

# 國立中央大學八十七學年度碩士班研究生入學試題卷

所別： 工業管理研究所 乙組 科目： 生產與作業管理 共 2 頁 第 1 頁

本試題卷共有三十九題選擇題（皆為單選題）。第一至第十七題，每題兩分，共三十四分；第十八至第三十九題，每題三分，共六十六分。總分為一百分。

請依題號順序作答，並清楚地標明題號於答案紙上。凡題號標明不清或無題號之答案將以零分計算。

- Which of the following are the three productivity variables?
  - inputs, outputs, productivity measures
  - labor, capital, management
  - quality, technology, management
  - manufacturing, service, capital
  - quality, productivity measures, service
- The mission statement outlines the company's
  - profit goals
  - rationale and purpose for existence
  - product lines
  - management structures
  - none of the above
- In terms of decision theory, the three types of decisions are:
  - decisions under risk, decisions under uncertainty, and decisions under certainty
  - long term, short term, and mid-term
  - decisions where the manager has complete control, some control, or no control over the solution
  - marketing, finance/accounting, or operations decisions
  - none of the above
- The expected values of perfect information (EVPI) is
  - the payoff for a decision made under perfect information
  - the payoff under minimum risk
  - the difference between the payoff under certainty and the payoff under risk
  - the average expected payoff
  - none of the above
- Of the following decision criteria for making a decision, the most conservative criterion is
  - maximax
  - maximin
  - equal likely
  - EVPI
  - EMV
- C-charts are based upon the
  - Normal distribution
  - Poisson distribution
  - binomial distribution
  - any of these
  - none of the above
- Control charts used for attributes are usually called
  - X-bar charts
  - R-charts
  - p-charts
  - c-charts
  - both c and d are attribute control charts
- Fishbone charts are also known as
  - quality loss charts
  - target specifications graphs
  - cause and effect diagrams
  - Ishikawa diagrams
  - a and b
  - c and d
  - b and c
  - none of the above
- 100% inspection
  - will always catch all of the defective parts
  - means that only good parts will be shipped to customer
  - is always practical and generally a good idea
  - means that every part is checked to see whether or not it is defective
  - all of the above are true
- The Taguchi method includes three major concepts. These concepts are all of the following except
  - employee involvement
  - remove the effects of adverse conditions
  - quality loss function
  - target specifications
  - none of the above are part of the Taguchi concept
- The ISO 9000 standard was developed by
- "Poka-Yoke" is the Japanese term for
  - card
  - continuous improvement
  - foolproof device
  - fishbone diagram
  - none of the above
- Pareto charts are used to
  - identify inspection points in a process
  - organize errors, problems or defects
  - outline production schedules
  - show an assembly sequence
  - none of the above
- A process chart is used to
  - identify the best data collection points
  - isolate and track origin of problems
  - identify the best place for process audits
  - identify opportunities for travel distance reduction
  - all of the above
- Acceptance sampling is usually used to control
  - incoming lots of purchased products
  - the number of units output from one stage of a process which are then sent on to the next stage
  - the number of units delivered to the customer
  - the quality of work-in-process inventory
  - none of the above
- Producer's risk is the probability of
  - accepting a good lot
  - rejecting a bad lot
  - accepting a bad lot
  - rejecting a good lot
  - none of the above
- When units are randomly selected from a lot and tested one by one, with the cumulative number of inspected pieces and defects recorded, the process is called
  - single sampling
  - sequential sampling
  - double sampling
  - simple sampling
  - none of the above
- In attribute sampling, a binomial probability distribution is usually used to build the OC curve. However, the Poisson probability distribution can be used as an approximation for the binomial distribution when
  - the sample size is large and the percent defective is large
  - the sample size is small and the percent defective is large
  - the sample size is small and the percent defective is small
  - the sample size is large and the percent defective is small
  - none of the above
- An OC curve describes
  - the sample size necessary to distinguish between good and bad lots
  - the most appropriate sampling plan for a given incoming product quality level
  - how well an acceptance sampling plan discriminates between good and bad lots
  - the number of defective items required to reject a lot
  - none of the above
- The relationship between the average outgoing quality (AOQ) and the true percent defective is such that
  - $AOQ > \text{true percent defective}$
  - $AOQ = \text{true percent defective}$
  - $AOQ < \text{true percent defective}$
  - there is no relationship between AOQ and true percent defective
  - none of the above
- The R-Chart tells us
  - whether a gain or loss in uniformity has occurred
  - whether there has been a change in the percent defective

