Examiners' Report
Principal Examiner Feedback

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Introduction

The majority of candidates found this paper accessible although it was evident that not all candidates were fully prepared for the new topics on this specification. Whilst there were some very good responses to questions which asked candidates to give a reason for their answer many either gave no reason or lacked the required detail. Topics which require more attention by candidates include how to write hypotheses and translating mathematical problems into equations.

Question 1

The majority of candidates made a good start to the paper in part (a) by being able to use the given formulae to obtain the product Spearman's rank correlation coefficient. A minority of candidates forgot to rank the data and found the differences between the scores.

Part (b) was also well attempted with the majority of candidates being able to find the critical value and draw a correct conclusion. The main error that occurred was not writing the hypotheses in terms of Rho.

Part (c) proved to be one of the more challenging parts of the paper. On the whole candidates knew that the correlation coefficient would increase but were unable to give a complete reason. The required reason consisted of two parts. The first was to realise that to the $\sum d^2$ would decrease although we allowed d or d^2 decrease for D and E. The second part was to indicate that the ranks of D and E would be the same.
The most common explanation given that did not have the required detail was "the judges are in more agreement therefore Spearman's rank correlation coefficient would decrease"

Question 2

In Q2 the majority of candidates were able to gain the marks in parts (a), (b), and (c). part (d) discriminated the most able candidates on this paper as it was uncommon to see full marks being scored here. Many candidates were unable to translate the mathematical problem into an equation they could solve. Those who were able to form an equation were then able to produce a fully correct solution.

Question 3

Part (a) of question three proved to be the most accessible part of the paper with the majority of candidates gaining full marks. In part (b) whilst most candidates realised that the product moment correlation coefficient would be the same as part (a) a minority of candidates either forgot or were unable to give a suitable reason.
The nearly all candidates were able to gain some marks in part (c) with those using the method given in the mark scheme gaining full marks. The most commonly used alternative method was to go back to the original summary data to find the value of b and then use a particular value for s to try and find the value of a. This was a rather long winded and generally unsuccessful.
Part (e) was well answered with the majority of candidates gaining both marks.
Part (f) discriminated the most able candidates with a correct answer to both parts rarely being seen. Those candidates who made an attempt at answering were generally able to gain a mark in part(ii). The most common error in part (i) was to state that "all the points are close

to zero" which may be true but does not necessarily mean a linear regression model is suitable. They need to be randomly scattered.

The candidates who gained no marks in this part had left it unanswered. candidates should remember that leaving a part unanswered will definitely gain zero marks but if an attempt is made there is always a chance of scoring some marks.

Question 4
This question was well answered with many candidates gaining full marks.

Of those candidates who did not gain full marks the most common error in part(a) was to forget that $a - 5$ could $= -9$ and therefore did not give a reason for rejecting -4. In part (b) the majority of candidates showed clear their methods with full working.