Semester V

16BPU503A	MANAGING BUSINESS PROCESSES – I	L	T	P	C
		6	-	-	4

COURSE OBJECTIVE

- To equip the students with the knowledge of business processes in BPS industry
- To Understand different methods used for mapping a process
- To Understand different Metrics used in BPS
- To Understand Quality Management Techniques used in BPS

COURSE OUTCOMES

- Student will understand the different process levels and working of BPS industry.
- Student will learn to map the processes using different mapping tools.
- Student will understand the different Metrics used to measure the performance of project in BPS
- Student will be able to recognize different Quality Management techniques used in BPS

Unit I:

Business Process Management: Process Definition - Recognition of Business Processes - Core Processes Vs Support Process - Components of Process management - Understanding Internal Customer Vs End user

Unit II:

BPS Overview - Outsourcing Environment - Need for Outsourcing - Business Processes Outsourced to India. BPS Life Cycle - Sale/ Solutioning – Transition – Steady state – Value creation

Unit III:

Metrics Management - Service Level Agreements - Business Metrics Vs Operations Metrics - Target Settings

Process mapping Techniques – Process Levels - Process Mapping – Symbols, SIPOC, SIPOC fundamentals

Kano Model - Customer expectations in Business Process Outsourcing

Unit IV:

Quality Management: Quality Definition – Quality Control Vs Quality Assurance – Internal Quality Standards

Transaction Monitoring Process: Sampling inspection – Transaction monitoring cycle - Inspection – Feedback – RCA – Assurance

Unit V:

Defects Management: Defect Vs Defective - Opportunity Definition – DPU/DPMO calculation. FPY & COQ, Value stream mapping, Standard Operating Procedures.

Suggested Readings

Text Book

TCS study material

KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University Established Under Section 3 of UGC Act 1956)

Coimbatore – 641 021.

LECTURE PLAN
DEPARTMENT OF COMMERCE

STAFF NAME: V.VIVEK
SUBJECT NAME: MANAGING BUSINESS PROCESS 1 SUB.CODE:16BPU503A
SEMESTER: V CLASS: III B.COM .BPS

S.No	Lecture Duration Period	Topics to be Covered	Support Material/Page Nos
		UNIT-I	
1	1	Introduction to Process management	T1-5
2	1	Process: Meaning & Definition	T1-5-6
3	1	Difference between a process and procedure	T1-7
4	1	Business process Meaning and Definition	T,-5-7
5	1	Process Elements: Core processes	T1-8
6	1	Components of a process	T1-11
7	1	Support process	T1-9-10
8	1	Business process model	T1-12
9	1	Understanding Internal Customer	T1-16
10	1	End User	T1-16
11	1	Process management in BPO	T1-39-40
12	1	PDCA Cycle for Process Improvement	T1-33
13	1	Characteristics of a process	T1-34
14	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit 1=14		
		UNIT-II	

1	1	Introduction to BPO	T1-29
2	1	BPO Industry an overview	T1-29
3	1	Service level agreement	T1-30
4	1	Out sourcing Environmnets	T1-32
5	1	Need for Outsroucing	T1-32
6	1	Business process outsourced to India	W1
7	1	BPO Life Cycle	T1-49
8	1	Solutioning(Sales) and transition	T1-49
9	1	Stabilization and value creation	T1-50
10	1	Business Growth	T1-50
11	1	Pricing models for BPO services	T1-47
12	1	Delivery Model	T1-48
13	1	Technology Management	T1-46
14	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit II=14		
		UNIT-III	
1	1	Service level agreement	T1 31
2	1	Target setting	T1-34
3	1	Business metrics	T1-30
4	1	Operational metrics	T1-30
5	1	Diference between business and operation metrics	T1-30
6	1	Process mapping	T1-18
7	1	Process levels	T1-16
8	1	Process mapping techniques	T1-18
9	1	Process levels, symbols used in process flowchart	T1-19
10	1	SIPOC Model	T1-21

11	1	Fundamentals of SIPOC	T1-22
12	1	KANO Model	T1-25
13	1	Mapping customer expectations in Kano model	T1-26
14	1	Customer expectation in BPO	T1-27
15	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit III=15		
		UNIT-IV	
1	1	Defining Quality	T1-U4-5
2	1	Quality Control	T1-U4-6
3	1	Quality control tools	T1-U4-16
4	1	Difference between quality control and assurance	W2
5	1	Internal Quality standards	T1-U4-17
6	1	ISO Role and Function	T1-U4-17-19
7	1	Transaction Monitoring	T1-U5-35
8	1	Sampling and Inspection of sampling	T1-U5-35
9	1	Transaction monitoring cycle	T1-U5-36
10	1	Inspection	T1-U5-37
11	1	Feedback	T1-U5-38
12	1	RCA-Root Cause analysis	T1-U4-16
13	1	Assurance	T1-U4-17
14	1	Recapitulation and Discussion of Important Questions	
	Total No of Hours Planned For Unit IV=14		
		UNIT-V	
1	1	Defining Defects	T1-U4-27
2	1	Defective Meaning	T1-U4-27
3	1	Difference between defect and defective	T1-U4-27
4	1	Opportunity Meaning and	T1-U4-28

		definition	
5	1	DPU Caculation	T1-U4-28
6	1	DPMO Calculation	T1-U4-33
7	1	FPY Calculation	T1-U4-29-30
8	1	COQ Calculation	T1-U4-30
9	1	Value stream mapping	T1-24
10	1	Standard Operating Procedure	T1-30
11	1	Recapitulation and Discussion of Important Questions	
12	1	Discussion of Previous Year End Semester Questions	
13	1	Discussion of Previous Year End Semester Questions	
14	1	Discussion of Previous Year End Semester Questions	
15	1	Discussion of Previous Year End Semester Questions	
	Total No of Hours Planned for unit V=15		
Total Planned Hours	**72**		

TEXT BOOK

TCS Study material

WEBSITES

W1: www.wikipedia.com/outsourcesinIndia/contents

W2: www.Quora.com/difference/definequality@qualityassurance.

UNIT I

SYLLABUS

Business Process Management: Process Definition - Recognition of Business Processes - Core Processes Vs Support Process - Components of Process management - Understanding Internal Customer Vs End user

A **business process** is a collection of linked tasks which find their end in the delivery of a service or product to a client. A business process has also been defined as a set of activities and tasks that, once completed, will accomplish an organizational goal. The process must involve clearly defined inputs and a single output. These inputs are made up of all of the factors which contribute (either directly or indirectly) to the added value of a service or product. These factors can be categorized into management processes, operational processes and supporting business processes.

Management processes govern the operation of a particular organization's system of operation. Operational processes constitute the core business. Supporting processes such as human resources and accounting are put in place to support the core business processes.

A process requires a series of actions to achieve a certain objective. BPM processes are continuous but also allow for ad-hoc action. Processes can be simple or complex based on number of steps, number of systems involved etc. They can be short or long running. Longer processes tend to have multiple dependencies and a greater documentation requirement.
The three types of business processes are:

- Management Processes: The processes that govern the operation of a system.
- Operational Processes: The processes that constitute the core business of the organization and create the primary value stream.
- Supporting Processes: The processes that support the core processes. Examples include accounting and technical support.

A **business process** or **business method** is a collection of related, structured activities or tasks that in a specific sequence produces a service or product (serves a particular business goal) for a particular customer or customers. A business process may often be visualized (modeled) as a flowchart of a sequence of activities with interleaving decision points or as a process matrix of a sequence of activities with relevance rules based on data in the process. The benefits of using business processes include improved customer satisfaction and improved agility for reacting to rapid market change. Process-oriented organizations break down the barriers of structural departments and try to avoid functional silos.

A useful way of classifying business processes is to identify and define **core**, **support** and **management processes**. **Business process classification** is important to be able to develop an effective business process architecture.

Core processes are end-to-end, cross-functional processes that directly deliver value to external clients or intermediaries. Core processes are often referred to as "primary" processes

as they represent the essential activities an organisation performs to achieve its goals and objectives, fulfil its mission and attain its vision.

- These processes make up what is called the value chain, which is the set of high level, interconnected core processes each of which adds value to the product or service. The value chain creates and delivers the product or service, which ultimately delivers value to customers.
- Core processes can exist within organisational functions but usually move across functions and departments, or even across and between enterprises. Core processes are those involved in the development and creation of the product or service, the marketing and transfer to the service beneficiary or buyer, as well as customer feedback or after-sale support of the product or service. Core processes are the engines of the value chain and need to work seamlessly together to achieve real customer value.
- The number of core processes in an organisation, regardless of size, is between four and eight.
- An organisation's ability to clearly identify and manage its core processes is a strategic capability for that organisation.
- Core processes have strategic importance, have a major impact on an organisation and are critical to its success. If core processes are performed well, excellent service delivery can be provided but could pose a major strategic weakness if they are ineffective, inefficient or not managed.
- Core processes are essentially operational, enabling service delivery by directly providing the organisation's outputs and value to external key customers in the form of products, services, support or information. Core processes do not manage or provide internal services.

Support processes are enabling processes designed to assist the value-delivering core processes by providing the resources and infrastructure required by primary processes.

- The main difference between support and core processes is that support processes add value to internal customers and do not directly deliver value to external customers, while core processes do.
- Examples of support processes include provision of information technology, finance and human resource services, as well as the provision of goods and services to internal customers. Each of these support processes may involve a resource delivery lifecycle, and are often associated with functional areas of the organisation.
- Support processes can and often do cross functional boundaries. For example, the process of providing internal capacity does not directly deliver value to external customers but supports an organisation's ability to deliver mandated products or services.
- The fact that support processes do not directly deliver value to customers does not mean that they are unimportant to an organisation. Support processes can be critical

and strategic to organisations as they directly affect the ability of an organisation to execute core processes effectively.

