


**SECOND SEMESTER M.TECH. (PRINTING AND MEDIA TECHNOLOGY)**
**END SEMESTER EXAMINATIONS, APR/MAY 2017**
**ELECTIVE I**
**PRINT PRODUCTION AND BUSINESS MANAGEMENT [PME 5238]**
**REVISED CREDIT SYSTEM  
(25/04/2017)**

Time: 3 Hours

MAX. MARKS: 50

**Instructions to Candidates:**

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

- 1A.** Explain the impact of operations management on different sectors of the society.
- 1B.** Briefly explain the steps involved in systematic approach towards capacity decision
- 1C.** M/s Graphics, is a small carton maker. He is specialized in Pizza Shells, which is supplied to Restaurants. The manager must forecast weekly demand for these special pizza shells. Recent demand has been as follows.

Week	Demand	Week	Demand
June 2	50	June 23	56
June 9	65	June 30	55
June 16	52	July 7	60

- A.** Forecast the demand for Pizza shells for June 23 to July 14 by using the simple moving average method with  $n=3$ .
- B.** Then repeat the forecast by using the weighted moving average method with  $n=3$  and weights of 0.50, 0.30 and 0.20.

**[ 05 + 02 + 03 ]**

- 2A.** Which areas will come under the core competence for print operation? Briefly explain.

- 2B.** The monthly demand for offset blanket, manufactured by M/s Raj Blanket is as follows:

Month	Demand	Forecast	Month	Demand	Forecast
June	80	104	October	110	113
July	110	96	November	125	106
August	115	86	December	120	113
September	105	111			

Calculate the absolute percentage error for each month from June through December and the MAD and MAPE of forecast error as of the end of December.

- 2C.** Which are the dominant factors affecting the location decision, for print operation? Briefly explain.

[ 02 + 05 + 03 ]

- 3A.** The Cyan Printers are into commercial business, since a long time and are doing well. Because of good quality printing, it has obtained Export orders. In order to compete at international level, management gave importance both for quality and price. To reduce the packaging cost, the management is having two options:

**Option 1:** fixed costs for making carton is \$12,000, and the variable cost is \$1.50 per unit.

**Option 2:** fixed costs for buying carton is \$2400 and the variable cost is \$2.00 per unit.

If expected demand is 25,000 cartons, which option should be selected?

- 3B.** Five jobs are waiting for processing. The processing times have been estimated. Expected completion times have been agreed. The table shows the situation as of Monday morning. Customer pickup times are measured in business hours from Monday morning.

Determine the schedule by using the EDD rule and then the SPT rule.

Job	Processing time in hours	Scheduled Customer pick up time in hours
Invitation	8	10
Brochure	6	12
Book	15	20
Card	3	18
Magazine	12	22

- 3C.** Which decision making tool is used for selecting the alternatives, provided its weight and financial status is given? Explain briefly with a sketch.

[ 03 + 05 + 02 ]

Reg. No.									
----------	--	--	--	--	--	--	--	--	--

- 4A. What is economic of scale? Which are the reasons for economic of scale? Explain.
- 4B. How Linear programming can be applied for printing industry? Explain with an numerical or graphical example.
- 4C. Explain any qualitative technique used for forecasting.

[ 05 + 03 + 02 ]

- 5A. What is the application of preference matrix in printing industry? Explain with an example.
- 5B. A manager of a Commercial offset press, must determine the lot size for dampening solution, which has a steady demand of 30 barrels per day. The production rate is 190 barrels per day, annual demand is 10,500 barrels, setup cost is Rs. 200, annual holding cost is Rs. 0.21 per barrel, and the plant operates 350 days per year. Calculate the following:
- The economic lot size (ELS)
  - Total annual setup and inventory holding cost
  - TBO for the ELS
  - Production time per lot

- 5C. **Customer demand activates production of items** – Justify the strategy for this statement and explain its concept or philosophy.

[ 03 + 05 + 02 ]