

SECTION A

OBJECTIVES (40 marks)

INSTRUCTION:

This section consists of **FOURTY (40)** objective questions. Answer **ALL** the questions in the answer booklet.

1. Which of the following is the primary function of all organizations?
 - A. Operations, marketing and human resources
 - B. Marketing, human resources and finance/accounting
 - C. Sales, quality control and operations
 - D. Marketing, operations and finance/accounting

2. Which of the following would **NOT** be an operation function in a fast-food restaurant?
 - A. Advertising and promotion
 - B. Designing the layout of the facility
 - C. Maintaining equipment
 - D. Making bread and fries

3. These are the challenged faced by operational management, **EXCEPT**
 - A. Global focusing
 - B. Product development
 - C. Customer network
 - D. Culture flexibility

4. "A coordinator will send questionnaires to each member of the expert group whereby the participants themselves are not known to them".
The above statement refers to
 - A. Jury of Executive Opinion
 - B. Consumer Market Survey
 - C. Delphi Method
 - D. Market Survey

POLITEKNIK
Jabatan Pengajian Politeknik

EXAMINATION AND EVALUATION DIVISION
DEPARTMENT OF POLYTECHNIC EDUCATION
(MINISTRY OF HIGHER EDUCATION)

COMMERCE DEPARTMENT

FINAL EXAMINATION

JUNE 2012 SESSION

P5601: PENGURUSAN PENGELUARAN

DATE: 24 NOVEMBER 2012(SATURDAY)

DURATION: 2 HOURS (8.30 AM - 10.30 AM)

This paper consists of **FOURTEEN (14)** pages including the front page.

Section A: Objective (40 questions – answer all)

Section B: Structure (2 questions – answer 1 question)

Section C: Essay (2 questions – answer 1 question)

CONFIDENTIAL

**DO NOT OPEN THIS QUESTION PAPER UNTIL INSTRUCTED BY
THE CHIEF INVIGILATOR**

9. In linear regression, a dependent variable is related to one or more
- Linear equations
 - Independent variables
 - Causal methods
 - Linear regression models
10. The sales manager of the AXV Computer Software Station has gathered the following data of demand during the past nine months:

Month	1	2	3	4	5
Demand	100	105	115	110	108

Using 5 month moving average, forecast the demand for the 6th month?

- 110 units
 - 109 units
 - 108 units
 - 106 units
11. In "smoothing parameter", (k) value is normally in the range between:
- 0 and 1
 - 5 and 500
 - 0 and 0.11
 - 5 and 20
12. Which of the following is **NOT** a measure of production capacity?
- Capacity production output
 - Efficiency production output
 - Minimum output production rate
 - Maximum output production rate

5. All of the following decisions fall within the scope of operations management **EXCEPT**
- Financial analysis
 - Design of goods and processes
 - Location of facilities
 - Managing quality
6. Two general approaches of forecasting are:
- Qualitative and quantitative
 - Mathematical and statistical
 - Judgmental and qualitative
 - Historical and Law
7. Forecasts is
- More accurate with longer time horizons
 - Rarely perfect
 - More accurate for individual items than for groups of items
 - All of the above
8. The firm relies on managerial opinions and experience to generate forecasts when
- Lack of historical data
 - New product is introduced
 - The changes of technology
 - Modify forecasts generated by quantitative methods
- i and ii
 - ii and iii
 - iii and iv
 - i, ii, iii and iv.

17. In the selection and analysis of delegate for space approach, which of the following need to be considered and analyzed by the management in terms of the division building allocation.
- Size of department
 - Determine the building construction requirements.
 - The nature of organization or factory
 - Types of products or facilities.
- A. i,ii and iii
 B. i,ii and iv
 C. i,ii,iii and iv
 D. i and ii
18. Conveyor system is more suitable for system that require
- Manufacturing process using a fixed position and constantly moving.
 - Transmission from one place to another with a large quantity.
 - Moving and lifting heavy objects from one place to another.
 - Lifting the dangerous goods.
19. The following quantitative factors influence the location identification for the factory **EXCEPT**
- Cost of raw materials
 - Cost of labour
 - Sources of raw materials
 - Rental cost of location

