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ASSIGNMENT-3

1. What do you mean by failure mode effect analysis?

Ans. The analysis of possibility of failure of an equipment, failure modes, probability of occurrence of failure and severance of failure etc are called **failure mode effect analysis.**

2. What do you mean by process capabilities?

Ans. The ability of a process to keep central tendencies(mean,median and mode)- using x bar chart and dispersion(range, variance or standard deviations) at their required levels is called process capability.

3. Write and explain different types of chart which are used to control quality of a projector or a product?

Ans. A. x bar chart
B. histogram
C. run chart
D. control chart
E. poka yoke
F. Fail safe mode

Xbar chart is basically used for central tendency of the process. Xbart chart is quality control chart used to monitor the mean and variation of a process based on samples taken in a given time. The control limits on both chats are used to monitor the mean and variation of the process going forward. If a point is out of the control limits, it indicates that the mean or variation of the process is out-of-control; assignable causes may be suspected at this point.

R chart

R chart is basically used for measuring variability. The R chart is the control chart for the subgroup ranges. This chart must exhibit control in order to make conclusions on the Xbar chart.

S chart

S chart is called standard deviation chart. standard deviation graph is used to visualise the spread of data. tells how much the data is clustered around the mean of the data.
Lower standard deviation tells that the data is less spread and higher standard deviation tells that data is more spread.

Variance chart

If not standard deviation then variance chart is used. A variance chart plots both monthly and year-to-date variances for two metrics over time.

4. Write the categories for Selective Inventory Control tools and explain briefly.

Ans. Some inventory control tools are :
1. ABC analysis :
A : 10 - 20 % in quantity/volume, but 70% in value
B : 30-40% quantity , 15-20% in value
C : 40-50% volume, 5-10% value
2. Items classification-
a. seasonal and off seasonal
b. VED analysis : vital , essential and desirable
Eg. Pen - v : ink, E :body of pen ,d: cap
c. GOLF - SOURCE CAN BE government, other sources, local or foreign
d. Fast moving, slow moving and non moving items
e. SDE : scarce items , difficult and easy items

ABC analysis
---> It is based on the principle of the vital fiew and trivial many.
This technique is also popularly known as “Always Better Control” which is used to exercise control over inventories. ABC analysis is a basic inventory management technique that has been used in business management for a long time. Under this method various items of inventory are divided into some groups. These groups are often marked A, B, and C.
A items--->High value items which may consist of only a small percentage of the total items handled.
B items--->Medium value material and should be under the normal control procedures.
C items--->Low value material and should be under simple and economical method of control.

Sos analysis
-->It stands for seasonal off seasonal.SOS analysis is based on the seasonability of items and it classifies all the items into two categories i.e. “seasonal” and “off seasonal”.
--> Identifying itens that are available on the limited period of years e.g. mangoes are available during summers.
---> Identifying items that are seasonal and available throughout the year however the cost in off season are relatively high.
---> SOS analysis can selected when we want to determine the seasonality of the item and right season for procuring them.

VED analysis

It stands for Vital Essential Desirable. It attempts to classify the items used into three broad categories, namely Vital, Essential, and Desirable. The analysis classifies items on the basis of their criticality for the industry or company. Vital: Vital category items are those items without which the production activities or any other activity of the company, would come to a halt, or at least be drastically affected. Essential: Essential items are those items whose stock – out cost is very high for the company. Desirable: Desirable items are those items whose stock-out or shortage causes only a minor disruption for a short duration in the production schedule. The cost incurred is very nominal. VED Analysis is very useful to categorize items of spare parts and components. In fact, in the inventory control of spare parts and components it is advisable, for the organization to use a combination of ABC and VED Analysis. Such control system would be found to be more effective and meaningful.

GOLF analysis : It stands for Government Ordinary Local Foreign. There are mainly imported items which are canalized through the State Trading Corporation (STC) Minerals and Metals Trading Corporation, etc. Indian Drugs and Pharmaceutical Ltd (IDPL), Mica trading corporation etc. These are special procedures of inventory control which may not applicable to ordinary items as they require special procedures.

