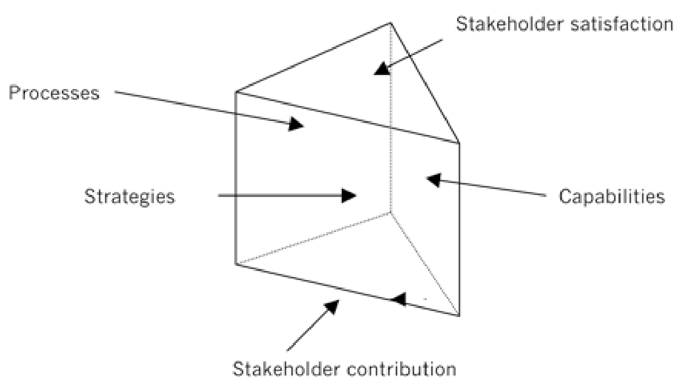
4) Learning & growth perspective:- It encourages identification of high level financial measures which helps in answering the question "How can we continue to improve, create value & innovate?" e.g. developing new products

Topic 4

PERFORMANCE PRISM MODEL

Performance Pyramid model & BSC focused on shareholder and customers. These ignored needs & requirement of other stakeholders such as employees, suppliers etc. So Neely & Adams developed performance prism model which focused on other stakeholders also.

Prism means a transparent mirror that changes the direction of light when it is passed through it. Performance prism model has 5 perspectives & thereby it identifies 5 questions which are necessary to answer complete performance measurement.



1) Stakeholders satisfaction:- "Who are the stakeholders and what are their need & wants?". Here stakeholders include customers, investors, employees, suppliers etc. Need & want of each stakeholder is different e.g.

a. Customer need high quality product, on-time delivery, timely respond to customer problem etc.
b. Employee need high salary package, on the job training, timely promotion etc
c. Investor need high ROI
d. Suppliers need timely payment, feeling of being partner in business of organization etc

2) Stakeholders contribution:- “What the organization needs from stakeholders?”.
   a. Organization wants customers to be loyal & actual feedback provider.
   b. Organization wants employee to be reliable, responsibility-taker, skillful etc
   c. Organization wants investor to believe in plans & policies of management.
   d. Organization wants suppliers to supply high quality raw material, timely supply etc

3) Strategies:- “What strategies should be put to satisfy wants and needs?”. In the performance prism model, strategy means “how the goal will be achieved”. It is the route that an organization takes to reach goal, not the goal itself. Goals are defined in first 2 perspective of this model e.g. Plan to launch a new product with help of skillful employees may fulfill both above goals.

4) Processes:- “What processes are required to implement above startegies?” after deciding strategy, now company needs to find out “Right business processes” to support strategies. Business process reengineering may be used to identify redundant process. Value chain analysis may be used to identify key processes. Strategies helps to decide “What to do” and Processes helps to decide “How to do”.

5) Capabilities:- “What capabilities organization needs to operate processes?” Capabilities means people, technologies & infrastructure required to enable a process to work. Availability of right capabilities is of utmost importance as per performance prism model.

The link between strategies, processes and capabilities

The facets of the Performance Prism are interlinked and should support each other. The required strategies are identified, then the processes required to achieve these strategies, followed by identifying the capabilities required to perform the processes. This is very much a top-down process, similar in some ways to the Lynch and Cross Performance Pyramid.

Topic 5

BUILDING BLOCK MODEL

It was developed by Fitzgerald & Moon. It is specifically designed for service sector.

There are 3 aspects to build performance measurement system

First Aspect	Dimensions	Deciding goals on which performance shall be measured
Determinants (The things that are important to	1. Innovation	Number of New products
	2. Quality	Product Reliability, Product Friendliness
	3. Resource	Good Productivity & Efficiency (Less wastage, Less

get results)	Utilisation	time to produce)
	4. Flexibility	Ease in change in Specification,
Results	5. Competitive Performance	Sales Growth, Relative Market Share Growth
	6. Financial Performance	Good Profitability, Return on Capital Employed, Optimum Liquidity

- Getting the Top 4 correct will lead to strong financial & competitive performance.
- These are insured at Board Level
- They are further broken in multiple targets for divisional managers so that someone is responsible to ensure that Each target is achieved.

Second Aspect	Standards Key Performance Indicators	Deciding what the company wants / desires
	1. Ownership	Who is responsible to achieve standards
	2. Achievability	How difficult are standards
	3. Equity	All managers should be given equally challenging standards
Third Aspect	Rewards	Deciding what the managers will receive
	1. Clarity	Targets should be very very clear e.g. innovate one new product within every 3 monthss
	2. Motivation	Rewards should itself motivate managers to achieve standards
	3. Controllability	Reward should be based on non-financial elements also.

Topic 6

Performance measurement of “Not-For-Profit” organizations

Performance measurement of “Not-For-Profit” organizations is very necessary to ensure that members & donors gets a confirmation that their funds are being utilized in batter manner and objectives of “Not-For-Profit” organizations are achieved.

