

UNIVERSITI SAINS MALAYSIA

SEMESTER EXAMINATION

APRIL 1993

MASTER OF BUSINESS ADMINISTRATION

ASU 661 - PRODUCTIVITY AND QUALITY MANAGEMENT

TIME : [3 HOURS]

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There are 9 questions in all. Questions 1, 2, and 3 are compulsory. In addition, answer any FOUR questions from the remaining. Figures in bracket indicate the marks for each question.

1. In order to improve man-machine productivity, data on productivity ratings of five operators on five different machines were gathered. This data is given in the following matrix :

Operators	Machines				
	1	2	3	4	5
A	20	30	35	40	60
B	50	65	70	70	90
C	40	25	20	30	45
D	90	80	70	90	100
E	35	30	45	60	60

How would you assign the operators, one to a machine, to maximize the productivity? (12 marks)

2. Six jobs have to be processed on three machines (A, B and C) in the same order in which they are taken on the first machine and no passing is allowed. Determine an optimal sequence for these jobs so as to reduce the total machine idle times. The data given below refers to the processing times (in hours).

...2/-

10	2.95	2.75	2.65	3.08
11	2.78	2.50	2.45	2.33
12	2.75	2.30	2.25	2.55
13	3.05	3.15	2.98	2.75
14	2.92	3.05	2.72	3.02
15	2.82	2.95	3.34	2.55
16	3.20	2.90	2.85	2.95
17	2.78	2.85	2.94	2.63
18	2.79	3.15	2.76	2.96

Draw the control charts for the mean and the range and on the basis of these charts draw your conclusions on the process control. What are your suggestions?

(12 marks)

4. What are the basic bottlenecks in introducing productivity programmes in an organisation? Suggest approaches to overcome these bottlenecks.
(16 marks)
5. Discuss, with suitable field examples, techniques which can be used to improve productivity in an organisation.
(16 marks)
6. " Managers cannot motivate workers. Workers have to motivate themselves. Highly motivated worker need not have high productivity " Discuss.
(16 marks)
7. Discuss the major issues in quality management in production/service organisations.
(16 marks)
8. Discuss, the important management tools for quality as advocated by quality "gurus".
(16 marks)
9. You are appointed as the Chief (Quality) in your organisation. How would you implement quality improvement programmes (QIP) in the organisation?
(16 marks)