FSN analysis

FSN stands for fast moving slow moving and non-moving. Here, classification is based on the pattern of issues from stores and is useful in controlling obsolescence. To carry out an FSN analysis, the date of receipt or the last date of issue, whichever is later, is taken to determine the number of months, which have lapsed since the last transaction. The items are usually grouped in periods of 12 months. FSN analysis is helpful in identifying active items which need to be reviewed regularly and surplus items which have to be examined further. Non-moving items may be examined further and their disposal can be considered.

SDE analysis

SDE stands for Scarce Difficult Easy. The criterion for this analysis is the availability of the materials in the market. In industrial situations where certain materials are scarce (specially in a developing country like India) this analysis is very useful and gives proper guideline for deciding the inventory policies.

S: refers to scarce items, items which are in short supply. Usually these are raw materials, spare parts and imported items.

D: Stands for difficult items, items which are not readily available in local markets and have to be procured from faraway places, or items for which there are a limited number of suppliers.

E: Refer to items which are easily available in the local markets.

5. Write short notes on the following:

Ans.

(i)Integration Management : integration management is the coordination of all elements of a project. This includes coordinating tasks, resources, stakeholders, and any other project elements, in addition to managing conflicts between different aspects of a project, making trade-offs between competing requests and evaluating resources. One example would be if a project is not on track, you may need to decide between going over budget or finishing the

project late in order to complete it. Assessing the situation and making the decision is a key part of project integration management.Integrated project management helps ensure projects are not managed in isolation. It takes into account not only how aspects of your project relate to each other but also how other parts of the organization relate to your project.

(ii)Scope Management : Scope management is the process whereby outputs, outcomes and benefits are identified, defined and controlled. Scope comprises the totality of the outputs, outcomes and benefits and the work required to produce them. It is the scope of work that is the deciding factor as to whether it will be managed as a project, programme or portfolio. The scope of a project will typically include outputs, but may be extended to cover benefits. The scope of a programme invariably covers benefits and the resulting change management. The scope of a portfolio is defined by the strategic objectives it is designed to achieve.

(iii)Communication Management : It includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information. Project managers spend most of their time communicating with team members and other project stakeholders, whether they are internal (at all organizational levels) or external to the organization. Effective communication creates a bridge between diverse stakeholders who may have different cultural and organizational backgrounds, different levels of expertise, and different perspectives and interests, which impact or have an influence upon the project execution or outcome.

(iv)Risk Management : Risk management encompasses the identification,analysis,and response to risk factor that form part of the of a business , and it is usually done with its best interest in mind.effective risk management means total control of future outcomes proactively rather than reactively. Therefore, effective risk management offers the potential to reduce both the possibility of a risk occuring and its impact.
Risk management steps :

1)Identyfy the risk.
2)Analyze the risk.
3)Rank the risk.
4)Treat the risk.
5)Monitor the risk.

(v)Human Resource Management : Human Resource Management is a management function concerned with hiring, motivating, and maintaining workforce in an organization. Human resource management deals with issues related to employees such as hiring, training, development, compensation, motivation, communication, and administration.
Function
1.Talent Acquisition/Recruitment.
2.Compensation Management.
3.Benefits Administration.
4.Training and development.

5.Performance Appraisal and Management.

6. What is the meaning of purchasing? Write the steps to grow the importance of Purchasing.

Ans. Purchasing includes market research, vendor rating, vendor standardisation, codification, value analysis,price negotiation, inventory control, budget, etc.
Duties/functions of purchase department are as follows :
1. Get receipt of purchase
2. Search and selection for suppliers
3. Analysis of product varieties
4. Get order in time
5. Disposal of excessive/surplus/scrap materials
6. Make or Buy decision - whether to buy product or make yourself

7. What will happen if you do not provide a finished product to the customer in time?

Ans. If the vendor do not provide finished product to the customer in time, then the customer will switch over to some other product because there are several competitors of that particular product which it is selling. So, it is the vendor's responsibility to ensure that it makes the product available. If it does not make products available in the market, then it would be a loss for him and it will be difficult to get customers back.