There are 2 techniques to measure performance of NGOs

1) Value for money framework
2) Adapted Balanced Scorecard

VALUE FOR MONEY FRAMEWORK

There is a framework i.e. “Value for money framework” which helps in evaluating performance of “Not-For-Profit” organizations. It has following 3 parameters to evaluate performance of “Not-For-Profit” organizations. There are 3E in this framework

1) Effectiveness:- Assessment of whether NGO achieved its mission & objectives?

2) Efficiency:- Assessment of whether resources & funds utilized properly? i.e. Assessment of whether maximum output obtained with minimum resources/Input?
3) Economy:- Assessment of whether desired output produced at lowest cost without compromising quality?

Example:- a NGO is formed for providing free quality education at class 12th level to poor students.

1) Effectiveness:- Assessment of whether NGO is providing quality education to poor students? Ratio of number of candidates got success in Class 12^{th} as compared to total number students will be performance measurement parameter. Ratio of students leaving the school before exam as compared to total number of students will be performance measurement parameter.

2) Efficiency:- Assessment of whether maximum output obtained using available resources? Ratio of number of students trained per hour by teacher OR students to teacher ratio will be a performance parameter. Lower students to teacher ratio will be treated as good

3) Economy:- Assessment of whether desired output obtained at low cost? Ratio of number of students as compared to remuneration of teachers will be a performance measurement parameter.

ADAPTED BALANCED SCORECARD APPROACH

Kalpan developed balanced scorecard approach to measure performance of NGOs. Main difference is that profit making is not the objective of organization. There are 4 perspective in adapted balanced scorecard:-

1) Customer perspective:- customer means beneficiaries. It aims at satisfaction of beneficiaries.
2) Financial perspective:- it aims at proper utilization of raised funds therefore focused at members/donors.
3) Internal processes perspective:- it aims at getting efficiency in using resources
4) Learning & growth perspective:- it aims at capability of organization to adjust according to changing environment.

CHAPTER 9 – DIVISIONAL TRANSFER PRICING

Topic 1

GOAL CONGRUENECE

“Goal Congruence” is considered to be achieved when each department (supply/receiving dept.) aligns its objective with vision, mission & objectives of organization. For example

- Suppose supply department is quoting TP of Rs.12 per unit. Purchase Department knows that supply department is earning Rs.2 per unit in its TP. Supply Dept has spare capacity to produce for purchase dept.
- Purchase department can buy that component from market at Rs.11 per unit.
- Purchase department knows that it can earn Rs.2 per unit if it purchase from market & then sell in market after doing some modification.

- In case purchase department buys internally then its profit shall reduce by Rs.1 per unit since TP is higher by Rs.1 as compared to Market price.

Decision of Purchase Department

1. If it ignores "Goal Congruence":- Purchase dept. will think only about its profit. It shall not consider benefit of Company as a whole. Hence purchase dept. would love to buy from market at a price of Rs.11 per unit.
2. If it focuses on "Goal Congruence":- Purchase dept. will think for its profit as well as consider benefit of company as a whole. Purchasing internally will although reduce its profit but it will help company 2 ways
   i. It will avoid "Sub-optimal utilization of resources" & will ensure utilization of spare capacity of supply dept.
   ii. It will increase overall profit of company since company profit is sum of profit of both departments (supply/Receiving Department)

In order to promote "Goal Congruence" a range of TP is decided i.e. minimum transfer price and maximum transfer price.

1. Minimum TP:- it is determined by supply dept.

Minimum TP = Marginal cost of production + any additional incidental cost incurred by supply dept. e.g. storage cost etc. + Opportunity Cost

Opportunity Cost means benefit forgone if decision to supply internally is taken in spite of selling outside

2. Maximum TP:- it is determined by purchase dept.

Maximum TP is lower of

- Market purchase price of component (External Buy-in-Price) OR
- Net Marginal Revenue

Net Marginal Revenue

= The price at which purchase department sells its FG in market (Selling price of Purchase Dept.) – Cost incurred by purchase Dept. after purchase of component

Example:- Dept. A produces Product A and Dept. uses product "A" as component/raw material to produce its FG "B".

Dept. A incurs marginal cost of Rs.10 per unit on producing "A".Dept. B incurs marginal cost of Rs.5 per unit to process it further. Division B sells product "B" externally at Rs.20 per unit.

You are required to calculate price range of TP assuming that Component "A" can be purchased from market at Rs.14 per unit.

Solution:- Minimum TP = Marginal Cost = Rs.10 per unit

Maximum TP means Lower of

1. Net Marginal Revenue i.e. Selling Price of FG – Modification Charges by Purchase Dept. i.e. Rs.20 – Rs.5 = Rs.15
2. External buy-in-price i.e. Rs.14

Hence maximum TP is Rs.14 per unit.

Range of TP which promotes goal congruence, will be Rs.10 per unit to Rs.14 per unit

Topic 2

PROPOSALS FOR RESOLVING TRANSFER PRICING CONFLICT

Supply Dept. & Receiving Dept. always has conflict w.r.t. to transfer price at which internal transfer can be initiated. Manager of supply dept. wishes to earn some profit so that he can achieve performance parameters set by Top Management. Manager of receiving dept. wishes to but at minimum price preferably at cost so that he can also achieve performance parameters set by Top management.

