Examiners' Report/
Principal Examiner Feedback

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GCE Statistics S3 (6691) Paper 01

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Introduction

The questions on the whole were answered very well with many fully correct solutions. Weaker candidates found the paper very accessible and standard methods were well known and applied accurately. There were very few candidates who seemed unprepared for this paper.

The paper discriminated effectively at the higher grades, especially question 2.

Report on individual questions

Question 1

This was a good start to the paper for the majority of candidates with part (a) usually being awarded full marks. In part (b) some candidates chose a two-tailed test when a one-tailed test was expected. There were very few attempts that scored both marks in part (c) with the majority being unaware of the need to use the product moment correlation coefficient and some deciding to simply ignore the tied ranks.

Question 2

This question proved to be a challenge to many candidates. There were a large number of responses that showed little understanding of how to carry out a survey or take a sample in practice. There were many answers that offered lists of advantages and disadvantages that related little, if at all, to the context of the question. The fact that a large number of candidates thought a practical solution involved enumerating the population and that many thought that they would 'interview' the fish showed how little this topic is understood.

Question 3

There were some very vague ideas offered about the Central Limit Theorem in part (a) with some candidates managing to score little here, but then going on to state that the mean is normally distributed in part (c). There was a lot of confusion between the distribution of the population and the distribution of the sample mean with some candidates stating that the population mean has a distribution. Part (b) was very well attempted by the majority, with many correct solutions seen. In part (c) very few candidates mentioned that the normal distribution is needed for the confidence interval. Part (d) was completely misunderstood by a lot of candidates. There were many who stated that 20000 was not in the interval, but missed the important point that it was above the interval's upper limit. Many did not understand what this meant in terms of the claim made and as a result few gained both marks here.

Question 4

This was a ready source of marks to the great majority of candidates. The only common error seen was in the statement of the hypotheses and the conclusion, which were sometimes incomplete.

Question 5

Part (a) was well done by the great majority of candidates, the most common error being a statement of hypotheses in words only. Almost all candidates are now giving their conclusion to the test in the context of the question with appropriate detail. Part (b) was very well done with many candidates giving all correct answers, with just a few candidates being thrown by the style of the question and deciding that the 1.6 should be put into a formula.

Question 6

This was a good question for most candidates as they recognised it as a standard example of this type of test. In part (a) most candidates now realise that some working has to be shown, and few failed to score here. Part (b) was also well done. The test in part (c) was also done very well, but there are still many candidates who are not aware of the fact that they should not state inappropriate values of the parameters in their hypotheses. Only a minority of candidates failed to group classes and a similarly small number failed to give the correct degrees of freedom.

Question 7

Part (a) was usually well done and it is good to see more candidates giving sketches in order to check the size of the probability required. Part (b) was less successful with a minority of candidates giving the wrong variance and thus losing the method and then the subsequent accuracy of the final answer.

Grade Boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

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