Components of a Process

Events: Events are the conditions which must exist for the process to be performed. It is something that happens as opposed to something that is done on purpose. It can think of as the effect which occurs after sufficient cause is provided. Each process starts and ends with an event.

Tasks: A task is the smallest unit into which the activity can be broken down. Breaking it down is not feasible for the purpose at hand. The business process describes the different activities as well as the interrelationship between them. It is important to note that inter-relationships are more important than the tasks. In any structure, the whole is greater than the sum of its parts. While conducting BPM exercises, one must therefore have a synergistic view.

The number one problem with BPM today is that most of the practitioners are unable to understand the system viewpoint. The employees of the same business have conflicting objectives. Therefore a human resource professional may end up optimizing their process, but may have an adverse effect on the functioning of a marketing department. Thus problems are merely being shifted than actually being resolved. A good understanding of how the process connects to other activities and processes will help solve this problem and achieve sustainable progress.

Decisions: There might be certain decisions which may have to be taken as the part of a process. Leaving the decisions up to the people involved has undesirable consequences. It is likely that in the absence of clear guidelines, the decisions taken by different people will be different. This will create inconsistent experiences for the customers and bring down quality.

As an example consider a leave granting process in any big organization. There are explicit rules which define the number of leaves that a person can take as well as the procedure to get them approved. Thus although it may look like the manager is taking the decisions with regards to granting leave, all they are doing is following a pre-defined procedure. Thus no matter who the manager is, the decisions will always remain consistent because they are taken on the basis of rules rather than on the basis of who is involved. Such rules are usually laid down as if, then and else conditions in the process.

Inputs: Until gives inputs, a process cannot function. The correct inputs are like the correct food for the process. Just like eating unhealthy food makes us unhealthy, giving wrong inputs makes the process unhealthy and inefficient. Here are some common inputs required by a process.

People: Processes require people with the correct aptitude and attitude. This is why breaking down of tasks is so important. In a process driven organization, you can arrange for an unskilled person to do the mundane jobs while a skilled person can be deployed to do the important jobs. Matching skills with task requirements brings down costs and increases efficiency.

Raw Material: Raw materials need to be made available in a timely manner and at least costs. There are companies which have built procurement processes as their core competencies.

Information: The correct information needs to be made available to all the entities in the process. The worker must have the skill and must be well versed with the procedure. The manager must get continuous feedback to ensure that the production is on target and as planned.

Outputs: The outputs from the process must be continuously monitored. This will help in measuring the effectiveness and efficiency of the process and suggesting changes as and when required.

EXTERNAL CUSTOMER

External customers are the people that pay for and use the products or services your company offers. When brainstorming problems and designing solutions, these customers are who you're designing for.

The goals for your external customer can depend on your product, but they can include repeat purchasing, giving referrals and positive reviews, and otherwise supporting your company. You may check in with them after-purchase or during use to conduct formal or quick-pulse surveys. You might follow business adages such as the customer as always right when serving this group. These are the lifeblood of the company because of their revenue stream – if they're not here, the company fails.

INTERNAL CUSTOMER

An internal customer is someone who has a relationship with your company, though the person may or may not purchase the product. It is often a person who works within the company, such as general employees and managers.

Internal customers need not be directly internal to the company. For instance, you may partner with other companies in order to deliver your product to the end user – the external customer. Such internal customers all have a hand in delivering the product to your end client. Stakeholders and shareholders are additional internal customers, perhaps less obvious but quite significant.

Comparing internal and external customers

External customers have been inherent in business since people started making and selling products – a long time! The idea of an internal customer, however, is a more modern

one. For instance, Six Sigma promotes identifying internal customers as a way to creating a more positive work environment.

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DEPARTMENT OF COMMERCE

SUBJECT : Managing Business Process - I

SEMESTER : V

SUBJECT CODE : 16BPU503A

CLASS : III B.COM BPS

UNIT I

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	……is a group of activity	process	procedure	policy	aim	process
2	……is a documentation of activities that needs to be carried out	process	procedure	policy	aim	procedure
3	……..is a standard of measuring any product or service	process	procedure	quality	aim	quality
4	……..defines where the process starts and ends	process scope	process title	input	output	process scope
5	……..are the things required for a process to convert input into output	control	resources	process	procedure	resources
6	……..are set of interrelated activities that have a direct impact on the product	operational process	support process	management process	business process	operational process

7	……..do not directly impact the revenue but act as an enabler for the core process	operational process	support process	management process	business process	support process
8	……..is carried out by senior management of an organization	operational process	support process	management process	business process	management process
9	planning, controlling, organizing and pioneering are done in ……..	operational process	support process	management process	business process	business process
10	BPO stands for	Business Process Outstanding	Business Process Outsourcing	Business Per Order	Business process organization	Business Process Outsourcing
11	……..involves outsourcing of internal business function	Back office outsourcing	front office outsourcing	alternate office outsourcing	business units	Back office outsourcing
12	……..involves outsourcing of customer related services	Back office outsourcing	front office outsourcing	alternate office outsourcing	business units	front office outsourcing
13	……..is the search for better technology for an existing process	technology solution	process simplification	process level	hand offs	technology solution
14	……..is simplifying the process to get desired result by optimum usage of resources	technology solution	process simplification	process level	hand offs	process simplification
15	……..provides signal before a trend occurs	Lead indicator	Lag indicator	governance	role definition	Lead indicator
16	……..provides signal after the trend has occurred	Lead indicator	Lag indicator	governance	role definition	Lag indicator
17	……..are customers form within the organization	Internal Customer	External customer	End User	Consumer	Internal Customer
18	……..is the end user of the product	Internal Customer	External customer	producer	Consumer	External customer
19	……..are executed by completion of the task	procedure	process	quality	service	procedure

20	……are accomplished when desired output is achieved	procedure	process	quality	service	process
21	……approach must be adopted to enhance customer satisfaction by meeting customer requirements	process	quality	management	service	process
22	……ensures organization's ability to deliver customer requirement	process	quality	management	service	quality
23	……ensures that all statutory and regulatory requirement according to organizations requirement are met	process	quality	management	service	quality
24	A division, facility or department of an organization is otherwise called as	product	process	business unit	organization	business unit
25	……is realized as the direct result delivered by process	output	input	resource	manpower	output
26	……is an indirect affect that the process have on external and internal environment	output	outcome	quality	manpower	outcome
27	……..are the ways to evaluate the performance	output	input	measures	resources	measures
28	…….are the measures used to reveal the needs and expectations of investors	process measure	input	TAT	stake holder measure	stake holder measure
29	KPI stands for	key per income	key performance income	key performance indicator	key permission indicator	key performance indicator
30	……..reveals whether the process objectives have been met or not	process measure	input	TAT	stake holder measure	process measure

31	…….happen when the process flow moves form responsibility of one person to the other	transition	transfer	movement	hand offs	hand offs
32	……..TAT stands for	turn around time	turn around turn	turn about time	turn and time	turn around time
33	……is a person hired by company who is responsible to handle different activities	manager	team leader	associates	customer lead	associates
34	who guides, interacts and leads a group of associates to deliver required result	manager	team leader	associates	customer lead	team leader
35	……are directly responsible for quality of service delivered by the organization	Customer Lead	team leader	associates	Line Manager	Line Manager
36	who has the authority to make changes in their functional area or line of business	Customer Lead	team leader	associates	Line Manager	Line Manager
37	who involves in employee motivation, training and development	Customer Lead	team leader	associates	Line Manager	Line Manager
38	……are the one point contact for the customer	Customer Lead	team leader	associates	Line Manager	Customer Lead
39	who is responsible for delivering expected service to customer	Customer Lead	team leader	associates	Line Manager	Customer Lead
40	……is a program or an operating system which enables user to connect to a computer in another location	virtual desktop	citix remote desktop	rural desktop	desktop connectivity	citix remote desktop
41	……..is a service which is used to access remote serves over a network using remote display protocol	virtual desktop infrastructure	citix remote desktop	rural desktop	desktop connectivity	virtual desktop infrastructure

42	……is used to deliver voice communication over internet protocol	virtual desktop	citix remote desktop	voice over internet protocol	desktop connectivity	voice over internet protocol
43	……is an application which enables all participants to view the presenter computer screen in real time	VDI	VOIP	webEx	dialler	webEx
44	……..are used in call centres to eliminate the task of manually dialling telephone numbers	VDI	VOIP	webEx	dialler	dialler
45	……..Is a pricing model in which the service provider is paid based on amount of input provided	Input based pricing model	transaction based pricing model	outcome based pricing model	market pricing model	Input based pricing model
46	……is a pricing model in which the service provider is paid based on number of transactions provided by customer	Input based pricing model	transaction based pricing model	outcome based pricing model	market pricing model	transaction based pricing model
47	……is a pricing model in which the service provider is paid based on the business result achieved by the customer	Input based pricing model	transaction based pricing model	outcome based pricing model	market pricing model	outcome based pricing model
48	……. Is obtaining services from someone outside a company but with in same country	off shore	on shore	near shore	sea shore	on shore
49	…… is obtaining service form service provider located in other country	off shore	on shore	near shore	sea shore	off shore
50	…….. Type of outsourcing is adopted in order to ensure geographical proximity	off shore	on shore	near shore	sea shore	near shore

51	……..is a redesign of core process to deliver improvements in productivity	process call	process structure	process reengineering	process idea	process reengineering
52	SLA stands for	Service level agreement	service legal agreement	service level arrangement	service legal arrangement	Service level agreement
53	SOP stands for	self operating procedure	standard operating procedure	standard order procedure	self order procedure	standard operating procedure
54	SLR stands for	service legal report	service level report	service level reengineering	standard level report	service level report
55	……model is used to understand the customer needs	SIPOC	matrix	KANO	flowchart	KANO
56	……mapping gives high-level description on entire process	Micro operational level	Macro high level	Hyper Micro level	design level	Macro high level
57	……mapping provides actual steps between inputs and outputs	Micro operational level	Macro high level	Hyper Micro level	design level	Micro operational level
58	……mapping provides details into operator methods	Micro operational level	Macro high level	Hyper Micro level	design level	Hyper Micro level
59	…….. Are representation of step by step activities in a process	SIPOC	matrix	KANO	Process flowchart	Process flowchart
60	……is a visual tool used to document end to end business process	SIPOC	matrix	KANO	Process flowchart	SIPOC

UNIT II

SYLLABUS

BPS Overview - Outsourcing Environment - Need for Outsourcing - Business Processes Outsourced to India. BPS Life Cycle - Sale/ Solutioning – Transition – Steady state – Value creation

OUTSOURCING IN THE BUSINESS ENVIRONMENT

Outsourcing (or contracting out) is a procedure involving the delegation of noncore operations or jobs from internal production to an outside resource. Outsourcing is a business decision that is often made to focus on core competences. A subset of the term, offshoring, also implies transferring jobs to another country, either by hiring local subcontractors or building a facility in an area where labor is cheap.

