

注意：考試開始鈴響前，不得翻閱試題，
並不得書寫、畫記、作答。


國立清華大學 110 學年度碩士班考試入學試題

系所班組別：歷史研究所
乙組

科目代碼：3402

考試科目：科技史

—作答注意事項—

1. 請核對答案卷（卡）上之准考證號、科目名稱是否正確。
2. 考試開始後，請於作答前先翻閱整份試題，是否有污損或試題印刷不清，得舉手請監試人員處理，但不得要求解釋題意。
3. 考生限在答案卷上標記「由此開始作答」區內作答，且不可書寫姓名、准考證號或與作答無關之其他文字或符號。
4. 答案卷用盡不得要求加頁。
5. 答案卷可用任何書寫工具作答，惟為方便閱卷辨識，請儘量使用藍色或黑色書寫；答案卡限用 2B 鉛筆畫記；如畫記不清（含未依範例畫記）致光學閱讀機無法辨識答案者，其後果一律由考生自行負責。
6. 其他應考規則、違規處理及扣分方式，請自行詳閱准考證明上「國立清華大學試場規則及違規處理辦法」，無法因本試題封面作答注意事項中未列明而稱未知悉。

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*請在【答案卷、卡】作答

一、中國傳統文獻中可見與科技史相關材料的記載，如：天文曆算、農田水利、醫藥、器械、陶冶、版築等。然東西方學者對這些文獻的批評也不少，認為大部分出自「複製」、「貼上」前人的著述。請論述是否同意這樣的看法，並分析造成此現象的原因。另：請同學以自己最熟悉的領域為例，列出相關的重要文獻（不超過三本）及其作者或編纂者，並分析撰寫或編纂、刊印的背景、動機與目的。(34%)

二、18 到 19 世紀，西方物理學界最熱門的三個課題是光、熱、與電。請選其中一個課題，說明原本科學界普遍接受的理論是什麼，而哪些科學家在什麼時間利用什麼實驗，推翻舊說而提出新理論。(33%)

三、In October-December 2020 in Tsing Hua University a series of public lectures were devoted to activities of the famous Song dynasty polymath Shen Kuo (Shen Gua) 沈括 (1031–1095) who was an expert in numerous fields related to science and technology. Was the phenomenon of Shen Kuo very unusual, or there were other scholars – in China or in the West -- who were experts in different fields of science and technology? Provide an example of such a scholar (**NOT Shen Kuo!**) who was an expert in at least two fields of science and/or technology. Answer the following questions (in English or in Chinese) about this scholar and provide information necessary to support your opinion:

- (1) Briefly describe the biography of this scholar, his educational background, his career, and his religious affiliation (if he had one). (11%)
- (2) Introduce his main publications, their (approximate) dates, and

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provide a detailed description of the contents of one of them.
(11%)

- (3) Choose one of the main technological inventions or scientific achievements of this scholar and describe it in detail; specify how much it influenced the works of scholars who lived after him. (11%)

(完)