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- (e) none of the above
22. The qualitative model that pools the opinions of a group of high-level manager is known as the  
 (a) Jury of Executive Opinion Model  
 (b) Sales Force Composite Model  
 (c) Delphi Model  
 (d) Consumer Market Survey Model  
 (e) none of the above
23. Which of the following components of time series model cannot be explained?  
 (a) trend  
 (b) cycle  
 (c) seasonality  
 (d) random variations  
 (e) all can be explained by a time series model
24. Group Technology (GT) requires that  
 (a) each component be identified by a coding scheme that specifies the type of processing and the parameters of the processing  
 (b) a specific series of engineering drawings be prepared  
 (c) all bills-of-material be prepared using the same format  
 (d) engineering change notices be linked to each of the bills-of-material and engineering notices  
 (e) none of the above
25. For which of the following process types are we most likely to employ just-in-time inventory and procurement techniques?  
 (a) intermittent process  
 (b) repetitive process  
 (c) continuous process  
 (d) all of the above  
 (e) none of the above
26. Management information systems (MIS)  
 (a) analyze data more fully than transaction processing systems but not as fully as decision support systems  
 (b) are data collection and information processing systems  
 (c) utilize sophisticated management science techniques such as linear programming  
 (d) are able to answer "what if?" questions posed by the decision maker  
 (e) all of the above are true
27. The main disadvantages of a process-oriented layout stem from:  
 (a) the simplified scheduling problems presented by this layout strategy  
 (b) its ability to employ low-skilled labor  
 (c) the general-purpose use of the equipment  
 (d) the low work-in-process inventory characteristic of this layout strategy  
 (e) none of the above
28. Four components of job design are  
 (a) employment stability, work schedules, work sampling, and motivation and incentive systems  
 (b) job specialization and enrichment, psychological components, ergonomics and work methods, and motivation and incentive systems  
 (c) job specialization and enrichment, motivation and incentive systems, employment stability, and work sampling  
 (d) ergonomics and work methods, method time measurement, work schedules, and motivation and incentive systems  
 (e) none of the above
29. The difference between net change MRP and regenerative MRP is that  
 (a) in net change MRP, the entire MRP program, rather than just a portion, is executed  
 (b) in net change MRP, computations are redone only for those items which have had activity  
 (c) regenerative MRP requires more sophisticated computer programs  
 (d) net change MRP requires more computer processing time  
 (e) none of the above
30. A master production schedule contains information with regard to  
 (a) quantities and required delivery date of final products  
 (b) quantities and required delivery date of all sub-assemblies  
 (c) inventory on hand for each final product  
 (d) inventory on hand for each sub-assembly  
 (e) all of the above
31. Which of the lot-sizing techniques may be used with MRP  
 (a) lot-for-lot  
 (b) EOQ  
 (c) part-period-balancing  
 (d) all of the above  
 (e) none of the above
32. A bill of material is a list of  
 (a) the production schedule for all products  
 (b) the components, ingredients, and materials required to produce an item  
 (c) the operations required to produce an item  
 (d) the components, ingredients, materials and assembly operations required to produce an item  
 (e) none of the above
33. MRP II is  
 (a) MRP with a new set of computer programs which execute on micro-computers  
 (b) MRP augmented by other resource variables usually employed to isolate manufacturing operations from other aspects of an organization  
 (c) usually employed to isolate manufacturing operations from other aspects of an organization  
 (d) all of the above  
 (e) none of the above
34. By the term dependent demand we mean that demand for an item is:  
 (a) dependent upon demand for another item  
 (b) dependent upon customer requests  
 (c) dependent upon the selling price for that item  
 (d) dependent upon government regulation  
 (e) none of the above
35. Successful implementation of a Kanban system implies  
 (a) that production is accomplished in large batches using tight schedule  
 (b) emphasis on the use of general purposed machines  
 (c) emphasis on meeting schedules, and reducing the time/cost of setups  
 (d) all of the above  
 (e) none of the above
36. If the annual demand in a basic EOQ model increased 4 times, and all other parameters remained the same, the EOQ would  
 (a) increase by a factor of 4  
 (b) increase by a factor of 2  
 (c) remain the same but orders are placed 4 times faster  
 (d) decrease by a factor of 2 but order are placed 4 times faster  
 (e) none of the above
37. The tracking signal is computed as  
 (a) the running sum of forecast errors (RSFE)  
 (b) the mean absolute deviation  
 (c)  $RSFE/MAD$   
 (d) all of the above  
 (e) none of the above
38. Which of the following aggregate planning strategies is likely to have the greatest impact on quality?  
 (a) varying production rates through overtime or idle time  
 (b) changing inventory levels  
 (c) using part-time workers  
 (d) back-ordering during periods of high demand  
 (e) none of the above
39. Backward scheduling  
 (a) assumes that a delivery date is decided upon, and each operation is offset one at a time  
 (b) assumes that procurement of material and operations start as soon as the requirements are known  
 (c) is well suited where the supplier is usually unable to meet precise delivery dates  
 (d) tends to build up in-process inventory  
 (e) none of the above

