

國 立 清 華 大 學 命 題 紙

97 學年度 歷史所 乙 組碩士班入學考試

科目 西方科技史 科目代碼 3402 共 1 頁第 1 頁 *請在【答案卷卡】內作答

一、近代科學革命被視為是對亞里斯多德式自然哲學(Aristotelian Natural Philosophy)的革命，請舉出至少三點，並以科學史證據來說明為何如此。(34%)

二、Context: Mathematics in the *Elements* of Euclid is presented in the so-called 'axiomatic' way. It was mainly focused on proofs, unlike other mathematical traditions. Later, this style of doing mathematics became dominant in Western mathematics, and the axiomatic style was adopted in some other disciplines.

Question: compare this style with other ancient styles of doing and teaching mathematics which you know. In your opinion, how much the 'axiomatisation' of mathematics in the West contributed to its success? How this way of doing mathematics was accepted in the cultural contexts markedly different from the Western one (give at least one example)? Can one talk about 'scientific revolutions' in the field of mathematics? (可以中文作答) (33%)

三、孔恩《科學革命的結構》一書，出版到今天已經超過四十年了。從西方科技史研究不斷進展的情形來看，你覺得這本書的內容，有甚麼地方已經逐漸過時了？但又有甚麼地方仍然歷久而彌新？請各舉一個例子來說明。(33%)