AQA

**General Certificate of Education (A-level)
June 2011**

Statistics   **SS06**

(Specification 6380)

Statistics 6

Report on the Examination

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General

Most candidates were well prepared and had a good working knowledge of the specification. However, their ability to express themselves in context when interpreting results was often a problem. Hypotheses were usually accurately stated and candidates generally seemed competent at carrying out procedures for hypothesis tests.

Question 1

Most candidates were able to comment on the experimental design questions in part (a) but some did not answer in the context of the question as required. In part (b), many candidates simply repeated the definition answers from part (a) rather than fully explaining the purpose of a placebo and a double blind trial.

Question 2

Many perfect solutions were seen. A substantial number of candidates stated hypotheses that were inconsistent with the way the differences were obtained in part (a). In part (b)(ii), candidates often stated a sign or Wilcoxon signed-rank test correctly but did not give a reason for their choice of test.

Question 3

Most candidates are very confident when carrying out a one-factor ANOVA and part (a) was very well answered. A minority attempted to carry out a two-factor ANOVA despite the data being unsuitable. Candidates should be warned that a negative error SS is clearly incorrect and will lead to all subsequent marks being lost; they should double check their work if this happens. Assumptions were confidently stated but often were not in context.

Question 4

This question was either answered very well or control limits for proportions were not attempted at all. Often candidates simply found four confidence intervals for the mean. In part (b), candidates often lost marks when proportions were not evaluated and written down. Many candidates correctly mentioned in part (b)(iii) that an investigation into the dramatic improvement would be a good idea.

Question 5

There were many errors on this question with candidates evaluating incorrect binomial probabilities in part (a). This was particularly the case for the double sampling scheme T. In part (b), it should be noted that the operating characteristics should always be plotted through the point (0, 1). Candidates were confident in answering part (c) and many were successful despite having lost marks in part (a). Part (d) had mixed responses with some candidates who had struggled in part (a) gaining full marks and some who gained full marks in part (a) being unable to attempt a solution. This was a simple application of binomial probabilities.

Question 6

Part (a)(i) was completed accurately and confidently by many candidates. For other candidates, the degrees of freedom were frequently incorrect and negative errors SS were often seen. In part (b), most candidates knew the requirement for no interaction between factors but were unable to explain this in context in part (b)(ii).

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the Results statistics page of the AQA Website. UMS conversion calculator www.aqa.org.uk/umsconversion