Need for out sourcing

Companies primarily outsource to reduce certain costs, which may include peripheral or "non-core" business expenses,[19]high taxes, high energy costs, excessive government regulation or mandates, and production or labor costs. The incentive to outsource may be greater for U.S. companies due to unusually high corporate taxes and mandated benefits like social security, Medicare, and safety protection (OSHA regulations).[20] At the same time, it appears U.S. companies do not outsource to reduce executive or managerial costs. For instance, executive pay in the United States in 2007 was more than 400 times more than average workers—a gap 20 times bigger than it was in 1965.[21] Other reasons include:

- Reducing and controlling operating costs.
- Improving company focus.
- Gaining access to world-class capabilities.
- Freeing internal resources for other purposes.
- Streamlining or increasing efficiency for time-consuming functions.
- Maximizing use of external resources.

Business process outsourcing to India refers to the business process outsourcing services in the outsourcing industry in India, catering mainly to Western operations of multinational corporations (MNCs).

- The term Business Process Outsourcing or BPO as it is popularly known, refers to outsourcing in all fields. A BPO service provider usually administers and manages a particular business process for another company. BPOs either use new technology or apply an existing technology in a new way to improve a particular business process. India is currently the number one destination for business process outsourcing, as most companies in the US and UK outsource IT-related business processes to Indian service providers.

- As of 2012, around 2.8 million people work in outsourcing sector.Annual revenues are around $11 billion,[1] around 1% of GDP. Around 2.5 million people graduate in India every year. Wages are rising by 10–15 percent as a result of skill shortage.

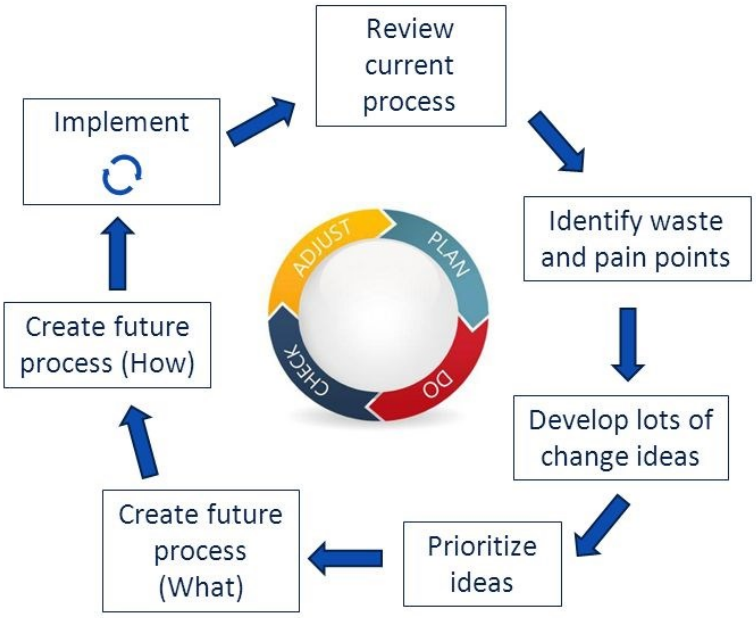
BPO/KPO/Domestic & International Call Centres/NOC etc. are covered under the 'Other Service Provider' (OSP) Category by the Department of Telecommunications.

In India, Business Process Outsourcing (BPO) is the fastest growing segment of the ITES (Information Technology Enabled Services) industry. Factors such as economy of scale, business risk mitigation, cost advantage, utilization improvement and superior competency have all lead to the growth of the Indian BPO industry. Business process outsourcing in India, which started around the mid-90s, has now grown by leaps and bounds.

India is now the world's favored market for BPO companies, among other competitors, such as, Australia, China, Philippines and Ireland. The BPO boom in India is credited to cheap labor costs and India's huge talent pool of skilled, English-speaking professionals. Research by the National Association of Software Services and Companies (NASSCOM) has revealed that quality orientation among leading BPO companies, 24/7 services, India's unique geographic location and the investor friendly tax structure in India have all made the BPO industry in India very popular.

The BPO life cycle begins with Service Assimilation Study - assessment and analysis, Service Opportunity Identification, followed by Service Solution Definition and process design, Service transaction and transition, Service Pilot and Review, SLA based Service Delivery and Service Delivery Enhancement through ongoing management and improvement.

The improvement cycle



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UNIT II

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	……are people outside out organization who receives goods and services and not under the control of organization	External customer	Internal Customer	producer	supplier	External customer
2	……..are type of data which can have a count	descriptive type	continuous type	categorical type	Inferential type	descriptive type
3	……..are type of data which can be measured	descriptive type	continuous type	categorical type	Informational type	continuous type
4	……are type of data which is kind of data having labels	descriptive type	continuous type	categorical type	Informational type	categorical type
5	amount of spread of data or distribution from their average is called	mean	median	mode	variation	variation
6	small number of items taken from population for study is called a	test	sample	pilot	quality	sample

7	number of samples taken to make judgement is called	test size	pilot size	sample size	quality size	sample size
8	in ……type of sampling each object has equal chances of being selected	simple random sampling	systematic sampling	stratified sampling	cluster sampling	simple random sampling
9	in ……. Type of sampling elements are selected at equal intervals	simple random sampling	systematic sampling	stratified sampling	cluster sampling	systematic sampling
10	in……. Type of sampling, stratify population is segmented into homogeneous groups	simple random sampling	systematic sampling	stratified sampling	cluster sampling	stratified sampling
11	in …….type of sampling, population is divided into clusters	simple random sampling	systematic sampling	stratified sampling	cluster sampling	cluster sampling
12	…….is a chart showcasing the nature as well as flow of process steps in a process by using set of graphical symbols	check sheet	fish bone diagram	flow chart	histogram	flow chart
13	…… is a skeleton by a presentation used to categorize the potential cause of problems	check sheet	fish bone diagram	flow chart	histogram	fish bone diagram
14	…….is the distribution of data in simple bar graph in class intervals	check sheet	fish bone diagram	flow chart	histogram	histogram
15	…….are diagrams used to understand relationship between two variables	check sheet	fish bone diagram	flow chart	scatter plot	scatter plot
16	failing to deliver as per customer requirement is called as……..	quality	value less	defect	work	defect
17	more than one defect in a product Leeds to……..product	defective	value less	quality	colour full	defective

18	DPU stands for	Defects process unit	Defects per unit	Direction per unit	Direction procedure unit	Defects per unit
19	DPO stands for	Defects per Organization	Defects per opportunity	Defects per order	Dealing per order	Defects per opportunity
20	DPMO stands for	Defects per million opportunity	defects per minor opportunity	defects per macro opportunity	defect per market opportunity	Defects per million opportunity
21	COQ stands for	Control of Quality	Cost of Quality	Cash of Quality	casting of quality	Cost of Quality
22	the cost linked with evaluation of products to meet conformance to quality standards is ……..	Internal cost	Appraisal cost	Internal failure cost	casting of quality	Appraisal cost
23	……..is the cost which is incurred prior to delivery or shipment of the product to customer	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost
24	…….. Is the cost which is incurred after delivery of the product to customer	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	external failure cost
25	FPY stands for	financial plan year	first pass yield	first present yield	first person yield	first pass yield
26	……is the percentage of good units that complete the process and meets quality guidelines	financial plan year	first pass yield	first present yield	first person yield	first pass yield
27	the process of delivering and implementing of uniform or universal standard is called	ISO	Kaizen	6 Sigma	standardization	standardization
28	……is the cost involved to prevent poor quality in a product	cost of quality	6 sigma	prevention cost	standardization	prevention cost
29	…….. Is the cost of not producing a quality product	cost of quality	6 sigma	prevention cost	standardization	cost of quality

30	any step in a process that could affect the quality of end product is called…….	defect log	defect opportunity	defect process	defect quality	defect opportunity
31	the second stage in CMMI maturity level is …….	Initial	managed	defined	quantitatively managed	managed
32	the third step in CMMI maturity level is	Initial	managed	defined	quantitatively managed	defined
33	the fourth stage in CMMI maturity level is	Initial	managed	defined	quantitatively managed	quantitatively managed
34	the fifth stage in CMMI maturity level is	Initial	managed	defined	optimizing	optimizing
35	ISO stands for	Indian standard organization	International organization for standards	International services organization	International service orders	International organization for standards
36	according to ISO it is the responsibility of ……to plan strategically for quality deliverables	Management	Administration	worker	labour	Management
37	…….is used to provide direction and control to manage quality of service or product in the organization	management system	operational system	quality tool	operating system	management system
38	…….is the first stage in the 5D methodology which is used for transition if a process	Demonstrate	Design	Develop	Define	Define
39	……is the second stage in the 5D methodology which is used for transition of a process	Demonstrate	Design	Develop	Define	Design
40	…….is the third stage in the 5D methodology which is used for transition of a process	Demonstrate	Design	Develop	Define	Develop

