

B.E. (Met.) Part – IV 7th Semester Final Examination, 2013
Industrial Management
(ME-706)

Time : 3 hours

Full Marks : 70

Use separate answer script for each half.
Answer SIX questions, taking THREE from each half.
For First Half question 1 is compulsory and any two from 2 to 5.
The questions are of equal value.

FIRST HALF

1. Ford Motor Company has a long history of operating in Europe. Starting with exports to the United Kingdom in 1903, the company established sales branches in France and England in 1908 and 1909. Later assembly plants were set up in those countries. In Germany, Ford established a plant in 1926. For several decades, the European operations were separate subsidiaries, each being accountable to the headquarters in the United States with little coordination among them. The rationale for the organization structure was that each country's customers have different needs, tastes and preferences. In addition, each country had its own tariff regulations.
As the European countries grew closer together, Ford viewed its European operation as a common market with a regional organization named Ford Europe with two big manufacturing facilities in Germany and England. But now, the companies in the European countries were not anymore considered separate and independent, but operated with a coordinated strategy. The aim was to achieve economies of scale and to reduce engineering costs. Ford designed similar cars for Europe, instead of designing different ones for each country. Models such as Fiesta, Capri and Escort were the results of this new organization structure. According to the new strategy, products were largely designed in the UK and Germany and manufactured in those countries as well as in Belgium and Spain.
In 1994, a new strategy emerged that was named Ford 2000. In 1995, Ford merged its Automotive Operating in North America with that of Europe. Again an important reason was to be more competitive and cost reduction through the elimination of unnecessary car platform and engine duplication. This meant fewer basic vehicle platforms as well as engines and transmissions. Moreover, the regional profit centre concept was replaced by product line concentration. Specially, the Ford Automotive Operation consisted of five vehicle centres with worldwide development for cars and trucks. While four of those centres were in North America, the European centre was responsible for developing small and midsize automobiles. Moreover, the North American centre worked together with the Europeans to develop Mondeo, which was called the Mercury Mystique and the Ford Contour, produced in the U.S.A. and Mexico. These models were sold in some 78 countries.
But the Ford 2000 strategy and organization did not work well as shown by the 1998 performance specially in Europe where Ford was losing market share to competitors such as General Motors and Volkswagen. Consequently, the newly elected Jacques Nasser reviewed the Centralized Ford 2000 strategy and reintroduced the market focus that gives more autonomy to the regions especially in Europe where many of its

competitors introduced brand that addressed the needs of its customers. Nasser also created the Premier Auto Group for luxury cars that were more profitable than the low and mid priced cars. This luxury car division consisted of cars such as Lincoln, Volvo, Jaguar and Aston Martin.

The 21st century brings new challenges for Ford. In the past, European carmakers were protected by quotas on Japanese cars. But these restrictions are going to be reduced or eliminated in the new century. This means that Japanese and Korean car manufacturer will market their cars in Europe. Also the introduction of the European currency will enable customers to compare prices across borders and select the best price. Finally, the global car industry is plagued with overcapacity that may result in fierce competition. Ford may have to review its current strategy.

- a) What are the advantages and disadvantages of centralization and decentralization?
 - b) What was the rationale for the Ford 2000 program?
 - c) Why did Ford change from decentralization to centralization to recentralization?
 - d) Why did Ford establish a luxury car division?
 - e) Do you think Ford will be in the competitive global market? Why or why not?
2. a) What do you mean by Management? What is Managerial Skill? Show the Managerial Skill in organizational hierarchy.
- b) What is planning? Write the purpose of planning and explain. What are the steps involved in it?
3. a) What is element? Why the work content is divided into elements, State the general rules to be followed while breaking the job into element.
- b) Prepare flow process chart for steel making in steel industries.
4. a) Explain in brief the basic procedure of Method Study.
- b) Describe the nature and importance of management in Modern Business Organization.
5. a) What is rating? What is relaxing allowances, give example.
- b) Why do management analysis and practice required a system approach? Do manager operate in an open or closed system? Explain.

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SECOND HALF

Use separate answerscript for each half.

Answer any three questions

The questions are of equal value.

6. There are three potential sites and five relevant factors like transportation costs per week, labour costs per week, finishing material supply, maintenance facilities and community attitude. The costs are in rupees whereas for last three factors, points are assigned on 0 – 100 scale. The data are given below:

Potential Sites

Factors	S1	S2	S3
Transportation cost/ week F1	800	640	500
Labour cost/ week F2	1180	1020	1240
Finishing Material supply F3	30	80	70
Maintenance Facilities F4	60	20	30
Community Attitude F5	50	80	70

The location analyst has pre – established weights for various factors. This includes a standard of 1.0 for each Rs 10 a week of economic advantage. Other weights applicable are 2.0 on finishing material supply, 0.5 on maintenance facilities and 2.5 on community attitude. Also the organization prescribes a minimum acceptable score of 30 for maintenance facilities. Select a suitable site based on the above given data.

7. Write short notes on:

- i) Product or Line Layout
- ii) Combination Layout

8. (a) What is ABC Inventory Control system?

(b) The rate of use of a particular raw material from stores is 20 units per year. The cost of placing and receiving an order is Rs 40. The cost of each unit is 100. The cost of carrying inventory in percent per year is 0.16 and depends upon the average stock. Determine the economic order quantity. If the lead time is 3 months, calculate reorder point.

9. (a) Name 7 Quality control tools.

(b) In a glass factory thickness of glass is measured in mm by taking 5 samples from a lot of 100 and 6 lots are checked. The observations are as follows. Draw X Bar R chart and interpret the results. $A_2 = 0.577$, $D_3=0$ and $D_4= 2.114$

Lot	1	2	3	4	5	6
Sample No. 1	7	6	8	5	4	2
Do	2	8	5	7	4	3
Do	3	5	4	5	3	1
Do	4	4	3	2	3	5
Do	5	6	1	4	2	6

10.(a) Discuss the term Reliability.

(b) Following is the data available on the failures of 10 identical special purpose bulbs being used at a plant.

Time in month	Failure Probability
1	Nil
2	Nil
3	Nil
4	0.05
5	0.15
6	0.30
7	0.25
8	0.15
9	0.10

The cost of replacing bulbs individually, when they fail is Rs 100 (per bulb). The cost of replacing all the 10 bulbs together is Rs 500.

Compute the cost of group break down replacement i.e as soon as one bulb fails, all ten bulbs are replaced.