

**STUDY GUIDE FOR EXAMINATION #4**  
**PHILOSOPHY 2306 (BIOETHICS)**  
Spring 2010

**Define / explain:**

Gene =

Genome =

Genotype =

Phenotype =

Genetic engineering =

Genetic therapy =

Genetic Screening=

Genetic enhancement =

*somatic cell* gene therapy =

*germ cell* / '*germ line*' gene therapy =

Explain: ‘cloning’ (somatic cell nuclear transfer) =

*reproductive* cloning =

*therapeutic* cloning =

How would a human clone be like an ‘identical twin’?

Why would a human clone of you NOT be “another you”?

Why would a human clone NOT be rightly judged to be “sub-human”?

Some arguments / reasons in favor of human cloning:

Some arguments / reasons against human cloning

who was 'Dolly' and when was she produced?

stem cell research =

embryonic stem cells =

'totipotent' =

adult stem cells =

'pluripotent' =

[If 'pluripotent' is used to describe the ability of an embryonic stem cell to become any kind of cell (other than one capable of developing into a separate human being) then 'multipotent' would refer to the ability of adult stem cells to become a limited type of cell / tissue]

zygote =

blastocyst =

embryo =

trans-species hybrid animals =

xeno-transplantation =

GM foods ('Frankenfoods') =

- some benefits of GM foods:

- some risks of GM foods / crops:

The approach of Deontological ethics – arguments to genetic engineering issues:

The approach of Consequentialist ethics-arguments to genetic engineering issues:

Approach of Character-virtue ethics-arguments to genetic engineering issues:

Contrast 'conservative' and 'progressive' attitudes towards advances in biotechnology.

**Explain: Basic Ethical Concerns- Issues:**

'liberty issue' (of scientists to use biotechnology)

issue of 'need-necessity' (use of biotechnology in particular cases)

'safety' issue

issues of animal 'species integrity'

issue of "changing (human) nature"

human 'dignity' issue

issue of 'playing God' / *hubris*

issue of 'commodification' of life

issue of future 'unforeseen harms' of genetic technology

issues of 'equality and democracy':

- 1) 'access issue'
- 2) increased 'social stratification' issue
- 3) social-personal discrimination issue

issue of healthcare / insurance / employment discrimination

issue of 'impact on the institution and nature of family / kinship relations'

issue: genetic engineering is 'unnatural' therefore immoral

(and the 'yuck factor')

'informed consent' issue

issue of market values and corporate control in decision-making

issue of (adequate?) government *regulation* of biotechnology use

issue of 'designer children'

issue of impact on / attitudes towards disabled persons

**explain:**

the distinction between MORAL 'person'-hood and LEGAL 'person'-hood

Significance of conception for 'person'-hood issue:

Significance of embryonic 'twinning' and 'fusion' for 'person'-hood issue:

Significance of implantation for personhood issues:

Issue of fetal heartbeat and brainwaves for 'person'-hood issue

Significance of fetal viability for 'person'-hood issue

Significance of birth for 'person'-hood issue