41	……is the model that entitles the service provider to be paid the authentic costs	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Cost plus Model
42	……model allows a little elasticity when business objectives and technology undergo a change during the duration of the contract	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Cost plus Model
43	……model does not provide any motivation for the service provider to perform more diligently	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Cost plus Model
44	……model assumes a predetermined rate established by the service provider for a particular service level	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Unit price model
45	……..model is where the organization pays based on its usage	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Unit price model
46	……is a fixed price for the service is established for the duration of the contract	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Fixed pricing model
47	……..makes the organization to know exactly what the service provider's price will be even in the future	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Fixed pricing model
48	in……model, the organization must adequately define the scope or the process and design effective metrics before signing the contract	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Fixed pricing model

49	……model incorporates the use of a fixed price at the low end of the vendors service with variations based on higher service levels	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Flexible pricing model
50	……model's effectiveness depends on categorically defining the scope of the process and the metrics	Cost plus Model	Unit price model	Fixed pricing model	Flexible pricing model	Flexible pricing model
51	……..Model focus in motivating the service provider by offering incentives for a peak performance	Incentive based pricing	Unit price model	Fixed pricing model	Flexible pricing model	Incentive based pricing
52	in…….model bonus is rewarded if a project is completed ahead of schedule	Incentive based pricing	Unit price model	Fixed pricing model	Flexible pricing model	Incentive based pricing
53	in…….model penalty can be imposed or demanded if the performance is not up to the standards as per contract	Incentive based pricing	Unit price model	Fixed pricing model	Flexible pricing model	Incentive based pricing
54	……model should be used to abstract excellence in the delivery of the vendor.	Incentive based pricing	Unit price model	Fixed pricing model	Flexible pricing model	Incentive based pricing
55	The primary purpose of preparing a P&L statement is to determine the ……..	gross margin	sales margin	production margin	target margin	gross margin
56	……..is the variance between income and expenditure before accounting the expenses	gross margin	sales margin	production margin	target margin	gross margin
57	…….is derived as the sale price of an item minus the cost of goods	gross margin	sales margin	production margin	target margin	gross margin

	sold					
58	……is a statement that provides the summery of income and expenditure incurred during a specific period	P&L	Balance sheet	sales margin	production margin	P&L
59	…….manages the complete commercial aspects of the project in a BPO	Business finance	transition	inputs	output	Business finance
60	……acts as an interface in behalf of the BPO relating to financials	Business finance	transition	inputs	output	Business finance

UNIT III

SYLLABUS

Metrics Management - Service Level Agreements - Business Metrics Vs Operations Metrics - Target Settings
Process mapping Techniques – Process Levels - Process Mapping – Symbols, SIPOC, SIPOC fundamentals
Kano Model - Customer expectations in Business Process Outsourcing

A **service-level agreement** (**SLA**) is a commitment between a service provider and a client. Particular aspects of the service – quality, availability, responsibilities – are agreed between the service provider and the service user. The most common component of SLA is that the services should be provided to the customer as agreed upon in the contract.

A **Business Metric** is a quantifiable measure that is used to track and assess the status of a specific business process. It's important to note that business metrics should be employed to address key audiences surrounding a business, such as investors, customers, and different types of employees, such as executives and middle managers. Every area of business has specific performance metrics that should be monitored

A **Key Performance Indicator (KPI)** is a measurable value that demonstrates how effectively a company is achieving key business objectives. Organizations use KPIs to evaluate their success at reaching targets.

Operational Metrics focus management time and attention on potential issues, helping you make decisions for leaner and more efficient operations. It provides a way to review performance and data quality, allowing you to see problems in any number of key areas and trace them back to root causes.

Target settings

Targets are frequently used as a motivational technique. Founded on well-established theories of achievement motivation, targets that are specific and perceived achievable can help to focus managerial action, encourage people to succeed and drive superior performance.

Specific

What exactly do you want to achieve? The more specific your description, the bigger the chance you'll get exactly that. S.M.A.R.T. goal setting clarifies the difference between 'I want to be a millionaire' and 'I want to make €50.000 a month for the next ten years by creating a new software product'.

Questions you may ask yourself when setting your goals and objectives are:

- What exactly do I want to achieve?
- Where?
- How?
- When?
- With whom?
- What are the conditions and limitations?

- Why exactly do I want to reach this goal? What are possible alternative ways of achieving the same?

Measurable

Measurable goals means that you identify exactly what it is you will see, hear and feel when you reach your goal. It means breaking your goal down into measurable elements. You'll need concrete evidence. Being happier is not evidence; not smoking anymore because you adhere to a healthy lifestyle where you eat vegetables twice a day and fat only once a week, is.

Measurable goals can go a long way in refining what exactly it is that you want, too. Defining the physical manifestations of your goal or objective makes it clearer, and easier to reach.

Attainable

Is your goal attainable? That means investigating whether the goal really is acceptable to you. You weigh the effort, time and other costs your goal will take against the profits and the other obligations and priorities you have in life.

If you don't have the time, money or talent to reach a certain goal you'll certainly fail and be miserable. That doesn't mean that you can't take something that seems impossible and make it happen by planning smartly and going for it!

There's nothing wrong with shooting for the stars; if you aim to make your department twice as efficient this year as it was last year with no extra labour involved, how bad is it when you only reach 1,8 times? Not too bad...

Relevant

Is reaching your goal relevant to you? Do you actually want to run a multinational, be famous, have three children and a busy job? You decide for yourself whether you have the personality for it, or your team has the bandwidth.

If you're lacking certain skills, you can plan trainings. If you lack certain resources, you can look for ways of getting them.

The main questions, why do you want to reach this goal? What is the objective behind the goal, and will this goal really achieve that?

You could think that having a bigger team will make it perform better, but will it really?

Timely

Time is money! Make a tentative plan of everything you do. Everybody knows that deadlines are what makes most people switch to action. So install deadlines, for yourself and your team, and go after them. Keep the timeline realistic and flexible, that way you can keep morale high. Being too stringent on the timely aspect of your goal setting can have the

perverse effect of making the learning path of achieving your goals and objectives into a hellish race against time – which is most likely not how you want to achieve anything.

A process is a sequence of tasks, or activities, that when executed turn inputs into a result with added value. A business process execution consumes material and human resources that come from internal or external suppliers that feed the process. The results are products or services that meet the needs of clients.

A process map is a planning and management tool that visually describes the flow of work. Using process mapping software, process maps show a series of events that produce an end result. A process map is also called a flowchart, process flowchart, process chart, functional process chart, functional flowchart, process model, workflow diagram, business flow diagram or process flow diagram. It shows who and what is involved in a process and can be used in any business or organization and can reveal areas where a process should be improved.

Symbol	Name	Function
	Start/end	An oval represents a start or end point
	Arrows	A line is a connector that shows relationships between the representative shapes
	Input/Output	A parallelogram represents input or output
	Process	A rectangle represents a process
	Decision	A diamond indicates a decision

SIPOC

A key concept in six sigma methodology is the SIPOC high level process map in which SIPOC stands for suppliers, inputs, process, outputs, and customers.

The advantages of using a SIPOC model include:

- A display of cross functional activities in a single, simple diagram
- A "big picture" perspective to which additional detail can be added
- A framework applicable to both large and small organizations

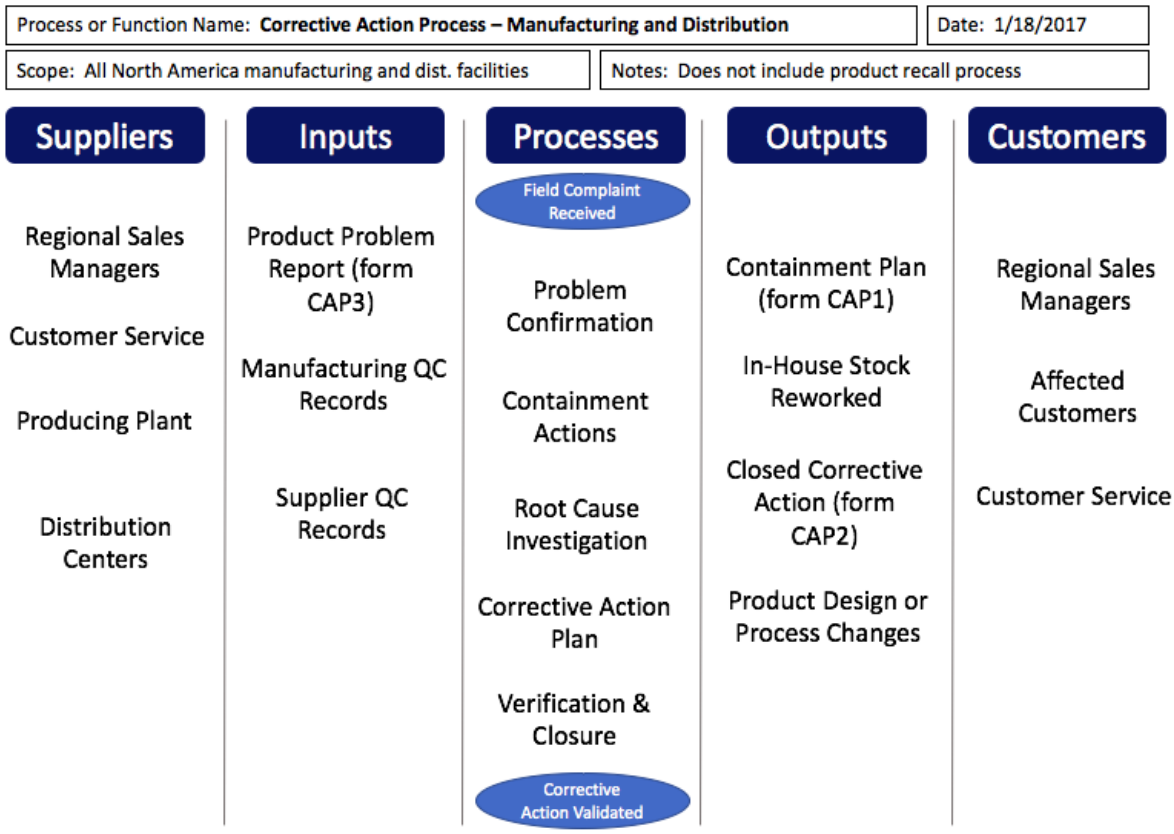
The feedback is shared when Inputs and Outputs are provided, similarly, the knowledge repository is updated with the process details. The ultimate goal is to identify essential work flows and sources of variation in work over time.

