

**Time Allowed 2 hrs 30**

**Max Marks: 50**

Roll No. \_\_\_\_\_

*Instruction:* Students are required to write *Roll No.* on every page of the question Paper, writing anything except the *Roll No.* will be treated as *Unfair Means*. In case of rough work, please use last page of answer booklet.

Word Limit for Section – A i.e Question – 1 each stage to be defined in not exceeding 200 words.

**Section A**

**Attempt any 3 questions out of 5**

**3\*5 Marks = 15**

Q1. How many stages are there in ERP Implementation? Give brief explanation of each stage.

Q2. Define Backward Scheduling & Forward Scheduling with examples

Q3. Discuss the most common type of architecture used in ERP?

Q4. Define Order – to – Cash or Procure – to – Pay with complete process flow. We would use which module to perform them?

Q5. What do you understand by Pre-sales activities and its impact on the final sales?

**Attempt any 2 questions out of 3**

**2\*10 Marks = 20**

Q1. What do we understand by BPR? Why do we require BPR for ERP Implementation in an organisation?

Q2. Why do organisations need to perform need analysis for an ERP system?

Q3. What does a Manager need to know about an ERP System? How does it help them in day to day activities?

**Section-C**

**Compulsory case Study**

**15 Marks**

Q1. Explain the benefits of implementing the ERP solution at TISCO.

Q2. How much did the company spend in SAP implementation on the project? Did they manage to save any money & how much was it?

Q3. What was the work force cost before the implementation and what was the cost of Manpower after the implementation per ton, is that a benefit to the company or to the work force. Any other cost got affected due to the Implementation.

Q4. Why is it challenging to implement an ERP system in any organisation, specifically if the organisation is very big and spread across the globe?

*(Each answer should not exceed 200 words.)*

Turn Over.....

## **TISCO rolls steel power with SAP technology**

*SAP enables seamless remodeling of Tata Steel from product-driven to a customer-driven enterprise of the Internet economy*

*"Implementing any ERP system is a challenge for an organization because of the declining success rate of ERP implementations world-wide. The challenge is compounded if the ERP provider is a world leader - SAP"*

*"Post the introduction of the SAP solution, the results have been terrific. The company has spent close to Rs 40 crore on SAP implementation, and has already saved Rs 33 crore"*

Tata Iron and Steel Company Ltd., is Asia's first and India's largest integrated private sector steel company. It has a state-of-the-art 3.5 million tonne steel plant and is capable of meeting the most rigorous demands of its customers worldwide. Turnover of Tata Steel was about Rs 69 billion in 1999.

Tata Steel has adopted ERP technology to take a lead in the competitive steel industry and through constant learning, innovation and refinement of its business operations, has transited seamlessly from a production-driven company to a customer-driven one. The existing technology was a simple replication of the manual system. Not only did it operate as individual islands of information but the technology had outlived its lifetime and was completely obsolete. The employees and management at Tata Steel faced a cumbersome task exchanging and retrieving information from the system. Further the reliability of information obtained was questionable because of inconsistency and duplication of data from different departments. Also there was no built-in integrity check for various data sources. Besides, several times the information against certain items was found missing.

In 1998-99 a small cross-functional in-house team along with consultants from Arthur D. Little (Strategy Consultants) and IBM Global Services (BPR Consultants) re-designed the two-core business processes, Order Generation & Fulfillment and the Marketing Development processes, to improve customer focus facilitating better credit control and reduction of stocks. In keeping with this commitment it adopted the latest production and business practices to offer innovative processes that meet the changing demands of its global and local customers.

Responding to changing customer needs started as early as 1999, with a study on cost competitiveness and a formal business planning, followed by ISO 9002 certification and benchmarking initiatives. Realising the need to further support the re-engineered core processes and quickly aligns the business processes to radical changes in the market place, TISCO decided to go for a new robust solution.

