Trainer's Guide to Question Pattern

Brief introduction to the topics

Production Management:

The subject of production management primarily focuses on the tools of lean and then supply chain management . While the focus is to make sure that the principles of flow are applied to production process, certain aspects are mandatory . The ZED model is for 25 Manufacturing sectors and care should be taken that only focus on automobile supply chain may not serve the purpose. The sixteen parameters that make up this subject should be taught in a cohesive manner . This should lead to better operations management practise . Please make it clear that using tools of lean on the shop floor should not interpreted as lean management. If the correct number of lean tools are applied there should be a clear understanding of how they will enhance the output of the manufacturing operation and impact bottom line . The concept on lean production should be carefully explained and then focus on what the tools say . The parameters are mainly tools of lean.

How to begin planning for timely delivery should be covered systematically.

The reason for TPM and how OEE can be useful need to be explained . Do not miss the opportunity to explain how these two methods can be over used and then become ineffective . Always explain the pitfalls of tools.

Quality Management:

We are not teaching any quality standard. The focus of the parameters is to make sure that process capability and process validation are well understood as core quality concept within the organisation. A brief treatise on process control is a good starting point . What we are aiming is that the organisation have process in place which point to where the scope of quality improvements exists. The in process quality to quality at customer end, explain how the gaps arise and what needs to be done .

There 8 Parameters in this subject and outcome parameters should be tied to the quality parameters.

However scrap is an outcome parameter and measuring it is mandatory in most of the manufacturing sectors. Explain why it is different from in process rejection.

Environment Management:

The second important part of ZED model is focus on environment. The system for selection of technology and system for abatement of emission & wastes is the focus in this subject. The focus should be on trying to explain what the environment management system should consist of instead of trying to explain the technology and equipment required the achieve the levels as stipulated by the legislation.

Then focus on how to run these systems without breakdown because if the equipment breaks down the factory will be brought to standstill. Tie up all the parameters together so that environment management is properly understood as a system of selection , use and maintenance of all the equipment that make up the abatement process. Avoid explaining the legislation , acts etc.

Design Management:

It is quite possible that many SMEs will not have a full blown design department. But it is a must that they do have some system of managing their technical inputs or any technical improvements that they make. Rather this is also not a mandatory parameter . Explain how if a company has access to any design outsource centre or even the design department of its customer it will need to have a robust process of managing all the updates etc.

This subject doesn't tell you what design management should be doing but only tells you that a process of design management should be in place even if you can't do any designing in house.

Natural Resources Management:

Most of the MSMEs will be using one form of natural resource or other . To focus on proper identification and consistent reduction of use of natural resources is what should be focused upon. With the constant and sharp focus of end customers on use of natural resources this is a big non-tariff barrier for major markets. The customer may not explicitly ask you to reduce the consumption of natural resources but will definitely appreciate any such move. More over a lesser use means more efficient process and lower cost of operation.

Management usually begins with identification , quantifying and setting targets for reduction. Even a method of proper storage and handling of natural resources can also be beneficial.

Discuss and extend the awareness of natural resource management.

There are only two parameters.

Human Resource Management:

There are three parameters in this subject. However people development and involvement will always remain a key element in manufacturing . While in production we have repeatedly focused on how shop floors improvements are beneficial , it the people who do it there. Managers should NOT be the only source of pushing ideas and improvements in an organisation.

However the key focus on people development in manufacturing department is to have a labour linearity . This will allow the labour cost to be in line with increasing production or decrease with reduced production levels .

TEI is also a motivation tool. Just filling in Kaizen sheets is not the only topic of TEI . Employees could also make local decisions that impact their ability to do their job well. This makes people think.

Intellectual Property Management:

The aim of this subject, that has four parameters, is to bring about awareness of how IPR gets created within an organisation and systematic focus could create a competitive edge.

But bring to focus how the use of other's IPR could be damaging to business and awareness of IPR within a company could also been avoiding a lot of legal issues that could crop up by total ignorance on the subject . While on one side it can protect your creative property on the other even guide to stay clear of any breach.

Energy Management:

The focus of this subject which has three parameters is to help reduce energy consumption. It is often better to approach this subject from a simple but straight steps of energy management.

This is often the low hanging fruit when working with any MSME . However we only mention a presence of a process . It is worth the while if you can discuss the steps to effective energy management.

Safety Management:

Safety management is managing business activities and applying principles, framework, processes to help prevent accidents, injuries and to minimise other risk.

A safety management system is a systematic approach to managing safety, including organisational structures, accountabilities, policies and procedures.

The universally accepted framework for SMS includes four main components and twelve elements, representing the minimum requirements for an SMS. They are:

- Safety policy and objectives
    - Management commitment and responsibility
    - Safety accountabilities
    - Appointment of key safety personnel
    - SMS implementation
    - Contractors/third party interfaces
    - Coordination of emergency response planning
    - SMS documentation
- Safety risk management
    - Hazard identification
    - Risk assessment and mitigation
- Safety assurance
    - Safety performance monitoring and measurement
    - Internal safety investigation
    - The management of change
    - Continuous improvement of the SMS
- Safety promotion
    - Training and education
    - Safety communication

The subject had just two parameters but take enough time to explain how does safety get inbuilt into a company's culture and system.

Performance Management:

Probably the most important of all subjects. One of the key promises that we are making is that ZED shall improve company performance. If all the improvements really work they should result in performance improvement figures of a company.

All three of the parameters are financial parameters . As with all financial figures we should have the ability to look at all figures simultaneously to derive the correct performance understanding .