SIPOC captures the key components of success from suppliers through internal processes and on to key customers. Other tools such as process mapping, flow charting, and affinity diagrams can be used to further identify the major steps in a process or system.

The SIPOC process map is designed to be a high level process view with 4 – 7 displayed steps. The map enables all team members to view the process in the same light. Various six sigma authors warn against making the diagram too detailed and thereby lose the ability to focus on a six sigma improvement project that has a significant reward.

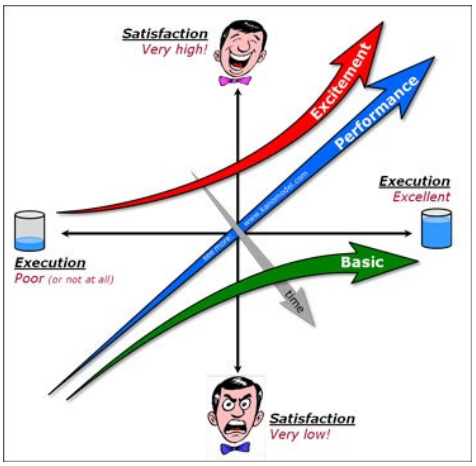
The following steps can be used for developing a SIPOC diagram:

- Have the team create the process map
- The process may have 4 or 5 key steps
- List the outputs of the process
- List the customers of the output of the process
- List the inputs of the process
- List the suppliers of the process
- As an optional step, identify some preliminary requirements of the customers
- Involve the team leader, champion, and other stakeholders for verification



The Kano Model is an insightful way of understanding and categorizing 5 types of Customer Requirements (or potential features) for new products and services.

It was created in the early 80's by Japan's professor Noriaki Kano, but continues today to be an essential tool for all organizations independent of industry or size. The main purpose of the Kano Model is:



- To communicate 5 universal categories of customer requirements that all product and service developers need to be aware of in order to remain competitive.
- To show how each of these 5 universal categories can influence satisfaction and dissatisfaction.
- To show how 2 of the categories add value and 2 of the categories detract from value, and 1 of the categories creates new value.
- To help organizations understand their customer needs better than their customers understand their own needs.
- To provide a mechanism to help organizations understand and classify all potential customer requirements or features into these 5 categories so they can prioritize development efforts on the things that most influence satisfaction and loyalty. This is done by the Kano Survey, or sometimes called a Kano Analysis.
    - **Must-be Quality**
      Simply stated, these are the requirements that the customers expect and are taken for granted. When done well, customers are just neutral, but when done poorly, customers are very dissatisfied. Kano originally called these "Must-be's" because they are the requirements that must be included and are the price of entry into a market.
    - **One-dimensional Quality**
      These attributes result in satisfaction when fulfilled and dissatisfaction when not fulfilled. These are attributes that are spoken and the ones in which companies compete. An example of this would be a milk package that is said to have ten percent more milk for the same price will result in customer satisfaction, but if it only contains six percent then the customer will feel misled and it will lead to dissatisfaction.

- **Attractive Quality**
  These attributes provide satisfaction when achieved fully, but do not cause dissatisfaction when not fulfilled. These are attributes that are not normally expected, for example, a thermometer on a package of milk showing the temperature of the milk. Since these types of attributes of quality unexpectedly delight customers, they are often unspoken.
- **Indifferent Quality**
  These attributes refer to aspects that are neither good nor bad, and they do not result in either customer satisfaction or customer dissatisfaction. For example, thickness of the wax coating on a milk carton. This might be key to the design and manufacturing of the carton, but consumers are not even aware of the distinction. It is interesting to identify these attributes in the product in order to suppress them and therefore diminish production costs.
- **Reverse Quality**
  These attributes refer to a high degree of achievement resulting in dissatisfaction and to the fact that not all customers are alike. For example, some customers prefer high-tech products, while others prefer the basic model of a product and will be dissatisfied if a product has too many extra features.[1]

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DEPARTMENT OF COMMERCE

SUBJECT : Managing Business Process - I

SEMESTER : V

SUBJECT CODE : 16BPU503A

CLASS : III B.COM BPS

UNIT III

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	……is the wing of the company dealing with financial operations	management	corporate finance	human resource	marketing	corporate finance
2	……has the function of raising capital for various ventures or endeavours	management	corporate finance	human resource	marketing	corporate finance
3	……..helps in managing the finances of a company in order to help that company achieve its financial goals	Sales	corporate finance	human resource	Financial Management	Financial Management
4	……..helps the team to gain necessary knowledge and sense of process	Associates	managers	lead managers	Domain experts	Domain experts
5	……..is a process that internally makes people adaptable to change	transition	management	control	audit	transition

6	……makes people in process to move from old ways to new methods	transition	management	control	audit	transition
7	……is succession planning to move from a current state into a future more desired state	transition	management	control	audit	transition
8	……..refers to restructuring and process reengineering	transition	management	control	audit	transition
9	……refers to introducing new technology ways of working	transition	management	control	audit	transition
10	…….are the biggest morale boosters for any employee	Financial reward	salary	staff engagement	work	Financial reward
11	…….has to be shared with the employee to make him feel emotionally connected	Vision and mission	financial statement	sales figures	profit	Vision and mission
12	……helps the company to learn the reason behind an employee leaving the company	stay interview	exit interview	feed back	metrics	exit interview
13	……helps the company to keep their staff focused and make them feel like coming to work excited	Rewards	work	tasks	publicity	Rewards
14	……..helps the employees to skip managers and meet immediate managers in the next level	Skip level meetings	manager meeting	feedback meeting	feed forward meeting	Skip level meetings
15	……signifies that there are no boundaries between a manager and their employees	open door policy	regular meeting	skip level meeting	compensation	open door policy
16	…….helps the employee to walk up to his manager at anytime and speak frankly about any issues	open door policy	regular meeting	skip level meeting	compensation	open door policy

17	……..refers to the system of management and controls exercised in an organization	governance	policy	procedure	audit	governance
18	……..is a process through which the company attracts screens and selects the qualified people for a particular job.	recruitment	training	governance	policy	recruitment
19	…….will be the interface between operations, IT, HR and Administration	Tem Lead	associate	management trainee	assistant manager	Tem Lead
20	……..is the smallest comprehendible piece of work that can be counted on a ratio scale	unit of work	SLA	SOP	capacity planning	unit of work
21	…….is the available time that a resource is operating	Utilization	SLA	SOP	capacity planning	Utilization
22	…….is the area of work that has been taken for outsourcing and execution	Scope of work	Sub Contract	SLA	Penalties	Scope of work
23	……..are the rules governing the sub contracting of third party vendors for carrying out in scope activities	Scope of work	Sub Contract	SLA	Penalties	Sub Contract
24	……. Are agreements to measure the process performance at pre determined frequencies between promisor and promise	Scope of work	Sub Contract	SLA	Penalties	SLA
25	…… are charged for not adhering to SLA's	Scope of work	Sub Contract	SLA	Penalties	Penalties
26	…… is a process of managing a company's interaction with current and future customers	customer management	financial management	human resource management	sales management	customer management

27	what is GAAP	Generally Accepted Accounting Principles	Generally Accepted Auditing Principles	Generally Accepted Appointment Principles	Generally Accepted accounting process	Generally Accepted Accounting Principles
28	The process of developing and implementing of uniform technical standards is called……	Standardization	equality	yield	audit	Standardization
29	……..is defined as determining the relationship of instrument measurement data to a standard of known accuracy	calibration	FPY	yield	audit	calibration
30	……is a reactive approach	Corrective action	preventive action	documentation	ISO	Corrective action
31	……..is a proactive approach	Corrective action	preventive action	documentation	ISO	preventive action
32	…….helps to differentiate between actual cost of product and the reduced cost should be	Total quality costs	preventive action	documentation	ISO	Total quality costs
33	…….is the cost that surfaces out after delivery of the product	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	external failure cost
34	……..is the cost incurred for inspection of purchased material	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Appraisal cost
35	…….is the cost incurred for final inspection during process	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Appraisal cost
36	……..is the cost incurred for measuring and test equipment's calibration	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Appraisal cost
37	……..is the cost associated with reworking	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost
38	……is the cost associated with re inspecting	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost

