

Dr. Rafiq Zakaria Campus
Maulana Azad College of Arts, Science and Commerce.

Department of Botany

(Question Bank)

Class: B.Sc. I. Semester: I

Paper Name: **Diversity of Cryptogams**. Paper Number: I

UNIT 1:

1. Describe ultra structure of Bacterial Cell add a note on its Economic Importance.
2. Give general Characters of Bacteria with its economic importance.
3. Describe reproduction in Bacteria.
4. Explain in detail structure and reproduction in *Usnea*.
5. Describe in detail TMV and its multiplication.

UNIT 2:

1. Describe life cycle of *Nostoc*
2. Describe sexual reproduction in *Chara*
3. Describe life cycle of *Botrydium*
4. Describe life cycle of *Sargassum*.
5. Write in detail sexual reproduction in *Batrchospermeum*

UNIT 3:

1. Describe asexual and sexual method of reproduction in *Albugo*.
2. Describe in detail the process of reproduction in *Mucor*
3. Give an account of sexual and asexual reproduction in *Eurotium*.
4. Describe external and internal structure in *Agaricus* basidiocarp.
5. Give an account of thallus structure of *Cercospora*. Add a note on its reproduction.

Short Notes:

- a) Economic importance of Bacteria
- b) Mycoplasma
- c) Lichens
- d) Trichome
- e) Globule
- f) Nucule
- g) Botrydium thallus
- h) Economic importance of Fungi.
- i) *Cercospora*
- j) Fruiting body of *Agaricus*
- k) Economic importance of Viruses
- l) Association in Lichen.

Dr. Rafiq Zakaria Campus, Maulana Azad College of Arts Science and Commerce
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Semester I Paper I (Diversity of Cryptogams)
MCQ's
Unit-1 Chapter 1.1 Viruses

1. Viruses are_____
A) Autotrophic. b) Heterotrophic. c) Cellular. d) Acellular *
2. More definite knowledge about chemical nature of viruses was provided by_____
a) D.J. Iwanowski. b) M.W. Stanley *. c) Louis Pasteur. d) Melvin Calvin.
3. Viruses are essentially made up of _____
a) Proteins and Nucleic acid *. b) Starch and Carbohydrates. c) Proteins and Lipids. d) Starch, Protein, Carbohydrates.
4. The organism capable of destroying bacterial colonies is _____
a) Lysis. b) Virus*. c) Fungi. d) Tadpole.
5. For successful study of the morphology of viruses the microscope used is _____
a) Binocular. b) Polarizing c) Electron* d) Simple.
6. In cyanophage the genetic material is _____
a) DNA*. b) RNA c) Both DNA & RNA d) Proteins.
7. Outside the host cell the viruses are simply non-living particles, known as _____
a) Virion*. b) Proviruses c) Prophages d) Capsids.
8. Leaf curl of Papaya is caused by _____
a) Bacteria. b) Virus* c) Fungi d) Algae.
9. Nucleic acid found in HIV is _____
a) 2 DNA b) 1 DNA c) 2RNA d) 1 RNA*
10. In which of the following viruses may have naked capsid _____
a) Polyhedral b) Helical c) Both a & b* d) Complex
11. Which of the following is absent in viruses _____
a) Mitochondria* b) DNA c) RNA d) Protein.
12. In TMV each turn of the RNA helix contains about _____
a) 29 Nucleotides b) 158 Nucleotides c) 49 Nucleotides* d) 23 Nucleotides.
13. The shape of T₄ Bacteriophage is _____
a) Tadpole shape* b) Spoon shaped c) Crescent Shaped d) Disc Shaped
14. TMV stands for _____
a) Total Multiple Virus b) Tobacco Mosaic Virus* c) Tomato Mosaic Virus d) Tree Mosaic Virus.
15. The disease caused by virus is _____
a) Malaria b) Influenza* c) Diptheria d) Typhoid.
16. TMV is _____
a) Balloon shaped b) Egg Shaped c) Rod Shaped* d) Leaf like.
17. Basic structural unit of virus capable of infecting a specific host is called _____
a) Bacteria b) Protein c) Lipids d) Virion*
18. Protein sub units of TMV are called as _____
a) Capsomers* b) Viriods c) Fats d) Sugars
19. Length of TMV is _____
a) 3000A⁰* b) 2000A⁰ c) 500A⁰ d) 1500A⁰.
20. Diameter of TMV is _____
a) 200A⁰ b) 150A⁰* c) 600A⁰ d) 70A⁰.

