

KATHMANDU UNIVERSITY
End Semester Examination
February, 2025

Marks Scored:

Level : B.Tech.
Year : III

Course : BIOT 314
Semester : II

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date : 06-feb-2025

SECTION "A"

[10 Q. × 1 = 10 marks]

Choose and encircle the most appropriate option from each set of choices

1. The slogan "the greatest happiness for the greatest number" arises from
 - a. Libertarian Theory
 - b. Egalitarian theory
 - c. Deontology
 - d. Utilitarianism
2. Which of the following ethical values and concepts is thought to be in the most conflict with autonomy?
 - a. Veracity
 - b. Paternalism
 - c. Confidentiality
 - d. Informed consent
3. Which of the following principles is concerned with providing individuals or groups with what is owed, due, or deserved?
 - a. Beneficence
 - b. Non-maleficence
 - c. Autonomy
 - d. Justice
4. The universal declaration of bioethics and human rights is addressed to
 - a. states
 - b. communities
 - c. individuals
 - d. institutions
5. The most common criterion used in drafting laws regulating abortion
 - a. Tissue separation
 - b. Brain activity
 - c. Viability of the fetus
 - d. Implantation
6. What does philosopher Ted Lockhard describe?
 - a. Perform actions that we are maximally confident are morally permissible
 - b. Perform actions that we are sure are morally permissible
 - c. Give speech that we are maximally confident are morally permissible
 - d. Give speech that we are sure are morally permissible
7. According to the basic arithmetic equation, the harm that the animal experiment will cause is the result of multiplying following three factors EXCEPT
 - a. the moral value of an experimental animal
 - b. the number of animals suffering in the experiment
 - c. the cost of research incurred in doing the animal experiment
 - d. the negative value of the harm done to each animal
8. In general, an invention is patentable if it meets the following requirement
 - a. Invention must form part of "the state of art"
 - b. Invention should be something obvious from the point of view of a skilled person in the field
 - c. Invention has to be unique that nobody else can make it again
 - d. Invention has to be useful or industrially applicable

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Time : 2 hrs. 30mins.

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Semester : II

F. M. : 55

SECTION "C"

[11 Q. × 5 = 55 marks]

Attempt ANY ELEVEN questions. (Q. N. 6 is compulsory)

1. What is non-maleficence? Discuss with an example how non-maleficence acts as an important balance to the principle of beneficence.
2. Explain casuistry with an example.
3. How did Don Marquis use the concept of a "future like ours" to support his claim that abortion is just as immoral as killing people?
4. Examine the implications of access to safe and legal abortion services on public health and social justice. How does the denial of abortion rights impact marginalized communities?
5. In which sense embryos possess a kind of potential that somatic cells and HESCs lack?
6. Read the following case and answer the questions that follow:

Case Study: Genetic Privacy and Discrimination

The Human Genome Project (HGP) enabled scientists to identify a gene linked to a rare, incurable neurodegenerative disease called Cerebral Ataxia Type 7 (CAT7). A research team, funded by a private biotech company, discovers that 1 in 500 people carry this gene, which has a 90% chance of causing severe disability by age 50. The company patents the genetic test for CAT7 and sells the data to insurance firms.

Scenario:

- Dr. Patel, a geneticist, works on the project. She learns that one of her study participants, Maria, tested positive for the CAT7 gene. Maria was never informed of her results because the consent form she signed allowed researchers to withhold "non-actionable" genetic findings.
 - Six months later, Maria applies for life insurance and is denied coverage due to her "high-risk genetic profile." She discovers the insurance company purchased her anonymized genomic data from the biotech firm. Maria sues the company, arguing that her privacy was violated and that she was never warned about the risks of participating in the study.
- a. What ethical principle(s) are violated by withholding Maria's genetic results without her explicit consent?
 - b. Should researchers have a duty to disclose *all* genetic findings to participants, even if the information is distressing or "non-actionable"?

P.T.O.

7. Should government policies strictly regulate stem cell research, or should scientific progress be prioritized? Why?
8. Explain the concept of “Acts and omissions” in the ethics of animal experimentation.
9. What were the main legal issues at stake in *Hartford-Empire Co. v. United States*, and how did the Supreme Court address these issues in its ruling?
10. Summarize the process of Patent Registration in Nepal.
11. What are the grounds for granting compulsory licenses?
12. What is PCT? Write its key features and advantages.
13. Discuss the controversy surrounding Polymerase Chain Reaction.