

MAY 2015

**P/ID 77502/PMBB/  
PMB1B**

---

Time : Three hours

Maximum : 100 marks

PART A — (5 × 6 = 30 marks)

Answer any FIVE questions.

1. State the multiplication rules of probability.
2. Describe the significance of Baye's theorem.
3. What is meant by hypothesis? Give an example.
4. Describe the various types of correlation.
5. What are the uses of multiple regression analysis?
6. In what way co-joint analysis used for marketing?
7. What is meant by total cost?
8. What is the purpose of the research proposal?

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

9. A candidate is selected for interview for 3 posts. For the first there are 3 candidates, for the second there are 4 candidates and for the third there are 2. What are the chances of he getting at least one?
10. The overall percentage of failures in a certain examination is 30. What is the probability that out of a group of 6 candidates at least passed the examination?
11. In a normal distribution 31% of the items are under 45 and 8% are over 64. Find the mean and standard deviation of the distribution.
12. A sample of 30 lights yielded a standard deviation of 90 hours burning time whereas the long experience with the particular brand showed standard deviation of 105 hours. Using  $\alpha = 0.05$ , test if there is any difference in the standard deviation.
13. Calculate the coefficient of correlation for the following data :

X	17	19	21	26	20	28	26	27
Y	23	27	25	26	27	25	30	33

2      **P/ID 77502/PMBB/  
PMB1B**

14. Describe the concepts of factor analysis with an example.
15. Discuss the purpose and contents of the executive summary.
16. Explain the applications of Baye's theorem.

PART C — (20 marks)

(Compulsory)

17. Fit a straight line of  $Y$  on  $X$  from the following data :

$X$	0	1	2	3	4	5	6
$Y$	2	1	3	2	4	3	5

3      **P/ID 77502/PMBB/  
PMB1B**