

Examiner's Report

AA1 EXAMINATION - JANUARY 2016

(AA12) QUANTITATIVE METHODS FOR BUSINESS

PART A

Question No. 01 - 40 marks (consists of 8 multiple choice and short answer questions)

Although major portion of this question, for which 40 marks had been allocated contained fairly easy theoretical parts, a considerable number of candidates had been able to earn less than 15 marks. Some of the weaknesses generally observed according to answers given to parts of this question are set out below:

Q. No. 1.1

This question in which the profit has to be calculated using a simple simplification has not been correctly understood by many candidates, and as a result, a wrong answer arrived at. The majority had worked it out as $\frac{937.5}{100} \times 125$.

Q. No. 1.3

This question involved calculation of correlation co-efficient. Though the required formulae had been provided, many candidates had not successfully selected and applied them.

Q. No. 1.4

This is a question relating to expected interest rates. Many candidates had made mistakes in calculations.

Q. No. 1.5

This question is associated with co-efficient of variation. Although standard deviation and mean have to be calculated from the data given, and the ratio between the two arrived at, many candidates had not done that correctly.

Q. No. 1.6

A question relating to regression. Theoretical knowledge has been tested therein. Since many candidates had not correctly understood theory, they had been unsuccessful.

Q. No. 1.7

A question to find out weighted average price. Though weighted average price can be arrived at by a simple calculation, that has not been done successfully.

Q. No. 1.8

The question involved matching of basic sampling terms in Statistics, but a large number of candidates had failed to select the correct answer.

Q. Nos. 1.9 to 1.13 had to be answered based on the graph given in the question. It was necessary to state whether the given 6 statements in the questions were True or False. Theoretical knowledge was tested by these questions but, the answers provided by candidates were at an unsatisfactory level.

Q. Nos. 1.14 to 1.16 had to be given based on the information provided in the Table of the question. Knowledge on probability had been tested. Many candidates had not attempted to answer these questions, probably because the problem had not been properly understood.

PART B

This section consisted of 4 compulsory questions.

Question No. 02 - 10 marks

(a) Majority of the candidates had attempted this question. This is a question relating to Statistics. The mean and the standard deviation of the distribution given had to be calculated. A large number of candidates had not understood that the value of X had to be obtained first from the whole distribution. Though necessary formulae had been provided in print form, majority of candidates did not seem to have applied them with proper understanding. A considerable number of candidates had calculated the mean correctly but not the standard deviation.

(b) The most suitable option in obtaining a loan was required to be stated and candidates had suggested both options as more suitable.

For repayment of mortgage loan, formula, $A = \frac{SR^n (R-1)}{R^n - 1}$ had been used.

Question No. 03 - 10 marks

(a) The cost function for a week had been given, and based on that, the cost, marginal revenue and marginal profit functions are required to be identified. Although $C^1(x)$ has to be obtained by differentiating $C(x)$ function from X, most candidates had not differentiated it correctly.

In obtaining $p(x)$ and $R(x)$ candidates had not correctly multiplied by X. Certain others had multiplied by 10,000 instead of X. In considering $p(x)$, terms had been interchanged instead of $R(x) - C(x)$. Differentiating the given functions using X appeared to have been a challenge to a large number of candidates.

(b) Even though this is a question relating to simultaneous equations, candidates had failed to write down the correct equations. Many candidates had, however, attempted the question.

Question No. 04 - 10 marks

(a) Many candidates had attempted to answer this question. This part relates to the section presentation of data under Statistics. The other part is a problem associated with interest. As a whole, majority of candidates had earned marks for the section on Bar Chart. Some candidates in the process of drawing the bar chart had connected up the bars and presented in the form of a histogram. Further, axes in the bar charts had not been shown correctly. Also it was seen that the height of the bars was not proportionate with the statistical information.

In the part relating to Pie Chart, candidates had comparatively earned less marks. The reason for this was non-calculation of the relevant angles correctly of each of the focused groups.

(b) Out of the 3 sub parts of this part, a considerable number of candidates had earned marks for the first 2 parts, but only a less number had answered correctly the part relating to computation of effective rate of interest. Even among them, only a very small number of candidates had been able to offer satisfactory answers.

Question No. 05 - 10 marks

A question relating to Time Series. A majority of the candidates had not answered satisfactorily. Even though the problem is very simple, not being conversant with the theory, a large number of candidates appeared to have given up answering the question. Even among those who attempted, only a handful of them had given satisfactory answers. It was also observed that candidates had not understood the problem.

It is unfortunate that majority of candidates had earned very low marks for this part. It is the view of the Examiners that as a whole although this is a simple question for which marks could have been easily earned, due to negligence on the part of candidates they had not earned marks having been aware of the subject matter.

PART C

Question No. 06 - 20 marks

(a) Although the weighted average price index should be calculated under this part of the question, many candidates had not selected the correct formula. Some candidates had used quantity index instead while some had written wrong formulae. Even if the correct formula had been used, application of it had been incorrect by some candidates. Further, a large number of candidates had not successfully done the simplifications. It was to this question comparatively that the second lowest marks had been earned.

(b) A large number of candidates had not correctly calculated the IRR in answering this part of the question. Selection of the discount factor also had not been done correctly. Certain candidates had not deducted the initial investment of Rs.50,000/- in arriving at the NPV.

- (c) The monthly demand / price function had been given as $P = 1,000 Q + 120,000$ and the cost function as $10,000 Q + 1,000 Q^2$. In arriving at the monthly cost only a small number of candidates had taken into account the total fixed cost of Rs.900,000/-.

Not being aware that the total cost function is equal to total revenue function at the break-even point, and arriving at the required number of units through equations formed in association with that had not been satisfactorily performed by candidates.

Many candidates had not correctly formulated the profit function. Candidates had not successfully arrived at the maximum value using differentiation through such profit function.

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General matters for which attention should be drawn to improve performance level of candidates:

1. Studying well the full contents of the new syllabus completely paying more attention to newly introduced subject matters.
2. Workings should be clearly shown along with answers wherever applicable.
3. Naming of graphs properly and explaining clearly as well as copying and application of formulae should be done with utmost care.
4. Handwriting should be legible and the numbers of questions should be correctly written.
5. Following correctly the instructions given in the question paper.
6. Perusal of past question papers and suggested answers would help sharpening of knowledge and experience.
7. Proper management of time is important.
8. Re-checking of question numbers etc. before handing over answer scripts is a must.
9. Appearing for the examination with a firm determination of passing the examination with due preparation.

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