ANSWER:*

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MCQ's
Unit-1 Chapter 1.3 Bacteria

1. Bacteria are considered to be plants because they have _____
a) Have rigid cell wall* b) Can Not move c) Are present every where d) Can multiply by fission.
2. What is the general shape of Bacteria _____
a) Rod*. b) Spheres. c) Spirals. d) Cubes.
3. Bacteria which are smallest in size are _____
a) Vibrio b) Cocci* c) Spirilli d) Bacilli.
4. *Nostoc* species resemble as _____
a) Mitochondria b) Chloroplast c) *Chlamydomonas* d) Bacteria*.
5. The structure formed by bacterial genome is generally called _____
a) Nucleus b) Nucleoside c) Nucleolus d) Nucleoid*.
6. Circular DNA is seen in _____
a) Blue green algae. b) Fungi c) Bacteria* d) Viruses
7. Cell wall of Bacteria is made of _____
a) Cellulose. b) Lipids c) Starch d) Peptidoglycan*.
8. The cells of Cyanobacteria and Bacteria exhibit similarity in having similar _____
a) DNA* b) Plastids c) Nuclei d) Chromosomes.
9. Milk spoilage is due to _____
a) *Aspergillus* b) *Pseudomonas* c) *Lactobacillus** d) *Staphylococcus*
10. Sexual reproduction in bacteria is called as _____
a) Fusion b) Fragmentation c) Genetic Recombination* d) Meiosis.
11. Vegetative reproduction in bacteria takes place by _____
a) Zoospores b) Conidia c) Aplanospores d) Binary Fission*.
12. Following is not the shape of Bacteria _____
a) Spirillum b) Vibrio c) Sarcinae d) Square*.
13. Hans Gram is known for _____
a) *Penicillium* b) Gram Staining* c) Chromatography d) Microscope.
14. The first to discover Bacteria _____
a) A.V. Leeuwenhoek* b) R. Koch c) J. Lister d) L. Pasteur.
15. Antibiotics are mostly obtained from _____
a) Bacteria* b) Viruses c) Angiosperms d) Fungi.
16. Plasmids are _____
a) Viruses b) micro-organisms c) essential bacterial genetic element d) Extra Chromosomal DNA*
17. Bacteria respiratory enzymes are present in _____
a) Chloroplast b) Cell wall c) Cell membrane* d) Mesosomes.
18. Which one of the following fixes CO₂ into Carbohydrates.
a) *Rhizobium* b) *Nitrobacter* c) *Bacillus* d) *Rhodospirillum**
19. Symbiotic bacteria which occur in the root of leguminous plants _____
a) *Rhizobium** b) *Lactobacillus* c) *Escherichia* d) *Xanthomonas*
20. Who discovered bacterial transformation _____
a) Leeuwenhoek b) Griffith* c) Robert Hill d) Khorana.