There are 2 methods which can be used to make both dept. happy

1. Dual Rate TP system:- under this system, Supply management records its transfer at "cost plus profit" and purchase department records internal transfer at "marginal cost". Inter-departmental profit is eliminated by an accounting entry. This method makes happy to both department. There are 2 prices at which internal transaction is recorded that's why it is called "Dual rate TP system".

   Advantages of this method are as follows:-

    1. It allows better performance evaluation of each department & also fulfill objective of each department i.e. supply department maximize profit and purchase department minimize cost.
    2. It promotes co-operation among both divisions
    3. It promotes "Goal Congruence"
    4. It reduces "Sub-optimization of resources" & thereby ensures full utilization of all resources.

Drawback (Limitations) of this method

i. It may complicate the accounting records since the transfer price, at which both departments are recording the transactions, are different.
ii. Profit shown by supply department is artificial (not actually earned profit).

2. Two Part TP system:- under this method, one TP is calculated at which both departments records the transaction. TP includes "marginal cost of production" plus "lump-sum fixed charge".
   "Marginal cost of production" means additional cost incurred by supply department to produce for internal transfer.
   "lump-sum fixed charge" enables supply department to charge some portion of fixed cost of supply department. This helps supply dept. to show better profitability.

   It is called "Two Part TP system" since TP includes 2 types of cost

- First Marginal Cost
- Second Fixed Cost

CHAPTER 10 – STRATEGIC ANALYSIS OF OPERATING INCOME

Topic 1

DIRECT PRODUCT PROFITABILITY (DPP)

It aims at calculating profitability of each product charging all cost to product based on its cost drivers. It helps in knowing true profitability of product so that management

1) Can identify the **most profitable product** & focus more on it e.g. addition of new features to product, adopting a different marketing style etc.
2) Can identify **least profitable product** & even loss-making product so that management can take appropriate decision e.g. Keep on producing or Stop producing, "**What to do analysis**" to make it profitable.

For profit making organization, profit is **"Key performance indicator"** which helps organization in achieving organization objectives.

This DPP analysis technique suggest to **"apportion cost based on cost drivers**" and thereby helping to calculate actual profitability of product. For example In Traditional costing management technique, Warehouse storage cost is apportioned among products based on either machine hours or labours etc. but in Strategic cost management technique, Warehouse storage cost is apportioned among products based on space occupied by each product & time spent by each product in warehouse.

Traditional Gross profit % was used as indicator of profitability of product and net profit was calculated in total but under DPP, net profit is calculated product-wise.

Under DPP, all cost are divided into 2 category:-

1) Direct cost - these cost can be identified for each product hence should be deducted directly from selling price to arrive at gross profit e.g. purchase cost
2) Indirect cost:- cost which is incurred for all products collectively hence cannot be identified product wise e.g.
   i. Indirect overhead cost (Warehouse Rent),
   ii. Volume related cost (storage & transportation cost),
   iii. Product Batch cost (Labour time cost attributable to stockings of product),
   iv. Inventory financing cost (Interest payment attributable to Cost of stock of product)

Note:- These indirect cost, apportioned on the basis of cost drivers, is called **"Direct Product Cost"**.

Direct Product Profitability Statement

Particulars	Product "A"	Product "B"

Sales	XXX	XXX
Less Direct Cost	(XXX)	(XXX)
Gross Margin / Gross Profit	**XXX**	**XXX**
Less Direct Product Cost	(XXX)	(XXX)
Direct product Profit	**XXX**	**XXX**

Benefits of DPP

1. It helps in better cost analysis which leads to better profitability analysis.
2. Calculating better cost helps in better pricing decision.
3. If warehouse cost of a particular product is higher then it highlights the product which needs better space management in warehouse.
4. Dropping a loss making product & focusing more on true profitable product makes the **"Perfect Products' Portfolio"**.

Topic 2

CUSTOMER PROFITABILITY ANALYSIS

Sometimes cost is dependent upon customer e.g. in case of banks, If a person request for cheque book then it is an activity which will increase cost of organization. In such cases it is better to analyze profitability of different types of group of customer. Organization offers many activities to customer but all customers do not consume all activities. It means activities consumed by different customer are different.

For example, a bank offers following activities to customer

1. Facility to withdraw money from ATM
2. Facility to Make an online request for receiving hard copies of bank statement.
3. Facility to request online for stopping payment of cheque issued.

Different customers of bank use these facilities differently. Some customer may not ask for hard copies of bank statement while some may ask. Hence in such kind of business, it is better to analyse group of customer and stop doing business with customers who are non-profitable or least profitable.

A banking company classify its credit card customer in 4 categories

1. Platinum customer – Most profitable
2. Gold customer – Profitable
3. Iron customer – Low profitable but desirable
4. Lead customer – non-profitable & not desired

If a customer making several calls on customer care number & asking many stupid questions & wasting time of executive thereby incurring cost to company. This type of customers are not desired by banking companies hence they stop providing them services.

