

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MBA– SEMESTER –II-EXAMINATION – WINTER-2023**

**Subject Code:1529303****Date: 16-01-2024****Subject Name: Global Operations Management****Time:02:30 PM TO 05:30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q. No.	Question Text and Description	Marks
Q.1	Definitions / terms / explanations / short questions based on concepts of theory/practical (a) TQM (b) MRP (c) ERP (d) Supply chain sustainability (e) Aggregate Planning (f) Master Production Schedule (g) Statistical Process Control	14
Q.2	(a) Explain the trends and challenges faced by operations management	07
	(b) Write a note on International Quality Standards applicable to global operations management	07
	<b>OR</b>	
	(b) “Plant layout refers to the arrangement of machinery, equipment and other industrial facility for achieving quickest and smooth production”. In the light of this statement, explain different types of layout with examples	07
Q.3	(a) Bring out the difference between PERT and CPM	07
	(b) There are key differences between level strategy and chase strategy in Aggregate Production Planning” Discuss	07
	<b>OR</b>	
Q.3	(a) “Project control should always focus on the critical path”---Critically examine the statement	07
	(b) “There are different elements of JIT manufacturing system”. In the light of this statement, explain different elements of JIT	07
Q.4	(a) Explain the implications of learning curves in manufacturing as well as services?	07
	(b) “JIT can not only be implemented in manufacturing organizations but also in service organizations” In the light of this statement, explain how JIT can be implemented in service organizations	07
	<b>OR</b>	
Q.4	(a) Explain the different types of maintenance	07
	(b) “A Kanban system is a means to achieve Just-in-time (JIT) production” In the light of this statement, explain how kanban system works	07

Location of a plant has direct relevance to raw materials, market, human resources, civic amenities transportation etc. However, in some countries the problem becomes complicated due to (i) Inter-State competitions and tussles, (ii) Regional development and (iii) Political pressures and biased decision.

Around 1970, Government of India mooted the idea of expanding steel production under public sector units to be established at suitable locations. A committee of eminent personalities was formed to go through claims of (i) Vijaynagar Steel plant near Bellary in Karnataka, (ii) Salem Steel in TN and (iii) Vishakhapatnam steel plant in A.P. Since it was under PSU, the political pressure was going on and if it was under private sector, there would not have been any kind of political pressure.

The most important raw materials for steel plant are iron core power and coal. Again in iron ore the iron percentage should be preferably more than 60% and ash content in coal should be less than 30%. These factors enable production of iron and steel at competitive price. From experts' reports, the following brief was available:

(a) Vizag – The Iron ore is rich with 65% Iron and coal can be arranged from MP and Bihar and Vizag is well connected by broad gauge railway line to all important cities and the place has sea port and airport. Hence this place has more natural advantage than other cities.

(b) Salem – Iron ore was having 60 to 65%. Iron content and hence be economically exploited. The coal is in lignite form which is low quality coal. Hence this needs to be converted as coke for use. The place has broad gauge line and Madras sea port and airport are nearby. This place was considered second preference.

(c) Vijaynagar – Bellary belt has Iron ore of 60% iron but coal has to come from AP (Singareni Colliery). The place had meter gauge railway line and hence not well connected to all India network.

The seaport and airports were far away and hence this place was not found suitable.

As per the expert committee report, steel plant work started Vizag and Salem and these plants came up as per the plan and are doing well. However, to everyone's surprise, the then PM, Smt. Indira Gandhi did foundation stone laying in 1971 at Toranagallu in Bellary district for Vijaynagar steel plant also. This ultimately proved to be an election gimmick to please the votes though the PSU unit did not come up there at all. This is a clear example how politicians try to fool gullible voters by way of inaugurations/foundation stone laying.

The expert committee had made comment on Vijaynagar proposal that the unit can be viable if it uses latest foreign technology. In this method, oxygen is injected to force oxidation of ores instead of natural air. Though PSU was not started a private enterprise, Jinal Group took interest and applied for license to the Central Government. By the year 1990, they obtained license and Vijaynagar Steel plant with foreign technology and decided to make only sheet products which fetch higher prices. They also kept bare minimum workforce and executives to make it economical right from inception. By this time, broad gaugelines were formed and nearest seaport was Goa and hence some problems were taken care. This unit became operative in about 3 years and is also running profitably.

- (a) What are essential factors for locating a Steel plant and why? **07**
- (b) Explain how political pressures and pulls effect decision making and delays in starting industries. **07**

**OR**

- (a) Explain how it was possible to make Vijaynagar plant visible **07**
- (b) Technology, HR, natural facilities play vital role to start new enterprise. Explain your views. **07**

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