

PE-279
(572) M.Sc. MICROBIOLOGY (SECOND SEMESTER)
Examination JUNE 2022
Compulsory/Optional
Group-
Paper-II

Name/Title of Paper- CELL BIOLOGY AND MICROBIAL PHYSIOLOGY

Time: Three Hours

Maximum Marks-080

Minimum Passing Marks-029

नोट: दोनों खण्डों से निर्देशानुसार उत्तर दीजिए। प्रश्नों के अंक उनके दाहिनी ओर अंकित हैं।

Note: Answer From Both the Section as Directed. The Figures in the right-hand margin indicate marks.

Section-A

- 1- Give Answer in one word/one line 1x10
- What are glycophorin
 - Which cell structure involve in photosynthesis
 - What is apoptosis
 - Write any one bacteria that shows chemolithotrophy
 - What is programmed cell death
 - Write about Thiobacillus species
 - How many ATPs are formed in oxidative phosphorylation
 - What is M-phase
 - Name any one anaerobic bacteria
 - What is the function of peroxisome
- 2- Give Answer in one word/one line 2x5
- Write a note on endoplasmic reticulum
 - Gap junctions
 - Photosynthetic pigments
 - Catalase
 - Lipid bilayer

Section-B

Long Answer Type Questions

15x4

Unit-I

- 3- Write about structure and chemical composition of bio-membrane in Prokaryotic and Eukaryotic cells.

Or

Write short notes on:-

- (a) Spectrins (b) Nucleus

Unit-II

- 4- Write an essay on intracellular control of cell cycle events.

Or

Write short notes on:-

- (a) Cell adhesion (b) Nitric oxide gas signal

Unit-III

- 5- Explain in detail on carbon dioxide fixation pathways.

Or

Write short notes on:-

- (a) Cyclic photophosphorylation (b) Ammonia Oxidation

Unit-IV

- 6- Write an essay on theories of ATP formation.

Or

Write short notes on:-

- (a) Inhibition of electron transport chain (b) Mechanism of oxygen toxicity