BENEFITS OF THIS ANALYSIS

1. It helps organization to identify most profitable customers and non-profitable customers. It helps organization in deciding whether to continue with non-profitable customer or not, what new services should be added to surprise most profitable customers.
2. It also provides a basis on which seller can ask buyer to increase margin.

Topic 3

ACTIVITY BASED COST MANAGEMENT (ABM) / (ABCM

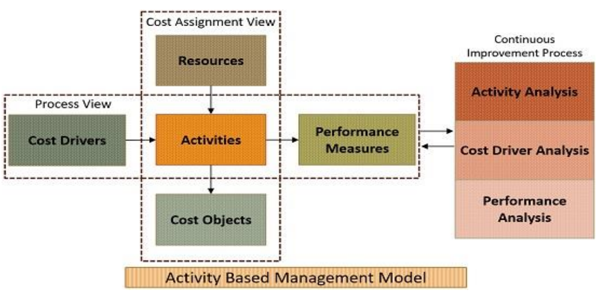
Use of ABC (Activity Based Costing) not only helps in increased accuracy in product costing rather it provides greater benefits by removing activities whose cost is greater than its value addition capability. ABM simply means application of ABC in cost management. Cost management means cost control & reduction.

There is a simple rule i.e. products consume activities and activities consume resources e.g. producing product needs set-up of machine and set-up will need resources e.g. labour time etc. ABC follows this rule. Hence ABM focus on

1) The activities that go into making the goods or providing the services
2) The cost of those activities.

To reduce a product's cost, managers will likely have to change the activities the product consumes.

ABM model



Under ABM model 3 types of analysis are done

1) Activity analysis
2) Cost-Driver analysis
3) Performance analysis

Activity analysis:- Under this, an organization identifies the activities of an organization and activity cost pools. For example, machine set-up is an activity and machine set-up cost will be its activity cost pool, purchasing material is another activity & cost of purchasing activities is its activity cost pool. All activities are analyzed into value added (VA) activities and non-value added (NVA) activities.

a) Value added activities:- activities which are essential for completion of process and which add value to product/services. Following parameters are used to identify whether an activity is VA activity.

Parameter Point	Decision
Is activity necessary?	If yes, it is VA
Is the activity efficiently performed?	It is VA if it is useful to meet budget, target or

	external benchmark.
Is an activity sometimes VA and sometimes NVA?	It is NVA if it is movement of raw material from store to factory. It is VA if it is needed transfer of WIP units within production process.

For example, Polishing furniture by a furniture manufacturer is a value-added activity.

b) Non-value added activities:- activities which are performed during process but which do not add any value to product/service. These activities create cost but does not add any value in end-product. NVA activity represents the work that is not valued by customer. NVA activities do not improve quality of product/services. For example, moving material, production set-up is NVA. Management desires to eliminate these activities or at least minimize to maximum extent.

All manufacturing activities are classified in VA & NVA activities.

Type	**Description**	**Type**
Processing Time	Time during which a Product is undergoing conversion activity.	VA
Inspection Time	Time spent in confirming that the Product is of the required quality.	NVA
Waiting Time	Time spent by Raw Material or WIP in waiting for the next Operation.	NVA
Move Time	Time spent in moving Raw Materials, WIP or Finished Goods between Operations.	NVA
Storage Time	Time during which Materials, WIP, or Finished Goods are held in Stock before further processing or shipment.	NVA

Cost Driver Analysis:- It aims at studying cost drives (Factors) which affect level of cost. For example, cost in processing of customer invoices is dependent upon training of customer invoice executive. If there is lack of proper training to executive then cost will increase. This study aims at identifying such factors & aims to eliminate or at least reduce these factors.

Performance Analysis:-it involves identification of performance parameter on which actual performance of an activity shall be compared.

CHAPTER 11 – BUDGETORY CONTROL

Topic 1

FEEDBACK & FEED-FORWARD CONTROL

Feedback control is a reactive process. It means taking corrective action after the error has taken place. However in some situations, it is possible to measure the error before the error has taken place. The possible effect of error is thereby reduced by measuring it & generating a control signals that counteracts it. This way of controlling the errors is called feed-forward control.

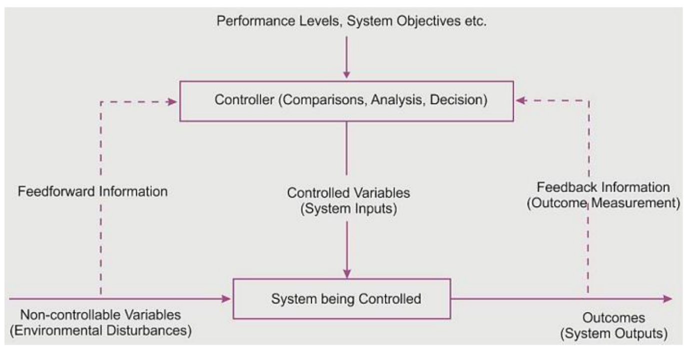
Under feed-forward control, control actions are taken based on forecast results. If forecast about results is bad, control action is taken in advance even before actual results happens.

