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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2022/2023 ACADEMIC YEAR**  
**SECOND YEAR, SECOND SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(BUSINESS ADMINISTRATION)**

Date: 7<sup>th</sup> December, 2022  
Time: 11.30am – 1.30pm

**KBA 202 - PRODUCTION AND OPERATIONS MANAGEMENT**

**INSTRUCTIONS TO CANDIDATES**

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**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

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**QUESTION ONE (30 MARKS)**

**ABC LIMITED COMPANY**

ABC Ltd is a manufacturing company engaged in the manufacturing of electric cables and accessories. They have been in the business for last 3 years and have been manufacturing only one type of electric cables. They started their business initially with sales of 10,000 cables per month and now they have grown the volume to about 50,000 cables per month. They have been buying all the raw material for the electric cables and were doing all the manufacturing in house. Now they have established themselves in the market and are planning to expand and produce different varieties of electric cables. They have their plant in the main city and the total area of the plant is 50,000 sq. ft. Now if they want to expand and continue doing all the activities of manufacturing of all the varieties in house, they would need another 50,000sq.ft. of the area. In the recent times, the land prices in the area have more than doubled in the last 3 years and still land is available with great difficulty. Mr. Mohan is the production head of ABC Ltd. and has been successful with the production and the level is continuously increasing. But in recent times, he is facing the problem of quality complaints which have gone up from average 0.2 % in previous 2 years to 0.5 % this year. Also, he is finding that there is a high level of dissatisfaction among the workers regarding workload as well as salary levels. The workers are regularly complaining about the over work.

Although Mr. Mohan has found that the workers have been spending lot of time on tea breaks, lunch breaks and even in between the production spending lot of time talking to each other. But, due to insufficient workers and staff, he is unable to take strict action and the workers are taking advantage of this situation. For completing the work and delivering the products timely, he has to employ workers on overtime and his overtime cost has also increased 3 times. Mr. Mohan is worried about the new expansion plan of the management and is worried where the new workers would come from as he is already finding shortage of workers for the existing job. He has requested the management not to go for expansion immediately and look at improving and consolidating the existing set up. He has sent his request to Mr. S. Kumar Director – Operations.

Mr. Kumar has gone through the request of Mr. Mohan and called a meeting of all the department heads and explained the situation to all concerned. The marketing manager has expressed very bullish prospect about the company's growth and said that the company should take advantage of growing economy and established brand image of the company and definitely go for expansion. The finance manager also expressed that this will result in economy of scale for the products and will further increase the profitability of the products. Mr. Mohan again expressed his problems regarding availability of manpower as well as production control and effect on quality and productivity. The Marketing manager asked the Production manager about the option of outsourcing. Mr. Mohan is skeptical about the outsourcing option as he felt that the outside agency will always charge more as he will try to make his profit as well and also is worried about the possible problems of deliveries. Mr. Kumar asked the Mr. Naresh who is the Purchase manager about his views and they planned to hold more meetings to discuss and come up with final solution.

Required:

- a) Explain three factors that ABC LTD will put into consideration in case they decide to expand the plant (6 Marks)
- b) Based on the case study above, is it advisable for the company to outsource. Give three reasons (6 Marks)
- c) Discuss three ways in which the company may solve the quality complaints they may have received (6 Marks)
- d) Highlight three ways in which the ABC LTD may solve the existing shortage of workers (6 Marks)
- e) Outline three ways in which the Mr. Mohan will solve the laxity of workers in a company (6 Marks)

#### **QUESTION TWO (20 MARKS)**

- a) The operations manager of Mwioko Manufacturers LTD intends to develop a new product. Explain the steps they should follow in executing its intentions (10 Marks)
- b) Explain five importance of Production and Operations management to a business enterprise (10 Marks)

#### **QUESTION THREE (20 MARKS)**

- a) Tembo Company limited is in the process of locating its cement manufacturing plant. Advise the management on five factors to consider in locating the plant (10 Marks)
- b) Discuss five benefits of production and operations planning and control to an organization (10 Marks)

#### **QUESTION FOUR (20 MARKS)**

- a) Explain five benefits that a firm may derive from adoption of a flexible manufacturing system. (10 Marks)
- b) Discuss five consequences of poor maintenance of plant and equipment on the growth and expansion of a firm (10 Marks)

#### **QUESTION FIVE (20 MARKS)**

- a) The operations manager of Bidco Manufacturers has adopted a process layout at the company's production facility. Discuss five advantages that the company may realize from this layout (10 Marks)
- b) Explain five factors that may influence the type of production system adopted by an organization (10 Marks)