SHRIMATI INDIRA GANDHI COLLEGE

(Nationally Accredited at 'A' Grade (3rd Cycle) By NAAC)
Tiruchirappalli – 2.

QUESTION BANK FOR

M.Sc MICROBIOLOGY

2017-2018

DEPARTMENT OF MICROBIOLOGY

CONTENT

SHRIMATI INDIRA GANDHI COLLEGE, TRICHY
(Nationally Accredited at 'A' Grade (3rd Cycle) by NAAC)
DEPARTMENT OF MICROBIOLOGY
M.Sc. DEGREE EXAMINATIONS – APRIL 2017
MICROBIAL PHYSIOLOGY

SUB CODE: P16MB21 **MAX MARKS: 75**
TIME: 3 Hrs

SECTION – A **(10X2=20)**

ANSWER ALL THE QUESTIONS.

1. N – acetylglucosamine
2. EPS
3. Growth curve
4. pH
5. Mixotrophs
6. Phycobilliproteins
7. Gluconeogeneis
8. Anabolism
9. Endospore
10. Cell division.

SECTION – B **(5X5=25)**

ANSWER THE FOLLOWING QUESTIONS.

11.(a) Give short notes on Pilli and fimbriae.

(or)

(b) Write short notes on passive type membrane transport mechanisms.

12.(a) Elaborate the synchronous growth .

(or)

(b) Describe the adaptive mechanisms thermophilic bacteria.

13. (a) Write short notes on photosynthesis.

(or)

(b) Write about cyanobacteria.

14. (a) Write short notes on Calvin cycle.

(or)

(b) Write short notes on homo and hetrolactic fermentation.

15. (a) Elaborate the bacterial endospore formation.

(or)

(b) Write short note on fungi.

SECTION – C **(3X10=30)**

ANSWER ANY THREE QUESTIONS.

16. Write detailed account on biosynthesis of peptidotoglycon.

17. Give detailed account bacterial growth curve.

18. Elaborate the role of bacterial pigments in photosynthesis.

19. Write detailed notes on Embden Meyer Hoff pathway.

20 Give a detailed account on algae.

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DEPARTMENT OF MICROBIOLOGY
M.Sc. DEGREE EXAMINATIONS – APRIL 2017
ENVIRONMENTAL AND AGRICULTURAL MICROBIOLOGY

SUB CODE: P16MB12 **MAX MARKS: 75**
TIME: 3 Hrs

SECTION – A (10X2=20)

ANSWER ALL THE QUESTIONS.

1. Comment on air sanitation.
2. Define denitrification
3. Define oxidation pond
4. Comment on SCP
5. Write the composition of biogas
6. Comment on lignin degradation
7. Write short notes rhizosphere microflora
8. Write about Glomus mosseqe
9. Comment on Plant Phenolics.
10. Write about wilt disease.

SECTION – B (5X5=25)

ANSWER THE FOLLOWING QUESTIONS.

11.(a) Give an account on carbon cycle.

(or)

(b) Explain about significance of air microflora.

12.(a) Discuss in brief about primary treatment of sewage.

(or)

(b)Give an account on waterborne diseases.

13.(a) Explain about degradation of xenobiotics.

(or)

(b) Write short note on preparation of panch akavya.

14.(a) Write about the advantages mycorrhizae

(or)

(b) Explain the application method of biofertilizers

15.(a) Give brief note on fungal diseases of plant

(or)

(b) Give short note on defense compound of plant

SECTION – C **(3X10=30)**

ANSWER ANY THREE QUESTIONS.

16. Explain in detail about the assessment of air quality

17. Write an essay on solid waste management

18. Discuss in detail about bioleaching

19.Give elaborate notes on phosphate solubilizers

20. Describe in detail about mechanism and advantages of microbial pesticides.

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DEPARTMENT OF MICROBIOLOGY
M.Sc. DEGREE EXAMINATIONS – NOVEMBER 2016

FUNDAMENTALS OF BIOLOGICAL SCIENCES

SUB CODE: P16MB11 **MAX MARKS: 75**
TIME: 3 Hrs

SECTION – A (10X2=20)

ANSWER ALL THE QUESTIONS.

1. Write short notes on heterocyst.
2. Define eye spot.
3. Define coralloid roots.
4. Write note on archegonium of Pteridophytes.
5. Define paraphysis
6. Comment on staminode.
7. Write short notes about Pellicle.
8. Define Hemixis.
9. Comment on potato tuber worm.
10. What is integrated pest management ?