Feedback control is also called "Post action control" and Feed-forward control is also called "Preventive control"

Example – Hospital use "thermostat" to maintain temperature of "Baby ICU".

Under feedback control system, "Thermostat" will measure temperature in ICU. When the temperature falls below a minimum set temperature then thermostat will itself activates the furnace to warm the ICU back.

Under feed forward control system, "thermostat" might measure external and internal temperature. it will focus on weather conditions that affect temperature such as open windows etc. if the thermostat senses that it is cold outside and someone opens the window then it will pro-actively turn on the furnace to maintain temperature in ICU.



Topic 2

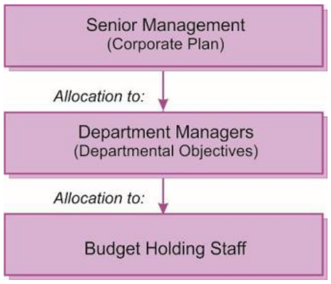
PARTICIPATION IN BUDGET SETTING PROCESS

There are 2 techniques which are used while preparing budgets i.e. while deciding targets.

1. Imposed Style approach/Top-Down Budget approach
2. Participative approach/Bottom-up approach

Imposed Style approach/Top-Down Budget approach

Under this approach, budget is prepared centrally i.e. by Top Management and sub-ordinates has little influence on budget target setting. It has one benefit i.e. budget can be prepared quickly but it has significant risk of high budget targets which may not be acceptable to sub-ordinate managers.



Process:- Senior Management make corporate plans & communicate these to Department managers. Now Department managers derive their objectives out of corporate plan and communicate these objectives to their staff.

Participative approach/Bottom-up approach

Under this approach, sub-ordinate managers participate in preparation of their own budgets and these budgets are reviewed by Top management. It has one benefit i.e. it ensures participation of all managers but there are following factors which affect effectiveness of participation.

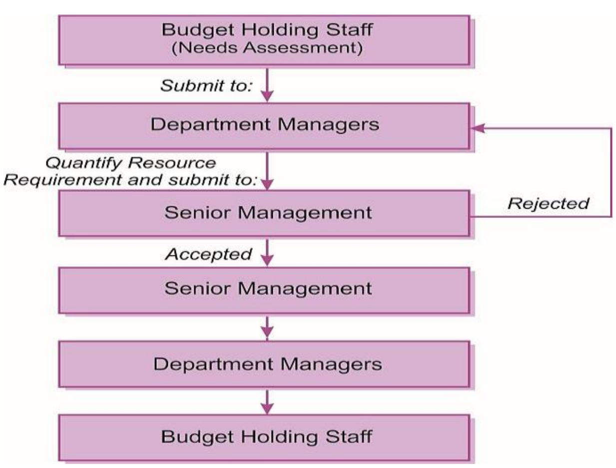
1) Personality of manager:- if a manager is authoritarian then his participation in budget making process will be less. Authoritarian means he does not want to get directed by others.

2) Work Situation:- In highly technologically constrained environment, participation of workers remains less. Highly technologically constrained means that technology used in organization cannot be changed which indirectly restricts the scope of organization & makes employees demotivated.

3) Locus of control:- if individuals has less control over their work then their participation will be less.

4) Job Difficulty:- when job is difficult then participation will be less

5) Type of organization structure:- In a centralized organization, participations of employees remains less. Centralized means all decision making power exists with Top management.



Process:- Staff decides targets & communicate to their departmental managers. Now Departmental managers submit it to Top Management. Top management either reject it or accept it. If rejected then Department managers make adjustments in consultation with staff and again submit to Top Management. After acceptance by Top management, budget targets are communicated to staff.

Topic 3

USE OF ACCOUNTING INFORMATION" IN PERFORMANCE EVALUATION

It emphasis focus on using accounting information in performance evaluation of budget. Accounting information means cost, income etc. Mr. Hopwood described 3 different styles to evaluate budget performance.

1) Budget Constrained style
2) Profit conscious style
3) Non-Accounting Style

Budget Constrained style

Under this style, Managers are evaluated on ability to achieve budget in the short term. Manager are criticised for poor results. For example, if spending exceeds the limit set. This style has following behavioural aspects.

- It creates Job related pressure
- It may result in short-term decision making at the expense of long term gain.
- It may result in poor working relations with colleagues
- It may result in manipulation of data

Profit conscious style

Managers are evaluated on ability to reduce costs and increase profit in the long term. For example, a manager will be allowed to exceed the budgetary limit in the short term if this will result in an increase in long term profit. This style has following behavioural aspects.

- It leads to Less job related pressure
- It helps in Better working relations with colleagues
- It reduces chances of manipulation of data

Non-Accounting Style

Managers are evaluated mainly on non-accounting performance indicators such as quality of product & customer satisfaction. This style has following behavioural aspects.

