Mid-Semester Examination

HS7.301 Science, Technology and Society

Max Marks: 50

2 March 2023

Instructions:

Answer ANY TWO of the following questions from PART A and ANY ONE question from PART B (in 700-800 words each). Each question in PART A is worth 15 marks and each question in PART B is worth 20 marks.

PART A

[handwritten annotations: the cold fusion or Louis Pasteur's debate ... cannot perfectly prove something ... in both cases leads to confusing questions. e.g. when he said can't make life out of nothing you need something]

[handwritten left margin: the point of future at the fundamental conditions can lead to inexplicability]

1) What do you understand by experimenters' regress? Why is experimenters' regress such a key idea used in social construction of science? Explain using examples. (CO-1, CO-2)

[handwritten: automatism, self augmentation, autonomy, universalism]

2) What, according to Jacques Ellul, are the characteristics of 'technique'? List at least 4 characteristics, and explain why these characteristics force social conditions to *adapt* to the machine. (CO-1, CO-3)

3) According to Lewis Mumford, what are the features of the eotechnic phase, and how is this age different from the paleotechnic phase? What does Mumford identify as the crucial cultural changes that occur as the eotechnic phase gives way to the paleotechnic phase? (CO-1, CO-3)

4) What are the major takeaways from David Noble's work on industrial automation in the US? (CO-3)

PART B

5) Why is the question of autonomy so central in science? Explain using examples how challenges to autonomy can influence knowledge making in science. (CO-1, CO-2)

6) How would you use Mumford's ideas of 'megamachines'? Identify any one such 'megamachine' and explain *why* Mumford would classify it as a megamachine. (CO-1, CO-3)

7) If you were to use the framework of social construction, how would you go about studying the evolution of the television? Describe the basic methodology you would use, as well as the broad contours of your analysis. (CO-1, CO-3)