Usually the two most important figures are absolute and relative figures of performance. So just looking at the three parameters may not be enough.

Tie all together to develop a ROI and Profit relationship with the three parameters . Explain how the calculations allow for massaging the figures and where to look if it is so.

However make sure you teach how these figures show correct trends and if the upward trends actually mean an improved performance .

Simplify the use of these parameters so they can be used more frequently than the usual twice a year. If possible explain how we can use financial performance parameters monthly.

If the use of ZED parameters does not result in increase of overall company performance of the company the cause has to be investigated.

Make sure all this is covered while teaching this subject.

Sample questions

Production Management

Which of the following is NOT an area of waste identified by Toyota?

A. Motion

B. Waiting time

C. Over-production

D. Over-staffing

The lean approach to people management has also been called the:

A. Multi-skills system
B. Employee-comes-first system
C. People empowerment system
D. Respect-for-humans system

Which TQM technique is used under lean manufacturing?

A. VSM
B. 5S
C. Quality circles
D. Six sigma

Quality Management

Which of the following are key components of a Total Quality Management system?

A. Individual responsibility, incremental improvement, use of raw data
B. Collective responsibility, continual improvement, use of raw data
C. Group responsibility, staged improvement, knowledge

D. Involves everyone, continual improvement, use of data and knowledge

What is the aim of fool proofing technique used for total quality management?

A. to achieve zero defects
B. to specify time schedules
C. to specify targets
D. none of the above

What is quality assurance?

A. Quality assurance deals with activities which prove that products and services meet the required quality standard.
B. Quality assurance deals with activities which aim at customers satisfaction
C. Quality assurance deals with controlling the quality of products by inspection
D. All of the above

Environment Management

The three R's to save the environment are

A. Reserve, Reduce, Recycle
B. Reuse, Reserve, Reduce
C. Reserve, Reuse, Reduce
D. Reduce, Recycle, Reuse.

The concept of sustainable development encourages

A. Form of growth that meets current basic needs
B. Preservation of the resources for the need of future generation
C. A change in all respects of life
D. Growth to meet current needs, preservation for the needs of future and change in all respects of life

An exhaustible renewable resource is

A. Coal
B. Solar energy
C. Fresh water
D. Petroleum

IPR Management

IPR are creations of

A. Nature
B. Humans
C. Chemical reaction

D. Geographical features

Which of the following constitute an important consideration for grant of patent for an invention

A. Exclusivity
B. Novelty
C. Disclosure
D. Process complexity

Which of the following is not covered in India under the Intellectual Property law

A. Geographical feature
B. Patent
C. Trade secret
D. Copyright

Human Resource Management

Which HRM practice involves, manner in which an organization sets goals, plans performance, provides ongoing coaching, and evaluates performance of employees

A. Planning and Appraisal
B. Team Development
C. Individual Development
D. Career Path

Objectives of training is

A. Increased morale
B. Increased productivity
C. Favourable reaction to change
D .All of the above

On the Job Training Methods is based on

A. Demonstration Method
B. Apprenticeship Training Method
C. Informal Training
D. All of the above

Energy Management

The energy strategies of companies have the principle of

A. restoring and preserving the environment
B. reducing wastes and pollutants
C. educating the people about energy conservation
D. all of these

E. none of these

The main objective of energy management is to

A. Minimize energy cost
B. Minimum environmental effects
C. Maintain optimum energy procurement and utilization
D. Only A and B
E. All of these

Which one is the key element for successful Energy Management?

A. Top management support
B. Planning
C. Monitoring
D. Training

An exhaustible renewable resource is

E. Coal
F. Solar energy
G. Fresh water
H. Petroleum

Performance Management

What are the two important measures for company performance

A. Profit and Turnover
B. Net Profit and Turnover
C. Profit and Return on Investment
D. Product Margin and Turnover

If the net profit of a company is growing year on year

A. Company is doing very well
B. Company is growing
C. Overall company performance is good
D. Can't say for sure that company is doing well

Can a company which is growing very fast and has a good profit go bankrupt

A. Yes
B. No.
C. Maybe
D. Need Analysis

Natural Resources Management

The management of natural resources should take into

A. A long term perspective
B. Environmental pollution
C. Their equitable distribution
D. (a), (b), (c) and safe disposal of wastes

Planned management of natural resources is

A. Not possible
B. Not easy
C. called conservation
D. Called depletion

The natural resources which are continuously consumed by man but are replenished by nature with a reasonable period of time is called

A. Exhaustible
B. Inexhaustible
C. Exhaustible renewable
D. Exhaustible non-renewable

Safety Management

Industrial safety management if that branch of management which is concerned with _____ hazards from the industries.

A. Reducing
B. Controlling
C. Eliminating
D. All of the above

The following is indirect cost of accident

A. Money paid for treatment of worker
B. Compensation paid to worker
C. Cost of lost time of injured worker
D. All of the above

The primary purpose of employee safety programme is to preserve the employees'

A. mental health
B. physical health
C. emotional health

D. All of the above

Design Management

If a company does not have its own R & D department but subcontracts the designing process, can it select the parameter for getting certified

A. Yes
B. No.
C. Maybe
D. Under special conditions yes

The process of design management looks into

A. Product & Process Design
B. How to manage the designs that we have
C. Ways to avoid mistakes
D. None of the above

Which of these techniques is not used for product design & development

A. FMEA
B. QFD
C. Taguchi Method
D. Heijunka