- It is Similar to profit conscious style but there is less concern for accounting information
- It Requires significant and stringent monitoring of performance against budget

A Summary of Effects of 3 styles

	Budget Constrained style	Profit conscious style	Non-Accounting Style
Involvement with Cost	High	High	Low
Job-Related Tension	High	Medium	Medium
Manipulation Data	Extensive	Little	Little
Relations with superiors	Poor	Good	Good
Relations with colleagues	Poor	Good	Good

Topic 4

BEYOND BUDGETING

Traditional budgeting is a method of preparation of the budget in which last year's budget is taken as the base. Current year's budget is prepared by making changes to previous year's budget by adjusting the expenses based on the inflation rate, consumer demand, market situation etc. this type of budgeting style has following limitations.

1) It simply increases the previous budget target while inventive to employee remains fixed.
2) It focus on making annual budget which leads to variance analysis only once that is also at the end of the year.
3) It focus on managing numbers i.e. cost reduction and not on value addition
4) It makes budget based on available resources i.e. does not consider acquiring resources on demand
5) Budget is centrally controlled by Top management.

Due to above limitations, beyond budgeting concept got its birth. Beyond budgeting is a simple re-thinking technique which focuses on thinking beyond the budget target set. Following principles are followed in beyond budgeting.

1) Leadership Principles
2) Process Principles

Leadership Principles	**Do this!**	**Not that!**
1. Customer	Focus on improving customer outcome	Not only on meeting internal target
2. Accountability	Create a team accountable for results	Not create individual responsibility
3. Performance	Focus on winning in marketplace	Not focus on internal targets only
4. Freedom to Act	Give teams freedom to act	Not simply focus on meeting plan
5. Governance	Govern through shared values & sound Judgement.	Not detailed rules & regulations
6. Information	Promote open sharing of information	Not restrict to some people

Management Process Principles	**Do this!**	**Not that!**
1. Goals	Set Organizational goals & aims at continuous improvement	Not on fixed annual targets
2. Rewards	Relative Performance should be rewarded	Not on meeting full targets
3. Planning	Make planning a continuous process	Not an annual event

4. Controls	Control should be implemented based on relative KPI	Not only on negative variance
5. Resources	Make resources available as & when required	Not simply focus on annual resources requirement
6. Co-ordination	Co-ordinate interactions dynamically	Not through annual budget

CHAPTER 12 – STANDARD COSTING

Topic 1

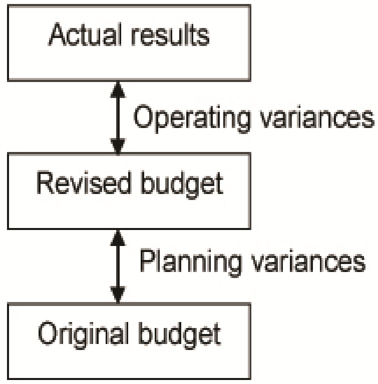
PLANNING & OPERATIONAL VARIANCES

Sometimes environmental conditions frequently changes and due to this, environmental conditions, prevailing at the time of setting standards and environmental conditions prevailing at the time of calculating actual results, are different. In such situation, variance analysis on the basis of original standards and actual results will not be suitable. Hence original set standards are converted to new standards considering conditions prevailing at the time of calculating variances then variances analysis is performed.

For Example Company set standard price per unit of material is Rs.5. This price was set as standards in May Month when material under consideration was freely importable but in Nov when these material was actually purchased & used, government restricted import of this material due to some issues with exporting country. Actual Price of material came to Rs.10 per unit. Now if we compare Rs.5 with Rs.10 & calculate variance then it will not be best analysis.

Rather company should identify prevailing market price of material in Nov month after the import is restricted. Now suppose it comes to knowledge that normal prevailing market price in nov. was Rs.11 per unit and Purchase manager has bought at Rs.10 per unit then he should be rewarded rather than being scolded.

Conclusion is that in such circumstances original standards is converted to revised standards using current prevailing environment conditions and revised standards are compared with actual results. The difference between revised standards and actual result is technically called as "Operational variance" while difference between original standards and revised standards is called "Planning variance".



Planning Variance:- It is difference between Original Standards and Revised Standards. It is non-controllable variance since it is beyond control of management.

Operational variance:- It is difference between Revised standards and actual results. It is controllable variance since it arise due to efficiency or inefficiency of staff of departments.

Topic 2

VARIANCE ANALYSIS IN ADVANCED MANUFACTURING ENVIRONMENT / IN HIGH-TECHNOLOGY FIRMS

Variance analysis is equally important in all types of firms whether it is high-technology firm or it is normal technology firm but direct labour variances and Fixed Overhead variances is of no use in high-technological firm.

High technological firms are firms where high technology is used. Technology includes Computer technology, information technology, Nano technology etc. Electronic industry is highly automated industry & a large part of manufacturing is computerized.