SECTION – B (5X5=25)

ANSWER THE FOLLOWING QUESTIONS.

11. (a) Write notes on heteromorphic and haplobiondic type of life cycle in algae.

(or)

(b) Explain the kinds of nutrition in fungi

12.(a) Give short notes on Reimers classification of Pderidophydes

(or)

(b) Write the economic importance of Gymnosperms

13.(a) Explain polygonum type of embryo sac

(or)

(b) Write note on special types of inflorescence

14 (a) Write brief note on characteristics and classification of phylum porifera up to classes With suitable examples.

(or)

(b) List out the salient features of Peripatus and its significance.

15. (a) Illustrate the method of biological pest control with two examples.

(or)

(b) Important pest and diseases of sugarcane.

SECTION – C **(3X10=30)**

ANSWER ANY THREE QUESTIONS.

16. Write an essay on the economic importance of alage.

17. Give detailed account of the male and female cones of *Cycas*

18.Explain the development of female gamedophyte in angiosperm

19. Write elaborate notes on water vascular system in starfish

20 Describe types and uses of insecticides.

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DEPARTMENT OF MICROBIOLOGY
M.Sc. DEGREE EXAMINATIONS – NOVEMBER 2016
GENERAL MICROBIOLOGY

SUB CODE: P16MB12 **MAX MARKS: 75**
TIME: 3 Hrs

SECTION – A (10X2=20)

ANSWER ALL THE QUESTIONS.

1. Magnetisone
2. PHB
3. Haeckel
4. Cladogram
5. Baker's yeast
6. Prion
7. SCP
8. Antioxidant
9. Spreat plate method
10. Synchronous culture

SECTION – B (5X5=25)

ANSWER THE FOLLOWING QUESTIONS.

11. (a) Differentiate Pili , fimbriae from flagella.

(or)

(b) Write Short notes on bacterial plasmid.

12. (a) Write short notes on Chemotaxonomy.

(or)

(b) Write note on Whottaker's five Kingdom approach.

13. (a) Briefly explain the economic importance of fungi.

(or)

(b) Enumerate the salient characteristics of fungi.

14. (a) Write a brief note on mode of reproduction in protozoa.

(or)

(b) Write note on Fritch system.

15. (a) Write short notes on anaerobic culture technique.

(or)

(b) Enlist and explain shortly about the various microbial preservation techniques.

SECTION – C **(3X10=30)**

ANSWER ANY THREE QUESTIONS.

16. Given an account on the structure and function of bacterial cell wall.

17. Write a detail account on Bergey's manual of determinative bacteriology.

18. Write an essay on structure and life cycle of *Aspergillus niger.*

19. Describe about biological and economical importance of algae.

20. Elaborate on physical and chemical requirements for microbial growth.

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DEPARTMENT OF MICROBIOLOGY
M.Sc. DEGREE EXAMINATIONS – NOVEMBER 2016

VIROLOGY

SUB CODE: P16MB13 **MAX MARKS: 75**
TIME: 3 Hrs

SECTION – A **(10X2=20)**

ANSWER ALL THE QUESTIO

1. Satellite viruses.
2. Viroids
3. Capsomer.
4. Embryonated egg
5. Complement fixation
6. Transduction
7. Interferon
8. Picornavirus
9. Wilt diseases
10 Nomenclature of virus.

SECTION – B **(5X5=25)**

ANSWER THE FOLLOWING QUESTIONS.

11.(a) Write briefly notes on discovery of viruses.

(or)

(b) Explain capsid and envelope.

12.(a) Write about cultivation of viruses.

(or)

(b) Elaborate the serological methods.

13.(a) Describe the lytic and lysogenic cycles.

(or)

(b) Elaborate on bacteriophages

14.(a) Describe the animal viruses.

(or)

(b) Explain in detail account on antiviral drug.

15.(a) Explain the nomenclature of plant viruses.

(or)

(b) Brief account on Potato leafroll virus.

SECTION – C **(3X10=30)**

ANSWER ANY THREE QUESTIONS.

16. Elaborate the satellite DNA.

17. Explain in detailed account on cultivation of viruses.

18.Write detailed notes on classification of viruses

19. Elaborate the prevention and treatment animal viruses

20.Detailed account on control of plant viruses.