This study investigated factors that influenced students' performance in KCSE examination in Meru South District. The study sought to achieve five objectives: - to examine whether there was any relationship between class size and students performance in KCSE examination; to assess the extent to which learner characteristics influenced performance in KCSE examination; to determine in KCSE examination; to establish whether the availability of resources in schools was related to students' performance in KCSE examination and finally, to establish whether there was any relationship between class size and students performance in KCSE examination. A review of related literature was carried out under the following sub-titles: School related factors, learner related factors and non schools related factors in relation to academic performance. The study used Ex-post study design. The instruments were piloted and tested for validity and reliability. The reliability index for teachers’ questionnaire was 0.9085 and that of the teachers was 0.9482. The questionnaires were therefore used for the study. The research instruments were questionnaires. Three sets of questionnaires for head teachers, teachers and students were used. Descriptive and inferential statistics were used in the data analysis. The Chi-square test was used to test various research questions. The findings were as follows: 1. In most schools, KCSE performance was found to be average. 2. There was a significant relationship between students’ performance and teachers’ age, teaching experience, academic qualifications and teacher commitment to school work. 3. Gender of students was not significant in KCSE performance. Additionally entry mark was significant in determining performance. 4. There was a relationship between category of school and performance. Boarding schools and single sex schools were found to be performing better than day schools and mixed schools. 5. There was a significant relationship between availability of textbooks, school laboratory, library and desks and KCSE performance. 6. Class size did not influence performance in KCSE. Based on the above enumerated findings, the following recommendations were made: 1) In-service programmes be organized for teachers to give them further experience since experience was significant in influencing performance 2) Higher entry mark to schools be considered for students joining secondary schools. 3) Single sex schools be encouraged since their performance was better. 4) Parents of children in day schools be sensitized for example during parents days to provide more study time to their children at home to improve on the performance. 5) Schools should provide adequate resources in their schools which could also be enhanced through improvisation. 6) The need to improve on students discipline since it was cited as a factor influencing performance. This could be done by strengthening the guidance and counseling programmes in schools. Suggestions for further research were also made: 1. Similar studies to be undertaken in other districts in the country for comparison purposes. 2. Researchers to investigate on other variables that were not covered in the study. 3. A similar study to be carried out in private schools in the district for comparison. 4. A similar study to be carried out in an urban setting to give a balanced view on the factors which influence students' performance in public secondary schools.