

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA– SEMESTER - III-EXAMINATION- SUMMER-2023

Subject Code: 4539273

Date: 22/06/2023

Subject Name: Production Planning and Control

Time: 02:30 PM TO 05:30 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

Q.1 Short Questions

(14)

- (a) Batch production
- (b) Assembly line balancing
- (c) Demand Forecasting
- (d) Design capacity
- (e) Just in time
- (f) Poka Yoka
- (g) Maintenance Management

Q.2(a) Write a short note on production planning and control.

(7)

Q.2(b) Describe the inputs, outputs, and nature of MRP processing with practical examples.

(7)

OR

Q.2(b) What is Scheduling? Explain different principles of scheduling with the help of an example.

(7)

Q.3(a) Name the various types of production systems. Describe the production system suitable for job work

(7)

Q.3(b) Differentiate between short term forecast, intermediate term forecast and long-term forecast.

(7)

OR

Q.3(a) Discuss different stages of production planning and control.

(7)

Q.3(b) What is forecasting. Discuss different quantitative and qualitative methods of forecasting.

(7)

Q.4(a) What is capacity planning? Describe different types of capacity with examples.

(7)

Q.4(b) What is the importance of maintenance management in PPC? Discuss about different types of maintenance management.

(7)

OR

Q.4(a) Classify and explain various types of Hazards.

(7)

Q.4(b) What do you understand by the term Materials handling? Explain in details different elements of Materials Handling. (7)

Q.5 XYZ Caterers

XYZ Caterers operate from the Green Park area of Ahmedabad, Gujarat. Green Park is a posh locality in South Delhi and has a large number of restaurants serving the needs of the people in the locality. Though XYZ has its main operations at Green Park, it's also deals with the catering needs of educational institutions. XYZ bagged the contract for catering in a well-known educational institution in South Delhi a few years back. They are responsible for the catering of the students and staff at the campus.

Campus Operations

At present, XYZ has two units operating in the campus: "Green View", which is on the seventh floor of the main academic building, and the second one, "XYZ Café", which is in the heart of the hostel zone. Green View operates between 10 a.m. and 5 p.m. during weekdays (Mon–Fri). It caters to the needs of the entire office crowd, students, and teaching and non-teaching staff. XYZ Café operates between 4 p.m. and midnight on a daily basis and is mostly visited by students.

Though XYZ has its main operation at Green Park, Mr. Jain, the proprietor of XYZ Caterers, considers the campus catering contract to be very important. There are quite a few educational institutions around. Jawaharlal Nehru University is near the campus. If XYZ can prove its worth in their current operations, it is only a matter of time, according to Mr. Jain, before they get contracts at other nearby institutions. This would mean a lot in terms of his business volumes.

At present, the volume of business at the campus is not substantial compared to the overall business of XYZ, but the situation has certainly improved ever since XYZ took over a few years back. XYZ has registered a steady 20 per cent increase in sales and expects it to go up even further. This is primarily because XYZ has been consistently maintaining a low price for its items.

Though the campus operations started with a small variety of food, XYZ introduces new items whenever there is a demand for them. For example, two new South Indian dishes—Mysore Masala Dosa and Onion Uthappam—were introduced recently. They are now available only between 11 a.m. and 3 p.m. The management expects to introduce new items in the coming months. Serving a typical meal request takes nearly 20 minutes of one worker's time.

XYZ has a group of service personnel and two managers who take care of the needs of the two centers. The service personnel can move from one restaurant to another (i.e. from Green View to XYZ Café and vice versa), if the need arises. In any case, the restaurants are not too far and they will not object to this. At present, the timings of the two centers are overlapping only between 4 p.m. and 5 p.m. Hence, resources management has not been a serious problem.

Future Plans

The immediate plan of Mr Jain is to keep XYZ Café open between 1 pm and midnight. This would mean an additional three hours of service timing and overlap with Green View. He believes that this new arrangement will not only facilitate the students, but also increase his volume of business. However, Mr Jain has to have a relook into the resource management problem. Mr Jain has vast experience in the catering industry and particularly in an academic set-up. He has observed some patterns in the arrival of customers at the restaurants.

(a) What are the potential advantages of forecasting requirements for the campus operations of XYZ Caterers (7)

(b) Summarize the entire case. (7)

OR

(a) If Mr. Jain wishes to develop a forecasting model, develop an overall framework for the same. (7)

(b) How should Mr. Jain plan his weekly plan for deploying resource requirements? (7)
