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 113 學年度碩士班考試入學試題

系所班組別：外國語文學系
　　　　　　甲組(外國文學組)

科目代碼：3803
考試科目：文本分析

－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。

1. Examine the passage from Dipesh Chakrabarty's *The Climate of History in a Planetary Age*. Your analysis should clearly articulate Chakrabarty's main argument, focusing on the contrast he draws between the traditional modalities of political negotiations and the pressing urgency of climate change. After outlining the central thesis, offer a critical evaluation of his claims and consider how his ideas contribute to our understanding of the complexities in addressing climate change within existing political frameworks. (50%)

There is an interesting problem of temporality here. Negotiations between nations at the level of the UN usually assume an open and indefinite calendar. For instance, we don't know when there will be peace between the state of Israel and the Palestinian population or whether the people of Kashmir will ever live in an undivided land. Those are questions that belong to an open and indefinite calendar. Similarly, we don't know when humans will be successful in ushering in a fair and equitable world. The struggle against capitalism assumes that there is time aplenty for our historical questions of injustice to be settled. The climate problem and all talk of 'dangerous' climate change, on the other hand, confront us with finite calendars of urgent action. Yet powerful nations of the world have sought to deal with the problem with an apparatus that was meant for actions on indefinite calendars. Following the success of the Montreal Protocol of 1987, the UN treated anthropogenic climate change as a 'global'—and not planetary—problem that was to be solved through the UN mechanism. This is why the UN set up the Intergovernmental Panel on Climate Change (IPCC) in 1988. But, interestingly, the action that the IPCC recommends—on global carbon budgets, for instance—assumes a finite and definite calendar that then is subjected to global negotiations. The 2°C figure that is normally seen as the threshold of 'dangerous' climate change, for instance, represents a politically negotiated compromise between the UN tendency toward an indefinite calendar of action and the finite calendar that scientists come up with. It is entirely possible that planetary climate change is a problem that the UN was not set up to deal with. But we have no better democratic alternative at present. Climate change and the Anthropocene are thus problems that are profoundly political and that challenge our received political institutions and imaginations at the same time.... The climate crisis thus produces problems that we ponder on very different and often incompatible scales of time. Policy specialists think in terms of years, decades, at most centuries, while politicians in democracies think in terms of their electoral cycles. Understanding what anthropogenic climate change is and how long its effects may last calls for thinking on very large and small scales at once, including scales that defy the usual measures of time that inform human affairs. This is another reason that makes it difficult to develop a comprehensive politics of climate change. [David] Archer goes to the heart of the problem here when he acknowledges that the million-year timescale of the planet's carbon cycle is 'irrelevant for political considerations of climate change on human time scales.' Yet, he insists, it remains relevant to any understanding of anthropogenic climate change because 'ultimately the global warming climate event will last for as long as it takes these slow processes to act' (12-13; 50-51).

2. Read the following passage from Noam Chomsky's commentary on generative AI, and identify his central argument. Then, critically evaluate his viewpoint, considering the broader implications for our understanding of AI and its comparison to human intelligence and ethics. (50%)

Jorge Luis Borges once wrote that to live in a time of great peril and promise is to experience both tragedy and comedy, with "the imminence of a revelation" in understanding ourselves and the world. Today our supposedly revolutionary advancements in artificial intelligence are indeed cause for both concern and optimism. Optimism because intelligence is the means by which we solve problems. Concern because we fear that the most popular and fashionable strain of A.I.—machine learning—will degrade our science and debase our ethics by incorporating into our technology a fundamentally flawed conception of language and knowledge.

OpenAI's ChatGPT, Google's Bard and Microsoft's Sydney are marvels of machine learning. Roughly speaking, they take huge amounts of data, search for patterns in it and become increasingly proficient at generating statistically probable outputs—such as seemingly humanlike language and thought. These programs have been hailed as the first glimmers on the horizon of artificial general intelligence—that long-prophesied moment when mechanical minds surpass human brains not only quantitatively in terms of processing speed and memory size but also qualitatively in terms of intellectual insight, artistic creativity and every other distinctively human faculty.

That day may come, but its dawn is not yet breaking, contrary to what can be read in hyperbolic headlines and reckoned by injudicious investments. The Borgesian revelation of understanding has not and will not—and, we submit, cannot—occur if machine learning programs like ChatGPT continue to dominate the field of A.I. However useful these programs may be in some narrow domains (they can be helpful in computer programming, for example, or in suggesting rhymes for light verse), we know from the science of linguistics and the philosophy of knowledge that they differ profoundly from how humans reason and use language. These differences place significant limitations on what these programs can do, encoding them with ineradicable defects.

...

The human mind is not, like ChatGPT and its ilk, a lumbering statistical engine for pattern matching, gorging on hundreds of terabytes of data and extrapolating the most likely conversational response or most probable answer to a scientific question. On the contrary, the human mind is a surprisingly efficient and even elegant system that operates with small amounts of information; it seeks not to infer brute correlations among data points but to create explanations.

...

Indeed, such programs [ChatGPT and other generative AI models] are stuck in a prehuman or nonhuman phase of cognitive evolution. Their deepest flaw is the absence of the most critical capacity of any intelligence: to say not only what is the case, what was the case and what will be the case—that's description and prediction—but also what is not the case and what could and could not be the case. Those are the ingredients of explanation, the mark of true intelligence.

...

True intelligence is also capable of moral thinking. This means constraining the otherwise limitless creativity of our minds with a set of ethical principles that determines what ought and ought not to be (and of course subjecting those principles themselves to creative criticism). To be useful, ChatGPT must be empowered to generate novel-looking output; to be acceptable to most of its users, it must steer clear of morally objectionable content. But the programmers of ChatGPT and other machine learning marvels have struggled—and will continue to struggle—to achieve this kind of balance. ("The False Promise of ChatGPT")