8. What is inventory management? Why it is suggested to keep inventory as slow as Possible?

Ans.
In inventory management, you have to optimize conflicting objectives and these conflicting objectives are first.
Inventory management is the concept to make a balance between the inventories and cost of purchase and to minimize conflicting objects like we don’t want to spend money in form of inventory but we want to keep inventory to fulfil customer requirement. We should have balanced approach between them.
It is suggested to keep inventory as slow as possible because if lesser is inventory then purchase cost would be less which would aim for profit for the project.

9. Write the changing concept of buyer-seller relationship.

Ans. Earlier was thought that “A supplier is dependent on buyer and he can make to perform his part of contact that way buyer desires”.

But in today, it is believed that purchasing is not simply calling vendor to supply items. In this globalised area, techno commercial activity is used.
We should have win-win situation for both buyer and seller.

10. Write in one word what we can say to changing nature of purchase.

Ans.Techno commercial activity.

11. Define Just In Time w.r.t procurement management and explain different types of Wastages.

Ans. Just in time concept is that you should **get raw material and work in process items whenever you required** i.e. not too late and not too early because if you are getting it too early it is a kind of wastage in inventory and too late you will not be able to make finished product and you will not be able to supply in market. So, it should be just in time. So, just in time is basically a **technique of reduction of waste**.

There are various types of wastage:

Overproduction

The most serious of the wastes, overproduction can cause all other types of wastes and results in excess inventory. Stocking too much of a product that goes unused has obvious costs: storage, wasted materials, and excessive capital tied up in useless inventory.

Depending, of course, on the product in question, overproduction can have very serious environmental effects. More raw materials than necessary are consumed; the product may spoil or become obsolete, which requires that it be tossed; and, if the product involves hazardous materials, more hazardous materials than necessary are wasted, resulting in extra emissions, extra costs of waste disposal, possible worker exposure, and potential environmental problems resulting from the waste itself.

Inventory

Inventory waste refers to the waste produced by unprocessed inventory. This includes the waste of storage, the waste of capital tied up in unprocessed inventory, the waste of transporting the inventory, the containers used to hold inventory, the lighting of the

storage space, etc. Moreover, having excess inventory can hide the original wastes of producing said inventory.

The environmental impacts of inventory waste are packaging, deterioration or damage to work-in-process, additional materials to replace damaged or obsolete inventory, and the energy to light—as well as either heat or cool—inventory space.

Motion

Wasteful motion is all of the motion, whether by a person or a machine, that could be minimized. If excess motion is used to add value that could have been added by less, than that margin of motion is wasted. Motion could refer to anything from a worker bending over to pick something up on the factory floor to additional wear and tear on machines, resulting in capital depreciation that must be replaced.

There are many environmental costs from excess motion. One obvious one is the needless waste of materials used to replace worn machines; another one could be the health resources for overburdened employees, who might not have needed them if motion had been minimized.

Defects

Defects refer to a product deviating from the standards of its design or from the customer’s expectation. Defective products must be replaced; they require paperwork and human labor to process it; they might potentially lose customers; the resources put into the defective product are wasted because the product is not used. Moreover, a defective product implies waste at other levels that may have led to the defect to begin with; making a more efficient production system reduces defects and increases the resources needed to address them in the first place.

Environmental costs of defects are the raw materials consumed, the defective parts of the product requiring disposal or recycling (which wastes other resources involved in repurposing it), and the extra space required and increased energy use involved in dealing with the defects.

Over-processing

Over-processing refers to any component of the process of manufacture that is unnecessary. Painting an area that will never be seen or adding features that will not be used are examples of over-processing. Essentially, it refers to adding more value than the customer requires.

The environmental impact involves the excess of parts, labor, and raw materials consumed in production. Time, energy, and emissions are wasted when they are used to produce something that is unnecessary in a product; simplification and efficiency reduce these wastes and benefit the company and the environment.

Waiting

Waiting refers to wasted time because of slowed or halted production in one step of the production chain while a previous step is completed. To take the classic example, the production line, if one task along the chain takes longer than another, than any time the employee in charge of the next task spends waiting is wasted. The task that takes more time must be made more efficient, other employees must be hired to help, or the workflow must be better coordinated or scheduled in order to make up for this wasted time.

The environmental impact comes from the wasted labor and energy from lighting, heating, or cooling during the waiting period. Additionally, material can be spoiled, and components could be damaged because of an inefficient workflow.

