

[LB 1012]

OCTOBER 2012

Sub. Code: 2003

MBA HOSPITAL AND HEALTH SYSTEM
MANAGEMENT DEGREE EXAMINATION
FIRST YEAR

(for candidates 2010 – 2011)

PAPER III – BIOSTATISTICS AND OPERATION RESEARCH

Q.P. Code : 432003

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

Pages Time Marks
(Max.)(Max.)(Max.)

1. A company has factories A, B, and C which supply warehouses at D, E, F and G. Monthly factory capacities are 160, 150 and 190 units respectively. Monthly warehouse requirements are 80, 90, 110 and 160 units respectively unit shipping costs (in Rs.) are as follows.

17 40 20

| Factory | To | | | |
|---------|----|----|----|----|
| | D | E | F | G |
| A | 40 | 48 | 38 | 37 |
| B | 40 | 49 | 52 | 51 |
| C | 39 | 38 | 40 | 43 |

Determine the optimum distribution for this company to minimize the shipping costs.

2. Find the missing frequency from the following data. If arithmetic mean is 28 of the data given below.

17 40 20

| Profit per shop | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
|-----------------|------|-------|-------|-------|-------|-------|
| No. of Shop | 12 | 18 | 27 | ? | 17 | 6 |

II. Write Notes on :

1. Define statistics. Discuss the application of statistics. 4 10 6
2. Explain the advantages of classification of data. Discuss the different methods of classification. 4 10 6
3. Bring out the properties of harmonic mean and geometric mean. 4 10 6

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| 4. Explain the relationship among quartile deviation, mean deviation and standard deviation. | 4 | 10 | 6 |
| 5. Explain the concept of correlation between two variables. | 4 | 10 | 6 |
| 6. Explain clearly the procedure generally followed in testing of hypothesis. | 4 | 10 | 6 |
| 7. Explain the technical issue in handling of simplex method. | 4 | 10 | 6 |
| 8. Explain the concept of Hungarian model. | 4 | 10 | 6 |
| 9. Write a note of selection matching with the person in job design. | 4 | 10 | 6 |
| 10. Explain the concept of Event network Analysis. | 4 | 10 | 6 |
