BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: BE **SEMESTER: VI**
BRANCH: PRODUCTION **SESSION : SP/2018**

SUBJECT: PE6005 PRODUCTION PLANNING AND CONTROL

TIME: 1.5 HOURS **FULL MARKS: 25**

INSTRUCTIONS:
1. The total marks of the questions are 30.
2. Candidates may attempt for all 30 marks.
3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. The missing data, if any, may be assumed suitably.

Q1 (a) What do you understand by classification of production systems? Explain. [2]
(b) Give some examples to show how the transformation process adds value by changing, combining, transporting and preserving resources. [3]

Q2 (a) Define system, and systems concept used in the production systems. [2]
(b) In what sense are the following considered to be 'Production' activities? (a) airline (b) farm (c) restaurant (d) University. [3]

Q3 (a) Define forecast and explain the characteristics which are common to all forecasts. [2]
(b) Historical data on the sale of tractors of company for the year 1987 to 1993 is given below [3]

Year	1987	1988	1989	1990	1991	1992	1993
Sales	3286	4751	5867	4580	5020	8444	11072

Using regression analysis technique (a) establish the equation of the straight line satisfying the historical data. (b) extrapolate the trend for the year 1994 (c) Project the forecast of year 1994.

Q4 (a) What are the steps in the forecasting process? [2]
(b) Last 1 month's sales of a product of ABC company are as under [3]
(a) Assuming a smoothing factor of 0.4, calculate exponentially weighted moving forecast for the month of November.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Actual sales	350	640	420	480	510	450	638	720	805	750

Q5 (a) Why is scheduling fairly simple for continuous systems but fairly complex for job shops. [2]
(b) What is meant by aggregate production planning? Why is it required? [3]

Q6 Write Short notes on: [5]
a) Plant Lay out b) Cellular Manufacturing c) Routing
d) Product Mix e) Reconfigurable Manufacturing System

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