### Choosing the platform and technology

The management at Tata Steel wanted the software to seamlessly integrate with its existing information system and further provide compatibility with its future implementations. After an in-depth study of functionality, cost, time, compatibility, esteem, operability, support and future organizational requirements was done, SAP topped the list of contenders.

The implementation of SAP software was associated with certain strategic goals in mind. With this implementation, TISCO wanted to bring forth a culture of continuous learning and change. This would enable TISCO to achieve a world-class status for its products and services and strengthen its leadership position in the industry. Besides this, TISCO also wanted the software to result in quick decision-making, transparency and credibility of data and improve responsiveness to customers across all areas.

Adds Mr. B Muthuraman, MD (Designate), Tata Steel, "Implementing any ERP system is a challenge for an organization because of the declining success rate of ERP implementations world-wide. The challenge is compounded if the ERP provider is a world leader - SAP. At Tata Steel, however the challenge for us did not lie in successfully implementing SAP or in rolling it out to our 46 odd geographic locations across the country under a big bang approach in just eight months.

Turn Over.....

The challenge lay ahead in building a conducive environment such that SAP was embedded in the hearts and minds of the people and the customers of Tata Steel, for we all looked forward to knowledge-based, successful organization. It is inspiring to know that our TEAM ASSET with support from Pricewaterhouse Coopers and SAP successfully lived up to our axiom and truly demonstrated leadership skills by going live across 46 locations within a record time frame of eight months."

#### Mapping technology to business processes

The path was set to achieve success through SAP. All the branches, which had huge numbers of transactions and complexity, were identified as a HUB while the smaller branches along with the consignment agents were defined as SPOKES which were attached to these branches. In January 99 the team from TISCO was decided and christened 'TEAM ASSET' an acronym for Achieve Success through SAP Enabled Transformation. The TEAM ASSET had two simple axioms:

Go-Live date - 1st November 1999

There are only 24 hours a day

Preparatory task forces activities were conducted and core business processes were mapped to SAP modules. Also another parallel activity called 'Change Management' was initiated within the company. The prime objective of 'Change Management' was to reach out to people involved non-directly in the project to apprise them of the developments taking place. "We wanted that Tata Steel be the number one in the steel industry... we wanted to be the first to have the latest systems..." said Mr. Sandipan Chakravorty, GM (Sales), TISCO.

Tata Steel planned a big-bang approach of going live with all the modules at the same time, in just a span of eight months. Driven against the speed of time, the pace of implementation was fast with all activities backed by a lot of thought process and meticulous planning. On 1st November 1999 Tata Steel pulled off a big bang implementation of all SAP modules at one go across 46 countrywide locations, as per the set deadline.

#### The Result

The introduction of SAP solutions within Tata Steel has led to efficient business processes, enhanced customer service, reduced costs, improved productivity, accelerated transaction time, workflow management and reduction in the number of credit management errors.

"Post the introduction of the SAP solution, the results have been terrific. The company has spent close to Rs 40 crore on SAP implementation, and has already saved Rs 33 crore," said Mr. Ramesh C. Nadrajog, Vice President (Finance). The manpower cost has reduced from over \$ 200 per ton two years ago, to about \$140 per ton in 2000. The overdue outstanding has been brought down from Rs 5170 millions in 1999 to Rs 4033 millions by June 2000. The inventory carrying cost has drastically deflated from Rs 190 per ton to Rs 155 per ton. To add to this, there have been significant costs savings through management of resources with the implementation of SAP.

With SAP's solution Tata Steel can now update their customers on a daily basis and provide seamless services across the country improving customer management. The availability of online information has facilitated quicker and reliable trend analysis for efficient decision-making. Besides the streamlined business process reduces the levels of legacy system and also provides consistent business practices across locations and excellent audit trail of all transactions. "Now I shudder to think how we were functioning so many years without a world-renowned ERP system. Along with the hard times we had, came the rewards of the success of implementation," remarked Mr. K. V. Srinivasan, Member, Team ASSET at TISCO.