13. Aman Jaya Sdn Bhd has to fulfill a demand of 4,500,000 units of a product within a week. Calculate the quantity of production if the rate of rejection is 1%.
- 4,545,454
 - 5,454,545
 - 4,545,000
 - 5,454,000
14. The size of the source population in waiting-line system is considered to be either
- Finite or infinite
 - Fixed or variable
 - Known or unknown
 - Random or scheduled
15. In queuing problems, which of the following probability distributions is typically used to describe the time to perform the service?
- Binomial
 - Normal
 - Poisson
 - Negative exponential
16. Which statement describes the process layout?
- Known as "Job Shop".
 - Requires an effective work schedule.
 - All the workers and equipment involved in the process are placed in a department.
 - Production volume is low.
- i,ii and iii
 - i,ii and iv
 - i,iii and iv
 - ii,iii and iv

24. Which of the following is the inventory control method where the management places the inventory in accordance to its category?
- Two Bin Method
 - Pareto Principle
 - Computerised Inventory System
 - Stages Computerised Inventory
25. The main use of safety stock is to
- Meet customer demand if there is demand and consumption beyond the expectations.
 - Facilitate the storage of goods in the company.
 - Reduce the storage of goods in the company.
 - Reducing speculation raw materials.
26. The main problem in determining orders for Economic Order Quantity by an organization is
- To control inventory
 - To decide the total size of orders
 - To classify the stock in category
 - To decide the type of transportation
27. Below are statements related to activities in the Purchasing Department **EXCEPT**
- To find, evaluate and expand the source of materials, stocks, and services
 - To ensure the good relationship between the suppliers and to make sure the sources received are in good quality, efficient delivery, and good payment and returns.
 - Having good cooperation and effective communication among the departments in the company and between the company and the suppliers or future suppliers.
 - To ensure the goods are delivered to the specific place for inspection or storage.

20. This layout is designed in arranging the production processes of various products and services. It is suitable for producing a variety of product according to different customers' needs. The layout focuses on minimizing any potential problem in production. The arrangement method used is referred to as:
- Process Layout
 - Product Layout
 - Fixed-Position Layout
 - Process and Product Layout
21. The main problem in economic order quantity is closely related to:
- The stocks ordered which cannot be predicted
 - Difficulty in finding the supplier within limited period given
 - The speculation of price of raw materials which is unstable
 - Determine the right quantity or size of order that is at the optimal level. Orders made either in bulk or in small amount which usually involve fluctuations in variable cost.
22. The calculation of Economic Order Quantity (EOQ) involves cost such as:
- Holding cost, Completing cost and Supplying cost
 - Completing cost, Raw material cost and Set-up cost.
 - Holding cost, Ordering cost and Set-up cost
 - Ordering cost, Holding cost and Supplying cost
23. Syarikat Bahan Binaan Nuri intends to reduce its inventory cost by determining the optimum quantity of cement which should be delivered on every order. The yearly demand of cement is 2000 packets; each order cost is RM25, while the yearly storage cost is RM0.80 per packet. Determine the economical order quantity for each order made.
- 348 packets
 - 350 packets
 - 354 packets
 - 352 packets

32. Which of the following statement regarding CPM is **TRUE**?
- The critical path is the shortest of all paths in the network.
 - The critical path is that set of activities that has positive slack.
 - All activities on the critical path have their LS equal their predecessor's
 - All the statement is false.
33. A fictitious activity does not consume time or resources. It is represented in a network by a broken arrow. The statement refers to
- Dummy activity
 - Slack activity
 - Production activity
 - Inspection activity
34. Critical path for project network shows the shortest duration to complete
- Activities that show have zero slack
 - The overall project
 - None of the activities start before reaching to the end
 - Starting network from left to right
35. Following are the terminology in basic time analysis **EXCEPT**
- Earliest start time (ES)
 - Earliest finish time (EF)
 - Latest finish time (LF)
 - Actual Time (AT)
36. The terminology of activity in network means
- The ending time that shows the start or finish point for an activity or various activities
 - Task that needs time and sources
 - The usage of many workforce or other sources to shorten the project duration
 - Interrelated planning activities for activities which has been completed

28. These activities are associated with the flow of materials:
- Transport Department/ Traffic Department
 - Receiving Department
 - Delivery Department
 - Purchasing Department
 - Operation Department
- i, ii and iii
 - i, ii and iv
 - i, ii, iii and iv
 - i, ii, iii and v
29. The function of the Inventory Control Department is to
- Ensure materials and services are available when needed
 - Select inventory items to be delivered for to customers
 - Load and identify goods received
 - Package and label for delivery
30. The Process to get raw materials is as follow **EXCEPT**:
- Purchase instructions
 - Purchase order
 - Material specifications
 - Production control
31. The **TWO (2)** purchasing methods implemented by purchasing department are
- Centralization and decentralization
 - Few and many
 - Straight and order
 - Cash and discount

SECTION B

STRUCTURE (30 marks)

INSTRUCTIONS:

This section consists of 2 structured questions. Answer **ONE (1)** question in the answer booklet.

