

Answer all Questions

Time: 03 hours

1. Case Study-Nilo Signal Company

Nobert Gailer is the new plant manager for the Nilo Signal Company of San Martin California. The plant produces signal products for the highway, railway, and marine markets. Mr.Gailer is now confronted with a problem left over from his predecessor low productivity within the bonnet operation. It is imperative to increase the output of this operation because it is the bottleneck operation for the entire assembly line of the plant. In fact, the bonnet operation's present production level is 20 percent below the capacity of all other operations on the assembly line. The excessive labour cost that result from underutilized personnel have caused the plant to operate in the red for several months and furthermore, the plant's production level is inadequate to satisfy the demand of its customers.

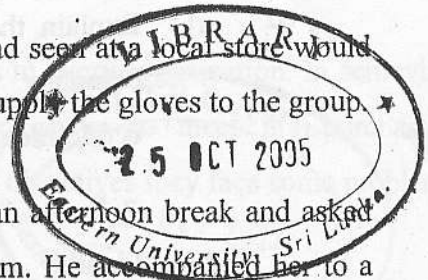
Eight women per shift now staff the bonnet operation. In the distant past, the operation was performed totally by hand and the workers' pay was based on the number of pieces produced by the group per shift. The workers now say that they never liked the incentive pay system. About a year ago, some machines were installed in the bonnet operation as a part of a plant wide program aimed at increasing plant capacity. It was estimated at that time the production level of the bonnet operation would be increased by 30 percent. The number of women in the group was reduced according to the plan, the machines were installed, and the production level did increase, but only by about 10 percent. About 3 months ago, when Mr.Gailer took over as plant manager, one of his first duty was to negotiate with the union representatives concerning the incentive pay system of the bonnet operation workers were placed on hourly rate in line with similar work in other

areas of the plant. The negotiation went well, and all parties seemed satisfied with the outcome.

Mr. Gailer thought that the change in the pay system would trigger higher production level in the bonnet operation, but the output remained below that of the other operations. Mr. Gailer met with the bonnet group and with individuals from the group to discuss the situation. Bernadine Murphy, the union steward for the plant and a member of the bonnet group, candidly indicated that the working relation between the former plant manager and the group had been strained. She seemed open and corporative, not at all the troublemaker described by previous plant manager. Mr. Gailer spoke plainly to the group. "The plant is in trouble profit wise, We can't produce enough products to satisfy our customers, and they are beginning to turn to our competitors. As I see it, the output of the bonnet operation is presently at the center of our difficulties. Times studies indicate that we should be able to get another 20% of production for shift out of the operation with just a fair day's work for a fair day's pay. Can't we work together to get the production level of your operation up? If I can assist you in any way, my door is open. Just walk across and tell me your needs and we will get going". The group did not deny that production level of their operation could be substantially improved. No immediate response came from the group, but during the next two weeks several personal contacts were made between individuals and Mr. Gailer:

1. Mary Malviola walked into Mr. Gailer's office during an afternoon break and said that the Bonnet room was so hot that the women were all wrung out by the end of the shift. She thought that the two or three fans would solve the problem. Mr. Gailer believed that the room was so warm, perhaps a little warmer than some of the other operations' locations.
2. Mioke Kisama walked up to Mr. Gailer in the parking lot before work one morning and showed him her hands. Her fingernails were torn and broken, and her hands had several nicks, scratches, and scrapes. She said that the new machines were chewing up the workers' hands and that it was hard to make her own hands look pretty after they had been exposed to the machines all day long.

She felt that some of the new type gloves that she had seen at a local store would solve the problem and asked Mr. Gailer if he would supply the gloves to the group. *



3. Mary Halalakala came into the main office during an afternoon break and asked Mr. Gailer if he would come over to the bonnet room. He accompanied her to a window on the west side of the room. She told him that the sun glared directly into the workers eyes during the late afternoon and wondered if he would have a sunshade, blind, or awning installed.
4. Bernadine Murphy, the plant's union steward, entered Mr. Gailer's office during a morning break and asked him if he would support a plant-wide Christmas party.

Based on the above case information answer the following questions.

- 1) Why is the production level depressed at the bonnet operation? Discuss the possible reasons for development of the problem. (06 Marks)
 - 2) What should Mr. Gailer do about the requests from the bonnet group? Discuss your recommendations for responding to the requests. (06 Marks)
 - 3) What course of actions should Mr. Gailer take to solve the problem of low productivity and to avoid its recurrence? (08 Marks)
 - 4) What type of incentives scheme could be installed by Mr. Gailer in this situation. (08 Marks)
- (Total 28 Marks)**

Q2 a) Explain the use of Make – or – Buy breakeven analysis for a manufacture company to make a required component or to provide a service economically.

(10 M)

b) Identify and briefly explain the common problem of storekeeping for organization that deal with chemical products.

(08 M)

(Total 18 M)

Q3

A manufacturer of complex electronic equipment has just received a sizeable contract and plans to subcontract part of the job. He has solicited bids for 6 subcontracts from 4 firms. Each job is sufficiently large that any one firm can take only 1 job. The table below shows the bids and the cost estimates (in Rs.10,000's) for doing the jobs internally. Note that no more than 2 jobs can be performed internally.

Firm	Jobs					
	Job 1	2	3	4	5	6
1	48	72	36	52	50	60
2	44	67	41	53	48	64
3	46	69	40	45	45	60
4	43	73	37	51	44	62
Internal	50	65	35	50	46	63

You are required to:

Solve the problem by Hungarian method, minimizing total costs. [

(18 Marks)

Q4 a) Identify and explain the principles of good plant layout.

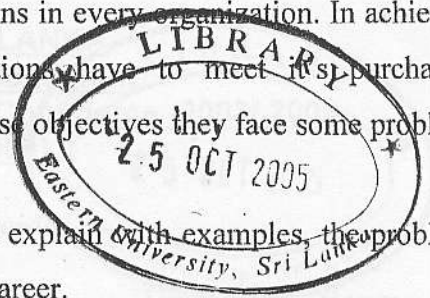
(08 M)

b) Define safety policy and explain the main five factors to be considered in maintaining industrial safety

(10 M)

(Total 18 M)

Q5 "Purchasing is one of the basic, common functions in every organization. In achieving the purchasing function effectively, organizations have to meet its purchasing objectives. When organizations try to achieve these objectives they face some problems in the organisation".



a) Based on the above statement identify and explain with examples, the problems that organizations face in their purchasing career.

(10 Marks)

b) Based on the above statement cite and briefly explain the techniques available to solve the purchasing problems?

(10 Marks)

(Total 18 Marks)