
Tech-Level **ENGINEERING**

Materials' Technology and Science F/506/5952
Report on the Examination

TVQ01019, TVQ01018 and TVQ01016
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General Comments

Most students demonstrated at least a basic understanding of the unit's content. The students who could apply this understanding to the contexts presented both analytically and scientifically were successful in this exam. The most successful candidates appeared to read and understand the questions thoroughly and produce sound answers that highlighted their knowledge and understanding. The least successful students found it difficult to apply their knowledge and understanding to the questions posed.

Section A

Questions One to Ten (multiple-choice)

All multiple-choice questions performed well, with the vast majority of students gaining at least 5 of the 10 marks available. Questions 2, 3 and 8 proved to be the most difficult with questions 7 and 9 being well answered.

Question Eleven

This topic is generally well answered when it has been asked previously. A large number of students scored well with many gaining 5 or 6 marks. The recognition of Silicon Carbide being an engineering ceramic appeared to be the most challenging part.

Question Twelve

A significant proportion of the students here appeared to have some knowledge of alkanes and, thus, were able to score some marks. There were also some good explanations of crosslinking within polymers – a good number of seven-mark scores were awarded here.

Question Thirteen

The section asking for a description of a transducer wasn't well answered many failed to score 1 mark for better.

The section on waveforms was much better received as many of the candidates accrued some good marks here.

Question Fourteen

Overall, this question on fluid mechanics was poorly answered. Students did not appear to have knowledge of separation point, turbulent flow and laminar flow when related to fluid mechanics and aircraft flight.

Section B

Question Fifteen

The level of calculation, transposition of formulae and recognition of engineering formulae was quite encouraging with the quality of the responses posted to the question.

Question Sixteen

Here, the answers given were below the quality that are expected when concerned with engineering “bread and butter” questions of this nature. Stress, strain and Young’s Modulus are fundamental to all engineering students and, therefore, the quality of the answers given were a little disappointing for level three learners.

Question Seventeen

This question concerned corrosion and corrosion protection. Overall, some good and in-depth responses were given by the candidates; many of the responses used the correct engineering terminology: for example, alloy, galvanising, cathodic protection etc. Very encouraging from an examiners point-of-view.

Mark Ranges and Award of Grades

Grade boundaries and cumulative percentage grades are available on the [Results Statistics](#) page of the AQA Website.