39	……is the cost associated with scrapping the product	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost
40	Re testing cost is associated with ……..	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost
41	Downgrading cost is associated with……	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost
42	Review of material cost is associated with……	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	Internal failure cost
43	Customer complaints processing cost is associated with	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	external failure cost
44	Returning of products cost is associated with	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	external failure cost
45	Claims on warranty cost is associated with	Appraisal cost	Internal failure cost	external failure cost	opportunity cost	external failure cost
46	Cost involved in preventing poor quality in service by introducing specific activities is ……..	prevention cost	Internal failure cost	external failure cost	opportunity cost	prevention cost
47	The cost of quality increases when the work is……	redone	completed on time	partially done	not done	redone
48	6sigma = ……DPMO	3.4	320	6,210	66,800	3.4
49	5sigma = ……DPMO	3.4	320	6,210	66,800	320
50	4sigma = ……DPMO	3.4	320	6,210	66,800	6,210
51	3sigma = ……..DPMO	3.4	320	6,210	66,800	66,800
52	2sigma = …….DPMO	3.4	320	6,210	3,08,000	3,08,000
53	1sigma = ……DPMO	3.4	320	6,210	6,90,000	6,90,000
54	DPMO= DPO X……..	1 million	2million	1 thousand	10 thousand	1 million
55	Important phase of the six sigma approach is to identify and reduce the ……..in the process	Defect Opportunities	process	quality	audit	Defect Opportunities

56	inclusion of more than one defect in the service makes the services known as …….	defect	defective	opportunity	management	defective
57	Quality audit starts with ……with the senior management	opening meeting	closing meeting	introduction	agreement	opening meeting
58	The process of examination of quality system by an internal or external quality auditor is called as……	Quality audit	process audit	quality check	six sigma	Quality audit
59	CMMI models have ……..maturity levels	2	4	3	5	5
60	As per ISO Organizations must have a …….. With documented procedures	Quality manual	vision	mission	plan	Quality manual

UNIT IV

SYLLABUS

Quality Management: Quality Definition – Quality Control Vs Quality Assurance – Internal Quality Standards
Transaction Monitoring Process: Sampling inspection – Transaction monitoring cycle - Inspection

Definitions of Quality:

People have found many ways to describe quality. Some of the most popular definitions for quality are listed below.

a. A degree of excellence
b. Conformance to requirements
c. Totality of characteristics which act to satisfy a need
d. Fitness for use
e. Fitness for purpose
f. Freedom from defects
g. Delighting customers

Quality assurance (QA) is a broad concept that focuses on the entire quality system including suppliers and ultimate consumers of the product or service. It includes all activities designed to produce products and services of appropriate quality.
Quality control (QC) has a narrower focus than quality assurance. Quality control focuses on the process of producing the product or service with the intent of eliminating problems that might result in defects.
Quality management is the totality of functions involved in the determination and achievement of quality (includes quality assurance and quality control).

	Quality assurance	**Quality Control**
Definition	QA is a set of activities for ensuring quality in the processes by which products are developed.	QC is a set of activities for ensuring quality in products. The activities focus on identifying defects in the actual products produced.
Focus on	QA aims to prevent defects with a focus on the process used to make the product. It is a proactive quality process.	QC aims to identify (and correct) defects in the finished product. Quality control, therefore, is a reactive process.
Goal	The goal of QA is to improve development and test processes so that defects do not arise	The goal of QC is to identify defects after a product is developed and before it's

	when the product is being developed.	released.
How	Establish a good quality management system and the assessment of its adequacy. Periodic conformance audits of the operations of the system.	Finding & eliminating sources of quality problems through tools & equipment so that customer's requirements are continually met.
What	Prevention of quality problems through planned and systematic activities including documentation.	The activities or techniques used to achieve and maintain the product quality, process and service.
Responsibility	Everyone on the team involved in developing the product is responsible for quality assurance.	Quality control is usually the responsibility of a specific team that tests the product for defects.
Example	Verification is an example of QA	Validation/Software Testing is an example of QC
Statistical Techniques	Statistical Tools & Techniques can be applied in both QA & QC. When they are applied to processes (process inputs & operational parameters), they are called Statistical Process Control (SPC); & it becomes the part of QA.	When statistical tools & techniques are applied to finished products (process outputs), they are called as Statistical Quality Control (SQC) & comes under QC.
As a tool	QA is a managerial tool	QC is a corrective tool
Orientation	QA is process oriented	QC is product oriented

The ISO family addresses various aspects of quality management and contains some of ISO's best known standards. The standards provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer's requirements, and that quality is consistently improved.

It sets out the criteria for a quality management system and is the only standard in the family that can be certified to (although this is not a requirement). It can be used by any organization, large or small, regardless of its field of activity.

This standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. These principles are explained in more detail in the pdf Quality Management Principles. Using ISO 9001:2015 helps ensure that customers get consistent, good quality products and services, which in turn brings many business benefits.

ISO has a range of standards for quality management systems that are based on ISO 9001 and adapted to specific sectors and industries. These include:
ISO13485 – Medical devices
ISO17582 – Electoral organizations at all levels of government
ISO18091 – Local government
ISO/TS22163 – Business management system requirements for rail organizations
ISO/TS29001 – Petroleum, petrochemical and natural gas industries
ISO/IEC 90003 – Software engineering

Transaction Monitoring is an integral part of the business in almost all call centers. Most of the times, it is mandated by the clients that the third party vendor audits the transactions and provides guidelines on how to go about auditing to arrive at a Score. Some times, the Transaction Monitoring Score Card is developed internally by the third party vendor. With this blog, I would like to share some of the best practices which will ensure that your Transaction Monitoring Process actually delivers what it is intended to do i.e.

1. Deliver excellent CSAT results
2. Ensure the guidelines provided by the client is adhered to
3. Provide insights to the vendor on how we can work more efficiently (reduce cycle time, cost of operations)
4. Provide feedback to the Training department helping them continually improve the training content. 5. Plan for Remedial Trainings
6. Provide feedback to the Management/HR on motivation level of the agents
7. Provide feedback to the Clients on how they can improve their product/services, adding value to the client's business and reputation to the vendor

Transaction monitoring is a detective control designed to catch flawed transactions.
Controls can be preventive or detective. Management will select the combination most appropriate for its organization, considering risks and costs.

Root cause analysis (**RCA**) is a method of problem solving used for identifying the root causes of faults or problems.[1] A factor is considered a root cause if removal thereof from the problem-fault-sequence prevents the final undesirable outcome from recurring; whereas a causal factor is one that affects an event's outcome, but is not a root cause. Though removing a causal factor can benefit an outcome, it does not prevent its recurrence with certainty.

Essentially it is based on four general principles,

- Define and describe properly the event or problem ('five whys' technique).
- Establish a timeline from normal situation until the final crisis or failure.
- Distinguish between root causes and causal factor.
- Once implemented (and with constant execution), RCA is transformed into a method of problem prediction.

Six Sigma quality assurance approach and methods have definitely set a benchmark for excellence. It has been done by simply raising the standards of quality through implementation of a methodical quality management approach.
Quality system suggested by Six Sigma has created quite a buzz in almost every industry including healthcare, retail, BPO etc.

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UNIT IV

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	……will have the description of the sequence and interaction of the processes that make quality management system	Quality manual	vision	mission	plan	Quality manual
2	……arranges data presented in matrix in numerical data form	matrix data	arrow diagram	tree diagram	affinity diagram	matrix data
3	……..tool is used for contingency counter planning as well as getting back on track	matrix data	arrow diagram	tree diagram	process decision program charts	process decision program charts
4	……tool helps to steer in direction as is required of unanticipated problems occur on the way of a process	matrix data	arrow diagram	tree diagram	process decision program charts	process decision program charts
5	……..tool shows the sequence in which the task should be done to complete a pan	matrix data	arrow diagram	tree diagram	affinity diagram	arrow diagram

6	…….tool is also used in PERT and CPM chart	matrix data	arrow diagram	tree diagram	affinity diagram	arrow diagram
7	…….consists of an array kind of structure to show relation between two problems	matrix diagram	arrow diagram	tree diagram	affinity diagram	matrix diagram
8	…….develops a succession of branches and then sub branches for achieving objectives	matrix diagram	arrow diagram	tree diagram	affinity diagram	tree diagram
9	Tree diagram is also called as ……	matrix diagram	arrow diagram	Dendogram	affinity diagram	Dendogram
10	Tree diagram is also called as ……	matrix diagram	arrow diagram	systematic diagram	affinity diagram	systematic diagram
11	…….allows multidimensional free flow of thoughts	matrix diagram	relationship diagram	tree diagram	affinity diagram	relationship diagram
12	…….helps to resolve tangled issues by uncovering the logical connections	matrix diagram	relationship diagram	tree diagram	affinity diagram	relationship diagram
13	…….organizes the data into groups based on natural relationship	matrix diagram	relationship diagram	tree diagram	affinity diagram	affinity diagram
14	…….chart showcases the common and special cause variations in a process statistically	control chart	scatter plots	pareto analysis	histogram	control chart
15	…….are simple bar chart arranged in increasing height of bar form left to right based on data	control chart	scatter plots	pareto analysis	histogram	pareto analysis
16	…… are helpful in root cause analysis for problem related to quality	Quality tools	ISO	six sigma	CMMI	Quality tools

17	…….is a part of quality management focused on fulfilling quality requirements	Quality control	ISO	six sigma	CMMI	Quality control
18	…….is the measure of dispersion	Standard deviation	variance	range	median	Standard deviation
19	……is the measure of distance from the mean	Standard deviation	variance	range	median	Standard deviation
20	summing up all values and then dividing it by their count will give	mean	median	mode	standard deviation	mean
21	The value occurring most of the time in given or collected data is called as ……..	mean	median	mode	standard deviation	mode
22	if the data set has two modes it is called as ……..	mean	median	bimodal	standard deviation	bimodal
23	……consists of body of methods for collecting and analysing data	statistics	units	measures	metrics	statistics
24	The process of expressing numerical figures is known as……	statistics	units	measures	quantification	quantification
25	……is done in order to enhance the customer experience through value added services	value creation	stabilisation	business growth	transition	value creation
26	Organization needs to do ……..to ensure results are delivered as per client expectations	value creation	stabilisation	business growth	transition	stabilisation
27	constant reviews in the process are done in order to ……..	improve process	get feedback	hire employee	manage process	improve process
28	……..is the first phase in Transition	Deliver	Define	design	develop	Define