Transport

Transport is moving materials from one position to another. The transport itself adds no value to the product, so minimizing these costs is essential. This means having one plant closer to another in the production chain, or minimizing the costs of transportation using more efficient methods. Resources and time are used in handling material, employing staff to operate transportation, training, implement safety precautions, and using extra space. Transport can also cause the waste of waiting, as one part of the production chain must wait for material to arrive.

Environmental costs to waiting include gas emissions, transportation packaging used, possible damage to the product en route, as well as a whole host of other wastes involving transporting hazardous materials.

12. Write the objectives of scientific purchasing.

Ans. The objectives of scientific purchasing are as follows :

A. Procurement of material at competitive price.
B. maintenance of continuity in supply.
C. Ensure production of goods of better quality.
D. Suggest better substitution of materials.
E.Assist in standardisation ,variety reduction,cost reduction,etc
F. Advice on prices.

13. Why should procurement be treated as a profit centre function?

Ans. procurement should be treated as a profit centre function because to increase profit by lets say 100 rupees,you need to increase sales and increasing sales would be much much more than saving 100 rupees in purchasing. So, you should have some skillful negotiations with the vendors. If you go for skillful negotiations, then you can
save a lot in purchasing and that is how you can make purchasing as a profit centre purchasing and capital release.

14. What is the role of transportation mode?

Ans. The role of transportation mode plays an important role in purchasing, because it **affects the lead tim**e i.e. the time between placing the order and receiving the order.
It also affects the **freight charges** and total **efficiency** of the purchase department.

15. Write the policies or principles that we should follow while buying products.

Ans. Policies in general principles are as follows :
1. Bidding : Firm bidding vs loose bidding
a. Firm bidding : submission of final offer by perspective source (change of price/revision is not possible)
b. Loose bidding : possible to revise price by vendor
2. Speculative buying : buy least cost materials
3. Cooperative buying : sale of goods to employees, eg. Sale of shirt in low price to employees

16. Write the advantages and disadvantages of centralized and decentralized purchasing.

Ans.Advantages of Centralized Purchasing

1) As the duplication of efforts in buying function is eliminated, its cost will be relatively less and it will be managed efficiently.

2) The Manager of manufacturing departments, departmental heads and office managers are relieved from the responsibility of purchasing their own requirements. They can concentrate in their assigned areas of activities in a better way.

3) It is possible to tap the advantage of the specialized skill of the buying staff.

4) Bulk buying strengthens the bargaining position of the buyer. Moreover, the advantage of the quantity discount can be tapped. Direct contact with the suppliers will be possible which will eliminate the link of the intermediaries

5) It enables to develop and maintain good relations with the suppliers. Moreover, it facilitates the supplier to maintain relations with few buyers and thus it enables him to pass over some benefits on buyers.

6) It will enable the purchase of standardized items through standardized procedure.

7) It will reduce the inventory carrying costs. The minimum level of inventory is not maintained at different centers but at centralized center which reduce investments in inventories along with the other incidental storing costs. The central buying staff manages the stock levels, recording material usage, lead time and prices effectively.

8) The receiving of large supply through consolidated orders reduces the transport cost per unit.

9) The cost of order processing such as order placing, receiving, inspection, accounts etc are reduced substantially due to few orders of large quantities

10) As the responsibility center is fixed on one departmental head, the shifting of responsibility for wrong decisions is eliminated.

11) The inter-section requirements of the materials can be easily adjusted. Scarce materials can be allocated according to the economic advantage.

Disadvantages of Centralized Purchasing

The centralized purchasing suffers from the following limitations:

1) The specific requirements of the individual items may not be attended successfully. At times, it may result in absence of matching of mind between the needy section and the buying section resulting in wrong buying

2) The centralized standard procedure may result in delays in receiving the materials.

3) It is likely that the centralized buying staff may not be expert in buying varied types of items.

4) In case of multi-plant units located at distant places and receiving their requirements from centralized storing, it may not be possible to tap the local resources. However, this situation can be handled effectively authorizing the regional purchase agent to make local purchases if they involve cost advantage.

