

M.Sc. BIOTECHNOLOGY
SECOND SEMESTER
BIostatistics, Bioethics & IPR
MBT - 204

(Use Separate Answer Scripts for Objective & Descriptive)

Duration : 3 hrs.

Full Marks : 70

(PART-A: Objective)

Time : 20 min.

Marks : 20

Choose the correct answer from the following:

1X20=20

1. Aminocentesis cannot be used to determine which one of these?
 - a. Chromosome analysis
 - b. Detecting genetic defects
 - c. Maturity of fetal lungs
 - d. None of these
2. Chorion is a/an
 - a. Membrane developing around an embryo contributing to the formation of the placenta
 - b. Sack within a pregnant women's uterus containing the amniotic fluid surrounding the fetus
 - c. Organ in the uterus connected to the fetus by the umbilical chord
 - d. None of these
3. The full form of PNDT Act is:
 - a. Post natal diagnostic test
 - b. Post neural diagnostic test
 - c. Prenatal diagnostic test
 - d. None of these
4. This procedure involves inserting a small flexible plastic tube through the vagina into the uterus
 - a. Alpha fetoprotein screening
 - b. Aminocentesis
 - c. Chorionic villi sampling
 - d. None of the above
5. Euthanasia, from the Greek word meaning:
 - a. Violatile death
 - b. Good death
 - c. Bad death
 - d. Worst death
6. In case of medical negligence a claimant can succeed only if it is established on the balance of probabilities
 - a. That the doctor breached the duty of care owed to the patient
 - b. That the breach caused the injury to the patient
 - c. That the doctor owed a duty of care to the patient
 - d. All of the above
7. Bioethics is the philosophical study of ethical controverseries concerned to:
 - a. Life science and biotechnology
 - b. Politics
 - c. Theology
 - d. None of these

18. Renewal, removal and restoration of trademarks comes under sectionof Trademark Act 1999.
- | | |
|-------|-------|
| a. 25 | b. 52 |
| c. 12 | d. 43 |
19. GATT was replaced by
- | | |
|---------|----------|
| a. WIPO | b. TRIPS |
| c. WTO | d. ITO |
20. Articles in TRIPS agreement are related to GI.
- | | |
|--------------|--------------|
| a. 22 and 23 | b. 21 and 22 |
| c. 13 and 14 | d. 14 and 15 |

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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What are Clinical Trials? Describe the different phases of a clinical trial. 2+8=10
2. What is the PNDT Act? What is Prenatal Screening? What are the most common prenatal screening tests? 3+3+4
=10
3. Write short notes on: 2×5=10
 - i. Prenatal Screening
 - ii. Aminocentesis
4. a. Define Poisson distribution. State its properties. 5+5=10
b. Assume the mean height of soldiers to be 68 inches with a variance 10 sq inches. How many soldiers in a regiment of 1000 would you expect to in between 5 feet and 6 feet.[Given $\Phi(0.40) = 0.1554$ and $\Phi(0.80) = 0.2881$]
5. The following data give yield on 10 plots of land in three samples of 4 plots, 3 plots and 3 plots, under the three varieties of fertilizers A, B and C 10

A	B	C
25	20	24
22	17	26
24	16	30
21		

Test at 5% level of significance whether there is any significant difference in the average yields of land under the three varieties of fertilizers.[Given, the critical value of F at 5% level of significance and (2, 7) degrees of freedom is 4.74.
6. What do you mean by Patent? What are the objects of Patents? Describe the procedure of acquiring patent. 1+3+6
=10
7. What is trademark? Write down the characteristics of trademark. Also describe how the trademark can be renewed, removed and restored. 1+4+5
=10
8. What is GI, give some examples? Why GI is beneficial for the society? Who can apply for GI? 2+4+4
=10

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