QUESTION 1

The Bandar Penawar Sport School athletic department wants to develop forecast of winning in the next year. The athletic director believes athlete attendance is directly related to the numbers of winning for the team. The manager has accumulated total annual attendance and winnings for the past eight years.

Years	Winning	Athlete Attendance
2003	4	363
2004	6	401
2005	6	412
2006	8	530
2007	6	440
2008	7	456
2009	5	390
2010	7	475

- (a) Find the regression equation for this data to forecast the athlete attendance if the athletic director believes the team will win at least 7 games for the year 2011. (20 marks)
- (b) Compute the correlation coefficient between attendance and winnings for this athlete department. (10 marks)

- 37. Which is **NOT** a Just- In-Time (JIT) basic objective
 - A. Produce quality product
 - B. Reduce manufacturing cost
 - C. Produce product according to demand
 - D. Distinguish environment and work culture
- 38. 'Benchmarking' is one of the processes which is done by company to learn best practices in other organization either by making renovations or not. Determine the stages of 'Benchmarking' according the orders:
 - i. Plan and implement assessment
 - ii. Determine and understand company process
 - iii. Collect data
 - iv. Analyze and determine differences
 - v. Agree on what and who will be learned
 - vi. Revaluation
 - A. i, ii, iv, iii, vi dan v
 - B. i, ii, iii, iv, v dan vi
 - C. iii, iv, ii, v, i dan vi
 - D. ii, v, iii, iv, i dan vi
- 39. Which of these is unrelated to work design process approach?
 - A. Work rotating (Shift)
 - B. Expand work scope
 - C. Enrich work
 - D. Increase specialization
- 40. The main feature of "KANBAN" system is:
 - A. No other process can be carried out if the previous process has not been completed.
 - B. Other processes may be performed if the previous process has not been completed.
 - C. All production processes need to be examined clearly
 - D. Employee must maximize their working hours.

SECTION C

ESSAY (30 marks)

INSTRUCTIONS:

This section consists of **TWO (2)** essay questions. Answer only **ONE (1)** question in the answer booklet.

QUESTION 1

- (a) Describe **FOUR (4)** requirements of a good layout? (8 marks)
- (b) Explain the process of oriented layout. (8 marks)
- (c) Discuss briefly **TWO (2)** differences between process and product layout? (8 marks)
- (d) Explain briefly **THREE (3)** advantages of product layout? (6 marks)

QUESTION 2

- (a) Define benchmarking? (4 marks)
- (b) Discuss **SIX (6)** stages in benchmarking. (18 marks)
- (c) Explain briefly the benefits of using the benchmarking method. (8 marks)

QUESTION 2

The ABC Clinic has one dentist who see patients daily. An average of 6.5 patients arrived at the clinic per hour according to Poisson distributed. The dentist spends an average of 8 minutes (exponentially distributed) with a patient. The patients wait in a waiting area until the dentist is able to attend to them. However, since patients typically need dental treatment when they come to the clinic, the dentist did not believe it is good practice to have a patient waiting for an average of 10 minutes. Therefore, a consultant needs to help the dentist to

- (a) Determine:
- i) The arrival rate and the service rate of the clinic. (3 marks)
- ii) The probability that there is no patient in the clinic or the dentist is performing other work. (3 marks)
- iii) The number of patient waiting before receiving dental treatment. (4 marks)
- iv) The average time patient being served and in waiting line. (4 marks)
- v) The number of patient waiting and receiving a treatment. (4 marks)
- vi) The average time patient spends waiting in line. (4 marks)
- vii) The probability the dentist is busy and the patients waiting. (3 marks)
- (b) What is a calling population in relation to a waiting line system? (5 marks)