29	……step involved in defining the needs and setting up plan to accomplish the same	Deliver	Define	design	develop	Define
30	……is the second phase in transition	Deliver	Define	design	develop	design
31	……step involves in creating a prototype and training plan	Deliver	Define	design	develop	design
32	testing happens in …….phase of transition	Deliver	Demonstrate	design	develop	Demonstrate
33	……..is the final stage of 5D methodology in transition	Deliver	Demonstrate	design	develop	Deliver
34	……is the model of service delivered form neighbouring or near by countries	near shore	off shore	on shore	no shore	near shore
35	in ……..model the client will have no face to face interaction with the service provider	near shore	off shore	on shore	no shore	off shore
36	onshore outsourcing is also called……..outsourcing	near shore	off shore	domestic	no shore	domestic
37	in ……..model the service provider is paid based on the business result achieved by the customer	Outcome based	transaction based pricing	input based	development based	Outcome based
38	in …….model the payment to service provider is based on the number of transactions processed by him	Outcome based	transaction based pricing	input based	development based	transaction based pricing
39	in……model the payment to service provider is done based on estimated amount of input provided	Outcome based	transaction based pricing	input based	development based	input based

40	what is FTE	Full time employee	full turn employee	first time employee	for the employee	Full time employee
41	Technology solution is a part of	to be process design	as is process design	can be process design	should be process design	to be process design
42	process simplification is a part of	to be process design	as is process design	can be process design	should be process design	to be process design
43	Understanding automation opportunities is a part of	to be process design	as is process design	can be process design	should be process design	to be process design
44	process handoff is a part of	to be process design	as is process design	can be process design	should be process design	as is process design
45	process exceptions is a part of	to be process design	as is process design	can be process design	should be process design	as is process design
46	…….is understanding the approvals required for different activities	process handoff	process exceptions	process level	technology	process exceptions
47	……involves study of process from different areas to seek information	Internal Benchmarking	External Benchmarking	Business process	Process management	Internal Benchmarking
48	……..is the ability to reproduce consistently high quality of service with minimum resources	process standards	bench marking	procedure	audit	process standards
49	…….gives set of methods and conditions that makes possible repeated high performance	Standardization	bench marking	procedure	audit	Standardization
50	what is TPM	Total Productive maintenance	Total process maintenance	Total procedure maintenance	Total problem maintenance	Total Productive maintenance
51	……is the production procedure that identifies wasteful activities in a process	Lean	TPM	TQM	six sigma	Lean

52	…….is the set of activities to analyse existing process in order to identify improvement opportunities	Process improvement methodology	Product improvement methodology	procedure improvement methodology	life cycle of process	Process improvement methodology
53	…….is the process of generating, developing and communicating new ideas	Idea generation	TPM	TQM	six sigma	Idea generation
54	…….are high-level existing management performance indicators	Operational metric	business metric	SLA	SOP	business metric
55	profit and loss statement, balance sheet, cash flow statement are examples of ……..	Operational metric	business metric	SLA	SOP	business metric
56	……are represented by performance on the service level	Operational metric	business metric	SLA	SOP	Operational metric
57	……describes the SLA metric in detail	Metrics definition document	TPM	TQM	six sigma	Metrics definition document
58	…….is the written instruction of routine activity of every organization	SLA	SOP	TPM	TQM	SOP
59	…….tool is used to support product specification and discussion through better development of team understanding	matrix data	KANO	tree diagram	affinity diagram	KANO
60	…….tool focuses on distinguishing product features, rather than on customer needs	matrix data	KANO	tree diagram	affinity diagram	KANO

UNIT V

SYLLABUS

Defects Management: Defect Vs Defective - Opportunity Definition – DPU/DPMO calculation. FPY & COQ, Value stream mapping, Standard Operating Procedures.

Defect Management

Defect Prevention is much more efficient and effective in reducing the number of defects and also is very cost effective to fix the defects found during the early stage of the software process. Most of the organizations conduct **Defect Discovery**, **Defect Removal** and then **Process Improvement** which is collectively known as a **Defect Management.**

Goals of Defect Management

- Prevent the Defect
- Early Detection
- Minimize the impact
- Resolution of the Defect
- Process improvement

When a system gives a different output other than the actual business requirement i.e. when there is a deviation from the actual or original business requirement then we can say that there is a defect in the system/software.

When the testing team executes the test cases, they come across a situation where the actual test result is different from the expected result. This variation is termed as a **Defect**.

Defect vs defective

A product may have many defects – imperfections. But a product is not defective unless the defects prevent the product from functioning. If a product is not usable, it is considered defective.

Defects may be many on a shippable and acceptable product. An example is typos in a book. A typo is a defect, but the book ships to satisfied customers. A defective book would probably fall apart.

Opportunity

Any area within a product, process, service, or other system where a defect could be produced or where you fail to achieve the ideal product in the eyes of the customer. In a product, the areas where defects could be produced are the parts or connection of parts within the product. In a process, the areas are the value added process steps. If the process step is not value added, such as an inspection step, then it is not considered an opportunity.

Opportunities are the things which must go right to satisfy the customer. It is not the number of things we can imagine that can go wrong

Defects Per Unit (DPU):

DPU is a metric that expresses **how your product or process is performing, based on the number of defects**. DPU refers to the average number defects per sampled unit of product or service. DPU evaluates the average number of units carrying one or more defects

How to calculate DPU?

Let us now have a look at three steps to calculate process's DPU.

1. The first step is to **determine the total number of units you will sample**. It means determining the sample size. A sample group should be small enough to be manageable, yet large enough to reflect the problem that is disturbing the process under consideration
2. The second step is to **count the number of defects or errors**that occur within the sample. In other words, you will need to determine how many units in the sample group contain at least one defect or error.
3. The third step gives you the **DPU as a decimal number, which can be converted to a percentage**

Defects per unit (DPU) – the average number of defects per unit of product.

$$DPU = \frac{\text{total number of defects found in a sample}}{\text{sample size}}$$

For example when 26 defects (flaws) are found on 10 units of product, the DPU is 26/10 or 2.6 defects per unit.

Defects per Million Opportunities (DPMO) – a ratio of the number of defects (flaws) in 1 million opportunities when an item can contain more than one defect. To calculate DPMO, you need to know the total number of defect opportunities.

$$DPMO = \left(\frac{\text{total number of defects found in a sample}}{\text{total number of defect opportunities in the sample}}\right) \times 1{,}000{,}000$$

$$= \left(\frac{\text{total number of defects found in a sample}}{\text{Sample size x number of defect opportunities per unit in the sample}}\right) \times 1{,}000{,}000$$

First pass yield (FPY), also known as **throughput yield (TPY)**, is defined as the number of units coming out of a process divided by the number of units going into that process over a specified period of time.[1] Only good units with no rework or scrap are counted as coming out of an individual process.

Consider the following:
A lot of 5 units pass through 3 stations:
When passing through the first station, 3 out of 5 pass. 2 are reworked and then pass. First pass yield at station 1 is 80%. Total yield is 100%.
When passing through the second station all 5 units pass – a 100% first pass yield.
At station 3, 1/5 pass. 4 are reworked and then pass – a 20% first pass yield, and a 100% total yield.

Cost of Quality can be defined as the cost which is allied with the quality of a product. It is the sum total of costs which is incurred while maintaining quality up to standard levels plus the cost of failure to maintain that level. Cost of Quality will not incur if the quality is free from faults. Six sigma offers solution to this problem and helps the companies to reduce their Cost of Quality to a level of one to two percent only.

Internal Failure Costs: It is caused by services or products not meeting the requirements of the consumers or users and is found before the time of the release of services and products to the external customers. They would probably have dissatisfied the customer because of the dearth that is caused in cooperation by erroneousness products and inaccuracy in processes. These include the cost for:

- Rework
- Stoppage
- Re-designing
- Shortages
- Failure analysis
- Re-testing
- Reduction
- Downtime
- Lack of suppleness and adaptability

External Failure Costs: When customers are dissatisfied due to deficiency found at post delivery period of products can incur external failure costs. Examples for these costs include:

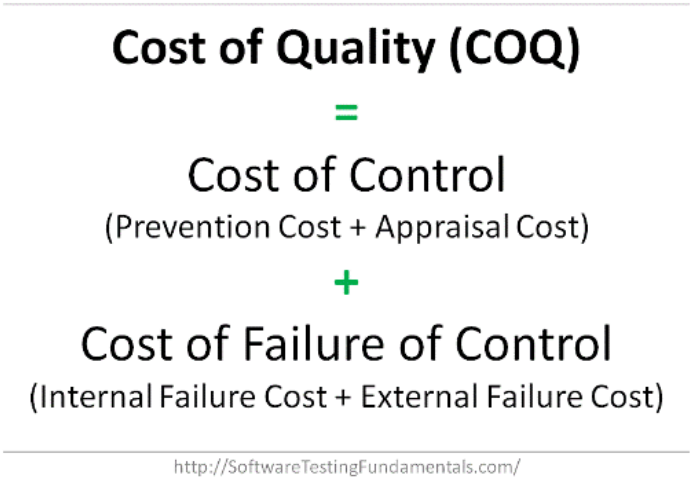
- Grievances
- Patching up goods and redo services
- Warranties
- Customers' bad will
- Sales reductions causes heavy loss
- Costs of environment.