In such high technology industries, Direct Labour cost and Fixed Cost are considered committed cost. Committed cost means a cost where organization is bound to pay even if output level gets reduced. Firm cannot afford to deny payment even during economic shutdown situation. Direct labour cost hereby includes cost of highly trained personal. Example of fixed cost is heavy rent of advanced & automatic machines.

Hence Direct Labour Cost variance and Fixed Overhead Cost variance is of no use in such situation. The emphasis is on Direct Materials cost variance and Variable Manufacturing Overhead variance.

There are following problems which are faced while doing variance analysis in such highly technologically oriented firms.

1) There is huge possibility that standard cost becomes outdated easily due to change in required technology.
2) These organization continuously emphasis on continuous improvement which reduced the relevance of standard cost.

3) Direct labour cost variance and fixed overhead cost variance is useless

Topic 3

STANDARD COSTING IN SERVICE SECTOR

Variance analysis is equally important for both manufacturing sector & service sector but in service sector, overhead cost has a major portion in total cost as compared to manufacturing sector. In service sector, direct material cost & direct labour cost is typically less as compared to overhead cost. Hence if we calculate variance in service sector the same way it is calculated in manufacturing sector then it will always show less variance in direct material & direct labour cost but a wide variance in overhead cost.

Hence variance analysis in service sector should be done using activity based costing technique. This technique helps in identifying each smallest possible task in most effective way. This process of breaking down each task into smallest possible level is technically called “McDonaldization”.

Mr. George Ritzer developed this concept of McDonaldization. He is professor & author. He emphasized that society is adopting the characteristics of fast food restaurant i.e. McDonald selling burgers in society. He found some features which are unique in fast-food selling company “McDonald” and suggested to implement these features in every business for getting best outcome. These 4 features/Components are as follows.

1) Efficiency:- McDonald is very fast service provider. It provides the fastest way from “being hungry” to “being full” i.e. very less service time. He suggested organization to reduce time in every task to achieve efficiency.

2) Calculability:- Objective should be quantifiable (e.g. Sales in numbers) rather than being subjective (e.g. taste). McDonaldization assumes quantity as equal to quality. Workers in service industries should be judged how fast they work. This concept believes that a large amount of product delivered to the customer in a short amount of time is the same as a high quality product

3) Predictability:- It means no matter where a person goes, they will receive the same service and receive the same product every time when interacting with the McDonald organization. These tasks are highly repetitive & predictable.

4) Control:- Standardize the process by replacement of human by non-human technology.

Topic 4

INVESTIGATION OF VARIANCES

Interpretation of variances may suggest possible causes of variances but investigation helps in finding out real cause so that reasonable required steps can be taken out. For example interpretation of an adverse direct material cost variance may indicate following possible causes of this

- Whether price of material really got increased at the time of purchase?
- Whether Purchase manager has purchased at high price due to his ignorance of prevailing market price?
- Whether Purchase manager has willfully purchased at high price & got some commission from seller?
- Whether Production manager changed the standard material mix ratio?

There may be many reasons of adverse variance but finding the right one will help management in taking required steps.

Sometimes it may not be beneficial to investigate variances since cost of investigation exceeds its probable benefits but if company decides "not to investigate" then also managers may feel demotivated to aim for favourable variances & hence may not comply with predetermined standards.

Following **"Factors must be considered"** while deciding whether to investigate or not

1. Type of variance:- some organization aims to investigate only adverse variances & some companies investigate all variances whether positive or negative. Hence organization must choose between these 2 options.

2. Size of variance:- some organization investigate variances only when it exceeds limit of acceptable variance e.g. adverse direct material cost variance shall be investigated only when adverse variance is more than 5% of standard direct material cost. Hence organization must also decide this acceptable limit.

3. Pattern in variances:- if variances are getting worse & worse over time then investigation of such variances is utmost required.

4. Budgetary process:- If company feels that standard setting process is not realistic i.e. setting standards simply considering past cost without considering future expected change then company must re-evaluate standards before starting investigation.

5. Costs:- Cost to be incurred in doing investigation should be less than benefits likely to arise after investigation. Hence cost-benefit analysis is must.

Following **"methods are used to decide"** whether start investigation or not

1. Non-statistical method/Model
2. Statistical Method/Model

Non-statistical method/Model

Under this method, investigation of variances starts when it exceeds limit of acceptable variance e.g. adverse direct material cost variance shall be investigated only when adverse variance is more than 5% of standard direct material cost. This method is also called "Simple Rule of Thumb Model"

Statistical Method/Model

Under this model, following methods are used to decide whether to start investigation or not

1. Probability & Normal distribution curve Method
2. Statistical control charts method
3. Mathematical Rule Method

Using these methods, companies decide whether any variance is "in control" or "Out of control". When variance is "in control" then company does not initiate investigation but when variance is "out of control" then company start investigation of variances.

Probability & Normal distribution curve Method

Let us understand with the help of an example.

