<u>INSTRUCTIONS :</u> -
Attempt any four questions.
Do not write anything on the question paper

QUESTION ONE

(a) Explain the considerations that should be taken into account when designing a productive system for a physical product.   (10 Marks)

(b) With reference to Pepsi Cola as a sample product, identify and illustrate the stage in the product life cycle (PLC) where it belongs. Support your answer using relevant illustrations and characteristics.   (8 Marks)

(c) In reference to the product in (b) above, identify with reasons the suitable productive system that a production manager would adopt in its production.   (7 Marks)

QUESTION TWO

Performance can be judged by setting standards and ensuring that comparison of actual performance is made with the set standards in an organization:

(i)   Using appropriate examples, discuss how overall organizational standards differ from departmental and individual standards.   (9 Marks)

(ii)   Discuss the importance of job performance standards.   (8 Marks)

(iii) Why is work measurement important?   (8 Marks)

QUESTION THREE

(a)   In capacity planning, managers use forecasts of product demand to estimate the work load that the facility will require to handle. Forecasts should be converted into productive units to match capacity.

   (i)   Define capacity planning.   (4 Marks)

   (ii)   Explain how you can use the Delhi method to forecast the likely number of freshers to be admitted for BAM course next year.   (6 Marks)

(b) The following table shows the monthly Time series data for UMU students who pay and sign up to acquire meal cards from Finaland the Caterer in the UMU dinning hall.

Month	Number of Students issued meal cards
August 2012	550
September 2012	572
October 2012	484
November 2012	528
December 2012	440

   (i)   What is the forecasted number of students to be issued meal cards in January 2013 using the Naïve approach?   (4 Marks)

   (ii)   What is the forecasted number of students to be issued meal cards in January 2013 using a Two-months moving average?   (4 Marks)

   (iii) Derive a Linear trend equation for the above signed for Finaland meal cards. Using this equation, forecast the likely number of students to be issued meal cards in January 2013.   (7 Marks)

QUESTION FOUR

(a) 'Only through increases in productivity can the standard of living improve. Moreover, only through increases in productivity can labor, capital and management receive additional payments.

    (i)   What is productivity?   (4 Marks)

    (ii)   Explain any two(2) measurement problems that may be encountered in using productivity measures by managers in determining how well they are doing.   (7 Marks)

(b) Tina Ltd makes apple crates for resale to local growers. The company's three(3) employees invest 25 hours per day making 75 crates.

    (i)   What is their productivity?   (6 Marks)

    (ii)   Tina Ltd is considering re-aligning work so that the flow through the shop is smoother. If this move is correct and the necessary training is done, the production of crates will increase to 80 crates per day. What is the company's new productivity? What is the company's increase in productivity?   (8 marks)

QUESTION FIVE

(a) Financial Mathematical analysis models are useful in answering the question; how much will it cost to build and maintain certain capacity? Financial investment models such as Net Present Value (NPV), Payback period(PBP), may be used in evaluating whether an organization will be able to operate at a given capacity considering the financial implications.

Required: (i)   What is time value of money?   (5 Marks)

              (ii)   What is the difference between a Pay-back period(PBP) and a Discounted Pay-back period (DPBP)?   (6 Marks)

(b) Nannozi is an ambitious business student. She is planning to set up Nannie Restaurant in Nkozi TC which will require an initial capital of $ 39,000 and this project has a projected life of four(4) years. The forecasted net revenues accruing from this project for the four(4) years are; $ 24000, $ 15000, $ 20000 and $ 11000 respectively. The interest rate is assumed to be 10% for all the project's life.

Required:

    (i)   Compute the Net Present Value (NPV) of the project.

                                                      (7 Marks)

    (ii)   Compute the Discounted Pay back period of the project(DPBP).

                                                       (7 Marks)

QUESTION SIX

(a) What is Total Quality Management (TQM) and what are the pre-requisites to be met in order to successfully introduce TQM into an organization?

                                                        (13 Marks)

(b) Explain the following categories of costs of quality and give two examples of costs that fall under each category;

- Internal failure costs
- External failure costs
- Appraisal costs
- Prevention costs   (12 Marks)

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