

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.)–201306

POST GRADUATE DIPLOMA IN MANAGEMENT (2020-22)
MID TERM EXAMINATIONS (TERM -IV)
Academic Session- 2021-22

Subject Name : **Production Planning and control**
Sub. Code: **PGO-06**

Time: **01.30 hrs**
Max Marks: **20**

Note:

1. Writing anything except Roll Number on question paper will be deemed as an act of indulging in unfair means and action shall be taken as per rules.
2. All questions are compulsory in Section A, B & C. Section A carries 1 Case Study of 8 marks. Section B carries 3 questions of 2 marks each and Section C carries 2 questions of 3 marks each.

SECTION– A

04+04 = 08 Marks

Q. 1: Case Study:

Zoom Electric Vehicles will invest Rs 1000 crore by 2025 to support its business expansion, including setting up of a new manufacturing unit to capture Indian two wheeler electric vehicle market. The company is planning to set up a new manufacturing facility with an annual capacity of three lakh units. The company has monthly demand as shown in table given below. The organization has 15% of the month forecast as safety stock. The numbers of days available in the each month is also shown. There is no inventory available in the beginning month i.e. January.

Month	January	February	March	April	May	June
Beginning Inventory	0	3,000	4,500	6,000	6,750	7,500
Demand	20,000	30,000	40,000	45,000	50,000	66,000
Safety Stock	3,000	4,500	6,000	6,750	7,500	9,900
Production required	23,000	31,500	41,500	45,750	50,750	68,400
Working Days	20	18	24	20	25	24

Cost of the organization is as follows:

Inventory holding cost: Rs 10/unit/month;
Hourly wage rate: Rs 25;
Hourly overtime rate: Rs 40;
Layoff cost/worker: Rs 2000 ;

Duration of Shift: 8 hours
Stock out cost/unit: Rs 20
Labour hour per unit: 4 hours
Hiring cost/worker: Rs. 1500

Two plans are suggested:

1. Produce to exact production requirement by varying the size of manpower on regular hours. Assume there are 500 workers available in January.
2. Make a constant manpower of 1000 workers. Assume no subcontracts are to be made.

(A) What is aggregate planning? How aggregate planning is being implemented in above case study? Explain with flow chart.

(B) Which plan would be suitable for Zoom Electric Vehicles basis on least cost?

SECTION– B

02×03 = 06 Marks

Q. 2: What is the difference between continuous mass production and intermittent batch production? Explain with suitable example.

Q. 3: Why are bar coding and RFID technology used in the various stores and warehouses of the organizations?

Q. 4: How the blueprint of production system facilitate the operations manager in planning for smooth operations?

SECTION– C

03×02 = 06 Marks

Q.5: What is production planning and control? How the technology support in production planning and control in Industry 4.0?

Q. 6: What are the key constituents of Material resources planning (MRP)? Explain briefly.

Mapping of Questions with Course Learning Outcome

COs	Question Number(s)	Total Marks Allocated to the CO
CO1	Q1(A), Q2, Q5, Q6	12
CO2	Q1(B), Q3,	06
CO3	Q.4	02
CO4		