- Suppose average production time per unit is 2.50 hour (Decided on the basis of previously taken production time). This is technically called "mean" and expressed using "µ" I statistics
- Company decided to accept 2 standard deviation of 15 minutes each. Standard deviation of 15 minutes means actual time may be plus/minus 15 minutes to mean time (average time). Standard deviation is expressed as "σ" in statistics
- Since company is accepting 2 times standard deviation, it means if actual time goes up to 3 hour per unit then company will treat it as "in control" variance & hence investigation is not required.
- If company use this method then company also calculate probability of getting "out of control" variance using normal distribution.

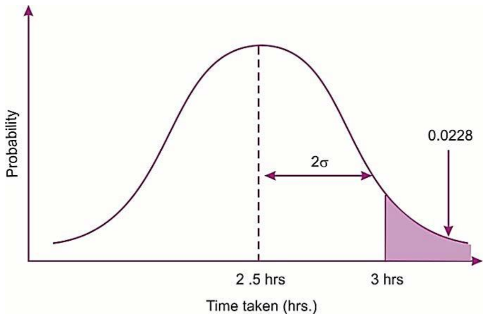
Probability of produce in 1 unit in 3 hour

$$Z = \frac{x - \mu}{\sigma}$$

$$Z = \frac{3\text{ hour} - 2.50\text{ hour}}{0.25\text{ hour}} = 2.00$$

Probability when (Z = 2) is 0.9772 i.e. 97.72%

Hence Probability of producing 1 unit in more than 3 hour = 100% - 97.72% = 2.28%



Hence there are only 2.28% chances that 1 unit will be produced in more than 3 hour.

<u>Statistical control charts method</u>

Control charts are used under this method to decide whether initiate investigation or not. Principles of normal distribution theory are used where μ =Mean and σ = Standard Deviation, we have -

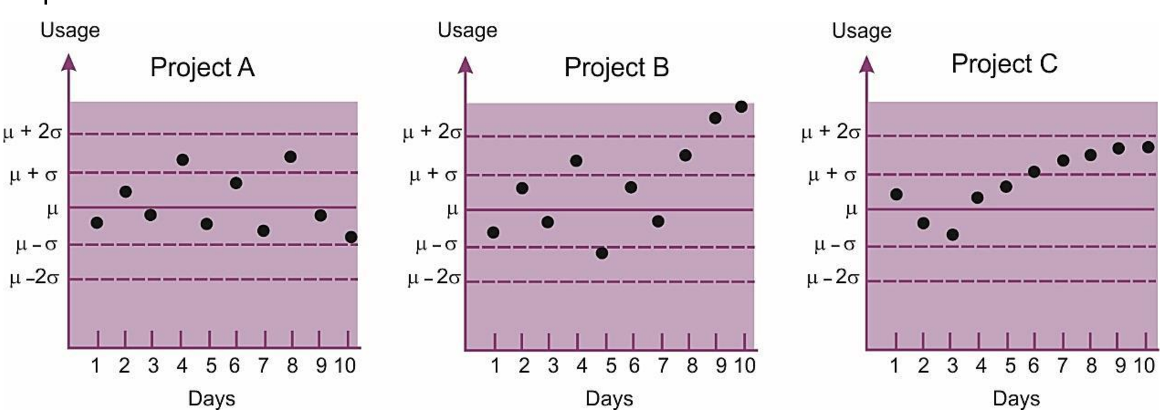
(a) 68.27% of the observations are expected to fall within the range μ + σ from the Mean.

(b) 95.45% of the observations are expected to fall within the range μ + 2σ from the Mean.

(c) 99.8% of the observations are expected to fall within the range μ + 3σ from the Mean.

If company accept 1 standard deviation, it means there are 68.27% chances that actual outcome will fall within acceptable variation limit and If company accept 2 standard deviation, it means there are 95.45% chances that actual outcome will fall within acceptable variation limit.

For Example company accepted 2 times standard deviation limit so let us plot actual outcome of 3 different projects and decide whether variance is “in control” or “out of control”. Actual outcomes are shown with the help of dots.



- If we check out project "A", all actual outcome is within acceptable limit of variation hence variance is "in control" so investigation need not to be started.
- If we check out project "B", last 2 outcomes are beyond acceptable limit of variation hence variance is "out of control" so investigation should be started.
- If we check out project "C", all actual outcome is within acceptable limit of variation but outcomes are gradually increasing hence company may treat it as "out of control" & may start investigation

Mathematical Rule Method

Start Investigating the variance if

PB > C

Whereby

- P means Probability of getting variance "out of control" e.g. in our example probability of doing work beyond 3 hour was 2.28%.
- B means benefit to be received from being "out of control" to "in control" situation i.e. benefit means cost saving in future by avoiding unacceptable variances. Let us assume B as Rs.100
- C means cost to be incurred to investigate variances e.g. manager time. Let us assume C as Rs.25

On reading above 3 things together, company will need to incur 100 rupees to convert "out of control" variance in "in control" variance & thereby will get future benefit of 25 rupees but the chances of getting "out of control variance" is only 2.28%.

Formula PB > C

2.28% x Rs.100 > Rs.25

2.28 > 25

Above equation is not true since 2.28 is not greater than 25 hence in above situation company should not start investigation even if variance is "out of control".