

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**MBA – SEMESTER –III-EXAMINATION – WINTER-2022**

Subject Code: 4539273

Date: 01/02/2023

Subject Name: Production Planning and Control

Time: 10:30 AM to 1:30 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. No.	Question Text and Description	Marks
Q.1	Define the following: (a) Poka-Yoke (b) Job shop (c) Subsidiary orders (d) Capacity planning (e) Production order (f) Batch Production (g) Just-in-time	14
Q.2	(a) Is it possible that there can be more than one order winner in a defined market? Why or why not? (b) Describe the inputs, outputs, and nature of MRP processing with practical examples.	07 07
<b>OR</b>		
	(b) What do you understand by Production Planning and control? Explain its main elements with proper examples.	07
Q.3	(a) What factors influence the choice of an appropriate forecasting model? (b) Describe any four qualitative forecasting techniques with suitable examples.	07 07
<b>OR</b>		
Q.3	(a) Classify and explain various types of Hazards. (b) Explain in detail with examples what are the different causes of accident.	07 07
Q.4	(a) With suitable examples, differentiate between Product Layout and Process Layout (b) How does the choice of the layout affect the operational performance of an organization?	07 07
<b>OR</b>		
Q.4	(a) Explain in detail, the advantages and disadvantages of different types of layout. (b) What do you understand by the term Materials handling? Explain in details different elements of Materials Handling.	07 07

**CASE STUDY:****ABS Caterers**

ABS Caterers operate from the Green Park area of Hauz Khas in New Delhi. 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 ABS has its main operations at Green Park, it's also deals with the catering needs of educational institutions. ABS 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, ABS has two units operating in the campus: "Green View", which is on the seventh floor of the main academic building, and the second one, "ABS 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. ABS Café operates between 4 p.m. and midnight on a daily basis and is mostly visited by students.

Though ABS has its main operation at Green Park, Mr. Jain, the proprietor of ABS 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 ABS 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 ABS, but the situation has certainly improved ever since ABS took over a few years back. ABS has registered a steady 20 per cent increase in sales and expects it to go up even further. This is primarily because ABS has been consistently maintaining a low price for its items.

Though the campus operations started with a small variety of food, ABS 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.

ABS 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 ABS 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 ABS 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 ABS Caterers

- (b) Summarize the entire case. 07

OR

- Q.5 (a) If Mr. Jain wishes to develop a forecasting model, develop an overall framework for the same. 07
- (b) How should Mr. Jain plan his weekly plan for deploying resource requirements? 07

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