Appraisal Costs: The necessity to control services as well as the products to make certain a high excellence level in all the stages causes the emergence of prevention cost. These include the costs for:

- Checking and testing services and goods that are purchased
- Final inspection and in process
- Field testing
- Product, service audits and process

Prevention Costs: Costs that are designed to prevent poor quality from arising in products or services are Prevention Costs. These are:

- Quality scheduling
- Error proofing
- Capability assessments
- Quality development projects
- Quality education and training



Value-stream mapping is a lean-management method for analyzing the current state and designing a future state for the series of events that take a product or service from its beginning through to the customer with reduced lean wastes as compared to current map. A value streamfocuses on areas of a firm that add value to a product or service, whereas a value chain refers to all of the activities within a company. At Toyota, it is known as "material- and information-flow mapping".[1]

The purpose of value stream mapping is to identify and remove or reduce "waste" in value streams, thereby increasing the efficiency of a given value stream. Waste removal is intended to increase productivity by creating leaner operations which in turn make waste and quality problems easier to identify.[2]

1. **Faster-than-necessary pace**: creating too much of a good or service that damages production flow, quality, and productivity. Previously referred to as overproduction, and leads to storage and lead time waste.
2. **Waiting**: any time goods are not being transported or worked on.
3. **Conveyance**: the process by which goods are moved around. Previously referred to as transport, and includes double-handling and excessive movement.
4. **Processing**: an overly complex solution for a simple procedure. Previously referred to as inappropriate processing, and includes unsafe production. This typically leads to poor layout and communication, and unnecessary motion.
5. **Excess Stock**: an overabundance of inventory which results in greater lead times, increased difficulty identifying problems, and significant storage costs. Previously referred to as unnecessary inventory.

6. **Unnecessary motion**: ergonomic waste that requires employees to use excess energy such as picking up objects, bending, or stretching. Previously referred to as unnecessary movements, and usually avoidable.
7. **Correction of mistakes**: any cost associated with defects or the resources required to correct them.

A **standard operating procedure** (**SOP**) is a set of step-by-step instructions compiled by an organization to help workers carry out **complex** routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance, while reducing miscommunication and failure to comply with industry regulations.

An SOP, in fact, defines expected practices in all businesses where quality standards exist. SOPs play an important role in your small business. SOPs are policies, procedures and standards you need in the operations, marketing and administration disciplines within your business to ensure success. These can create:

- efficiencies, and therefore profitability
- consistency and reliability in production and service
- fewer errors in all areas
- a way to resolve conflicts between partners
- a healthy and safe environment
- protection of employers in areas of potential liability and personnel matters
- a roadmap for how to resolve issues – and the removal of emotion from troubleshooting – allowing needed focus on solving the problem
- a first line of defense in any inspection, whether it be by a regulatory body, a partner or potential partner, a client, or a firm conducting due diligence for a possible purchase
- value added to your business should you ever wish to sell it

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(For the candidates admitted from 2016 onwards)

DEPARTMENT OF COMMERCE

SUBJECT : Managing Business Process - I

SEMESTER : V

SUBJECT CODE : 16BPU503A

CLASS : III B.COM BPS

UNIT V

S.No	Question	Option A	Option B	Option C	Option D	Answer
1	……..are attributes which refer to a high level of accomplishment in KANO model	Reverse Quality	Indifferent Quality	Must be Quality	One dimensional Quality	Reverse Quality
2	……..features refer to aspects that are neither good nor bad as they do not effect customer in KANO model	Reverse Quality	Indifferent Quality	Must be Quality	One dimensional Quality	Indifferent Quality
3	……is also called as hygiene features in KANO model	Reverse Quality	Indifferent Quality	Must be Quality	One dimensional Quality	Must be Quality
4	……are features that are taken for granted when fulfilled but will result in dissatisfaction when not fulfilled in KANO model	Reverse Quality	Indifferent Quality	Must be Quality	One dimensional Quality	Must be Quality
5	……..are the attributes which result in satisfaction when delivered and dissatisfaction when not delivered	Reverse Quality	Indifferent Quality	Must be Quality	One dimensional Quality	One dimensional Quality

6	……..are qualities which are good to have but are not required from hygiene or must have stand point in KANO model	Attractive Quality	Indifferent Quality	Must be Quality	One dimensional Quality	Attractive Quality
7	…….attributes provide satisfaction when they are fully achieved but do not cause dissatisfaction when not delivered in KANO model	Attractive Quality	Indifferent Quality	Must be Quality	One dimensional Quality	Attractive Quality
8	in ……the process and decisions are grouped visually by placing them in lanes	swim lane	KANO	tree diagram	affinity diagram	swim lane
9	SIPOC maps a process at …….level	Micro	Macro	high level	low level	Macro
10	……..model helps in gaining focus of the team in understanding the key elements of the process	swim lane	KANO	SIPOC	affinity	SIPOC
11	…….is a graphical representation of steps, events, operations and relationships with in a process	Process mapping	process scheduling	process limit	process benefits	Process mapping
12	…….provides a common definition of the suppliers, inputs, process steps, outputs and customers of the process	Process mapping	process scheduling	process limit	process benefits	Process mapping
13	Process mapping helps to ……..identify the steps in the process	graphically	theoretically	practically	variablelly	graphically
14	……visually shows process complexity and identifies sources of non value added activities	Process mapping	process scheduling	process limit	process benefits	Process mapping

15	……..identifies the key process input variables that go into a process and the result key out	Process mapping	process scheduling	process limit	process benefits	Process mapping
16	……is a structure for thinking through a completes process in a simplified, visible manner	Process mapping	process scheduling	process limit	process benefits	Process mapping
17	…….gives an ability to see the entire process as a team	Process mapping	process scheduling	process limit	process benefits	Process mapping
18	…….gives the ability to identify cycle times for each step in the process	Process mapping	process scheduling	process limit	process benefits	Process mapping
19	……..gives information on non value added steps in the process	Process mapping	process scheduling	process limit	process benefits	Process mapping
20	……..gives the gaps present in the As is process as against standard process	Process mapping	process scheduling	process limit	process benefits	Process mapping
21	……shows the bottlenecks which are impacting efficiency of the process	Process mapping	process scheduling	process limit	process benefits	Process mapping
22	…….is the recipient of a good, service product or idea obtained as output from a process	producer	customer	manager	auditor	customer
23	stake holders measure is also called as……	KPI	SLA	SOP	SIPOC	KPI
24	……..is derived from an analysis of the desired outputs	Objectives	outcome	output	measures	Objectives
25	……..comes long after the process has delivered its output	Objectives	outcome	purpose	measures	outcome

26	outcome are controlled by……	process chart	process design	process reengineering	process model	process design
27	……is the level 1 of business process model	Organizational level	Business unit	Product/service level	processes	Organizational level
28	……is the level 2 of business process model	Organizational level	Business unit	Product/service level	processes	Business unit
29	……is the level 3 of business process model	Organizational level	Business unit	Product/service level	processes	Product/service level
30	……is the level 4 of business process model	Organizational level	Business unit	Product/service level	processes	processes
31	…….is the first step in laying down a process approach	identification	support	managing	services	identification
32	resources are required to convert …….. into output	Resources	input	management	title	input
33	To ensure quality ……must be adopted to enhance customer satisfaction	Process approach	management approach	process element	auditing	Process approach
34	……..are executed by completion of task	procedure	process	quality	governance	procedure
35	…….are steps completed by different people in different department with different objective	procedure	process	quality	governance	procedure
36	……..focuses on complying with the rules and guidelines	procedure	process	quality	governance	procedure
37	……..define the sequential steps to accomplish a task	procedure	process	quality	governance	procedure
38	……..are used by people to execute a task	procedure	process	quality	governance	procedure

39	……are usually not modified and are static in nature	procedure	process	quality	governance	procedure
40	……..are accomplished when the desired output is achieved	procedure	process	quality	governance	process
41	……..are completed by different people with the same objective	procedure	process	quality	governance	process
42	……..focuses on customer satisfaction	procedure	process	quality	governance	process
43	…….produces results through use of resources	procedure	process	quality	governance	process
44	…….are dynamic nature and often improved continuously	procedure	process	quality	governance	process
45	a……approach is about executing a task	procedural	process	quality	governance	procedural
46	Starting and ending of the process is clearly defined in	process scope	process title	input	output	process scope
47	…….is a level to which a set of inbuilt characteristics of product or service satisfies requirements of a customer	procedure	process	quality	governance	quality
48	ISO provides detailed and complete idea on ……..	management	customer	quality	governance	quality
49	……should be simple to understand and should have a verb and a noun to get fair understanding of process objective	process title	process scope	control	resources	process title
50	…….are the raw material that are required by the process to transform it into output	process scope	process title	input	output	input

51	……..visually communicates the process at high-level and defines the scope of improvement efforts	KPI	SLA	SOP	SIPOC	SIPOC
52	…….mapping helps to compare and benchmark processes	KANO	SIPOC	flow chart	swim lane	SIPOC
53	……mapping helps to identify feedback and feed forward loops between customers, suppliers and process	KANO	SIPOC	flow chart	swim lane	SIPOC
54	……mapping contributes to understanding how the suppliers, inputs , process steps and outputs affect customers	KANO	SIPOC	flow chart	swim lane	SIPOC
55	……..helps to minimize variation and promotes quality through consistent implementation of a process or procedure	KPI	SLA	SOP	SIPOC	SOP
56	……helps to minimize opportunities of miscommunication	KPI	SLA	SOP	SIPOC	SOP
57	……..are used as checklists for auditing procedures	KPI	SLA	SOP	SIPOC	SOP
58	VOC stands for	Voice over customer	Value offered credit	Voice of the customer	Variety of customers	Voice of the customer
59	CTQ means	Critical to Quality	Critical towards quality	Centre to quality	Common to quality	Critical to Quality
60	……..is a repetitive four step management method used in business for controlling and improving process and products	PDCA Cycle	SLA	SOP	SIPOC	PDCA Cycle