VCD / / BIOTECHNOLOGY-I F.Y.B.Sc. SEM I EXAM MARKS 75 2 1/2 HRS

- **All questions are compulsory.**
- **Draw diagram wherever necessary.**
- **Figures to right indicate marks.**

Q I A EXPLAIN ANY FOUR OF THE FOLLOWING TERMS **(08)**

1. Pharmacogenomics
2. Zymotechnology
3. Biotechnology.
4. White Biotechnology.
5. ELISA.
6. Blue biotechnology
7. Red Biotechnology.
8. Steroid Hormone.

Q I B DISCUSS ANY TWO OF THE FOLLOWING QUESTIONS **(12)**

1. Branches of modern biotechnology.
2. Traditional biotechnology.
3. Nanomedicines.
4. Production of vaccines through biotechnology.

Q II A EXPLAIN ANY FOUR OF THE FOLLOWING TERMS **(08)**

1. Dark field illumination
2. Resolving power
3. Eye piece
4. Numerical Aperture
5. Condenser
6. Angstrom
7. Compound Microscope.
8. Working distance of object

Q II B EXPLAIN ANY TWO OF THE FOLLOWING QUESTIONS **(12)**

1. Light microscope
2. Resolving power
3. Importance of oculars and its types.
4. Diagrammatically explain- Fluorescent microscopy.

Contd…2/-

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Q III A EXPLAIN ANY THREE OF THE FOLLOWING TERMS (06)

1. Differential stains
2. Cationic dyes
3. Acidic dyes
4. Monochrome staining
5. Acid Chromophore groups
6. Leuco compound

Q III B GIVE SIGNIFICANCE OF ANY ONE OF THE FOLLOWING (02)

1. Romanowsky stains.
2. Heat fixation.

Q. III C ANSWER ANY TWO OF THE FOLLOWING (12)

1. Explain the principle and procedure of the staining method used for differentiation of gram positive and gram negative bacteria.
2. How is a dye different from stain? Add note on types of dyes.
3. Describe the principle and procedure of ZNCF staining.
4. Give brief account on fixation.

Q IV WRITE SHORT NOTES ON ANY THREE THE FOLLOWING (15)

1. Green biotechnology.
2. Phase contrast microscopy.
3. Negative staining.
4. Ethical issues of Biotechnology.
5. Bright field microscopy.
6. Theories of staining.

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