5) It adversely affects the employee morale. It can be concluded that the company should centralize all policy matters, the purchase of major raw materials and capital equipment should be made by the head office, while the individual divisions should be allowed to make their own purchases in accordance with the policies established by central office. If the company adopts the “profit centre decentralized” set up the decentralized should be made accordingly.

Advantages of Decentralized Purchasing

- Materials can be purchased by each department locally as and when required.
- Materials are purchased in right quantity of right quality for each department easily.
- No heavy investment is required initially. Purchase orders can be placed quickly.
- The replacement of defective materials takes little time.

Disadvantages of Decentralized Purchasing

- Organization losses the benefit of a bulk purchase.
- Specialized knowledge may be lacking in purchasing staff.
- There is a chance of over and under-purchasing of materials.
- Fewer chances of effective control of materials.
- Lack of proper co-operation and co-ordination among various departments.

17. Differentiate between centralized and decentralized purchasing.

Ans.

Decentralised purchasing	Centralised purchasing
1.control on buying is exercised effectively.	1.Effective control is not possible.
2.Economy in large scale purchase is	2. Large scale benefit is not possible.

possible.	
3.Better terms on purchase are availbale.	3.Burgaining power is very slow.
4.standrard material are purchased.	4.quality of the material ois questionable.
5.Uniformity in ourchase ius follow.	5. Lot of difference in purchase
6.Less finance is enough	6.more finance is enough.

18. Define firm bidding and loose bidding and state the difference between them.

Ans. Firm bidding : submission of final offer by perspective source (change of price/revision is not possible)
Loose bidding : possible to revise price by vendor

firm bidding	loose bidding
submission of the final offer.there is no chance for revise	submission of the final offer.there is chance for revise
vendors price for a material can not be change	vendors price for a material can be change

19. What do you mean by reciprocity in buying?

Ans. Reciprocity in buying are the situations where you are buying a raw material from different firms and your finished product is bought by those firms
Eg. you have obtained material from different 2-3 vendors and your final product is furniture. So, those people will also buy your product.

20. Define cooperative buying and speculative buying.

Ans. **Cooperative buying :** When a group of 2-3 organizations comes together and all of them are buying from one particular vendor. You are just clubbing your requirements and buying products from different sellers.
Speculative buying : purchase of goods from own employees. I.e. businesses in which the raw materials and components come from their employees.It is the least cost product.

21. What is meant by co-operative type of purchasing?

Ans. A cooperative type of system is in which the products produced by the company are sold to their own employees at a somewhat cheaper rate.
Eg. Let us say the product is a textile product and let us say the shirt is a product .So, the final product is a shirt.
Now we can have a cooperative type of system in which the shirts would be sold to your employees at somewhat cheaper rates. So, that is known as a cooperative type of purchasing.
I.e. **Sale of goods to employees**.

22. Briefly describe Ethics in buying.

Ans. Ethics may be defined as little finest complication of dos and ought to result from conflict of mind as to what a person is tempted to do and what he not to do.
Word ethic means character or conduct is that branch of philosophy which deals with rightness or wrongness, goodness or badness of human conduct.
Project manager has to be honest. He should follow latest purchase management practices.
Ethics in buying include :

A. Character/conduct of purchase manager
B. Difference between right and wrong, do's and don'ts

23. What is meant by unethical practice facts?

Ans. Unethical practice facts include facts that involves unethical practices.
These includes :

A. Vendor giving wrong estimates of requirement
B. Buyer may give false assurance that he will buy more product in near future if he sells in low price now
C. Buyer disclosing prices of different vendors to one vendor
D. Buyer making payment after the mature date
E. Buyer cancelling orders, demanding for low price, demanding to deliver in new areas
F. Unnecessary transport charges
G. Discrepancy in quantity/ consignment
H. Buyer ask for samples and estimates , but don't give order for purchasing, and donot pay for the sample

24. Define improprieties of bids.

Ans. The improprieties of bids include :

A. Not allowing any vendor to re change his quotes.
B. Once the last date of bidding is over that is over, not allowing any vendor to submit bid after closing date.

C. Buyer should not disclose prices of different vendors to one particular vendor.
D. Buyer should not make payment late, i.e. after fixed particular date.

25. How to develop work at the cost of a vendor?

Ans. many times a buyer get some designs, some drawings made from one particular vendor, so that vendor has done all those things for him, but they dont give order to him.This is called development work at the cost of a vendor.

26. What does a supplier want from the buyer?

Ans. Suppliers need :
1. Long term business relationship
2. Timely payment
3. Sharing of information of future plans
4. Non cancellation of orders without valid reasons
5. Avoidance of forced price reductions, harassments etc.

27. How to close down a particular project?

Ans. The project shall be closed keeping in mind of the following things :

A. Finishing the work- the team members should finish the current project before trying to think about a new project.

So, they should not lose focus on a particular project towards the end.
It is the responsibility of the manager to ensure that the team members do not lose focus.

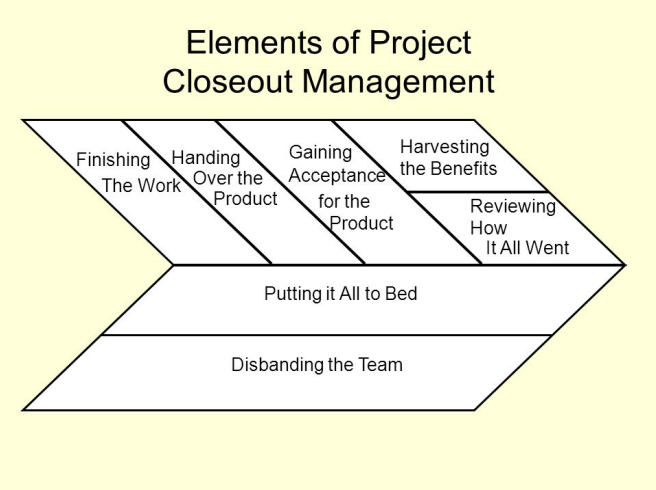
B. Handing over the product to the client: The product should be handed over to the client properly along with the charts, drawings, technical aspects etc.

So, handing over the product, any acceptance of the product, harvesting the benefits, reviewing how it all went, putting it to all bed and disbanding the team.

28. Briefly describe the methods of project termination.

Ans. Project is temporary organization
So, various methods of project termination are :
1. Extinction - project stopped either due to successful or unsuccessful conclusion
2. Addition - successful project added to organisation's structure
3. Integration - project members leave project, go back to parent department after project is completed successfully
4. Starvation - not completing project due to budget or other reasons

29. What are the different elements of a project closeout management? Explain briefly.
Ans. Elements of project close out management are as folllows :



1. Finishing the work : towards end, not losing focus while thinking of new project
2. Handing over product to client : transfer details, drawings, designs,technical aspects/support
3. Gaining acceptance for the product : acceptance from clients
4. Harvesting benefits : solve problems, increase productivity, higher market share or profit etc.
5. Reviewing : profit giving, useful or not
6. Putting all to bed : information to client , man power, legal issues handing to client
7. Disbanding the team : process of disbanding the project team , can be formal or informal

30. Write the top three knowledge areas of a project as per your view and explain why.

Ans. top three knowledge areas of project are : -

- Time management.
- Cost management.
- Risk management.

Time management

Time management" is the process of organizing and planning how to divide your time between specific activities. Good time management enables you to work smarter – not harder – so that you get more done in less time, even when time is tight and pressures are high. Failing to manage your time damages your effectiveness and causes stress.

Cost management

Cost management is the process of estimating, allocating, and controlling the costs in a project. It allows a business to predict coming expenses in order to reduce the chances of it going over budget. Projected costs are calculated during the planning phase of a project and must be approved before work begins. As the project plan is executed, expenses are documented and tracked so things stay within the cost management plan. Once the project is completed, predicted costs vs. actual costs are compared, providing benchmarks for future cost management plans and project budgets.

Risk management

risk management refers to the practice of identifying potential risks in advance, analyzing them and taking precautionary steps to reduce/curb the risk. When an entity makes an investment decision, it exposes itself to a number of financial risks. The quantum of such risks depends on the type of financial instrument. These financial risks might be in the form of high inflation, volatility in capital markets, recession, bankruptcy, etc.