ANSWER:*

1. The smallest known prokaryotic organisms are _____
a) Mycoplasma* b) Viruses c) Bacteriophage d) *Nostoc*.
2. Pleuro- pneumonia like organisms are grouped under _____
a) Prokaryotes* b) Eukaryotes c) Fungi d) Viruses.
3. Mycoplasma differ from viruses _____
a) Infect plants only b) Have cell wall c) Possess both DNA & RNA* d) Lack Metabolic Organelles.
4. The outer most limiting layer of typical cell of mycoplasma is a _____
a) Cell wall b) Cell membrane* c) Slime layer d) Capsule.
5. One of the diseases is caused by Mycoplasma in Plants.
a) Red rot b) Leaf curl of Papaya c) Tikka disease d) Little leaf of Brinjal*
6. Cryptogams includes _____
a) Thallophytes b) Bryophytes c) Pteridophytes d) All of the above*.
7. Classification of cryptogam is based on _____
a) D. I. Arnon. b) Bateson. c) Smith* d) Robert Koch
8. Lower cryptogams are _____
a) Angiosperms. b) Bryophytes* c) Fungi d) Gymnosperms
9. Higher cryptogams are _____
a) Pteridophytes* b) Viruses c) Angiosperms d) Bacteria.
10. The plants without flower and seeds are called as _____
a) Phanerogams b) Consumers c) Cryptogams* d) Decomposers.
11. One of the following is a symbiotic association between algae and fungi _____
a) Root Nodules b) Mycorrhiza c) Euglena d) Lichens*.
12. The algal component of Lichen is called as _____
a) Green Algae b) Phycobiont* c) Mycobiont d) Endophyte.
13. The fungal component of lichen is called as _____
a) Red algae b) Epiphyte c) Mycobiont* d) Phycobiont.
14. Lichenin found in thalli of lichen is _____
a) Carbohydrates* b) Protein c) Lipid d) Alkaloid.
15. On the basis of external form lichens are of following type _____
a) Crustose lichen b) Foliose Lichen c) Fruticose Lichen d) All of the above*.
16. Usnic acid is Obtained from _____
a) Algae b) Bacteria c) *Usnea** d) Fungi.
17. The fruiting body of lichens are _____
a) Apothecia b) Perithecia c) Cleistothecium d) Both a & b*.
18. *Usnea* often grows on _____
a) Sick or dying trees b) Water c) Soil d) walls.
19. Sexual reproduction is performed by _____
a) Algal component b) Fungal Component* c) Both a & b d) none.
20. *Usnea* species have been used to create _____
a) Caffeine b) Textile Dyes* c) Beverages d) Expectorant.

ANSWER:*

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MCQ's
Unit-2 ALGAE

1. Study of Algae is called as _____
a) Mycology b) Bryology c) Physiology d) Phycology*.
2. Whose classification is followed to classify Algae _____
a) Alexopolous b) F.E. Fritsch* c) G.M. Smith d) Bentham and Hooker
3. According to Fritsch Algae itself is _____
a) Division* b) Kingdom c) Order d) Family.
4. F.E. Fritsch divided Algae in how many classes _____
a) 10 b) 6 c) 11* d) 15.
5. Prokaryotic cell is found in class _____
a) Cyanophyceae* b) Rhodophyceae c) Xanthophyceae d) Diatoms.
6. The mode of Nutrition in Algae is _____
a) Heterotrophic b) Parasitic c) Absorptive d) Autotrophic*
7. Agar- Agar is obtained from _____
a) Bacteria b) Algae c) Mushroom d) Bryophytes
8. Chlorophyceae includes _____
a) Pink Algae b) Red Algae c) Green Algae* d) Brown Algae
9. Who is Father of Modern Indian Algology _____
a) M.O.P Iyengar* b) P. Maheshwari c) K.C. Mehta d) S.R. Kashyap
10. Algae reproduces _____
a) Vegetative b) Asexual c) Sexual d) All of the above*
11. The Cyanobacteria are _____
a) Eukaryotic b) Prokaryotic* c) a & b both d) None of the above.
12. In Cyanobacteria the nucleus is surrounded by _____
a) Single layered Membrane b) Double Layered membrane c) No Membrane* d) Triple Membrane
13. The storage products in Blue Green Algae are _____
a) Mannitol b) Cyanophycean starch and protein* c) Algin d) Agar-agar.
14. Flagellation is not found in _____
a) Chlorophyceae b) Phaeophyceae c) Charyophyceae d) Cyanophyceae*
15. The heterocyst are not found in _____
a) *Oscillatoria** b) *Nostoc* c) *Rivularia* d) *Gloeotrichia*.
16. The tissue of Anthoceros contain _____
a) *Nostoc** b) *Spirogyra* c) *Oscillatoria* d) *Lyngbya*
17. Root of *Cycas* contain _____
a) *Nostoc* b) *Anabaena** c) *Croococcus* d) *Oscillatoria*.
18. The filament of *Nostoc* is called as _____
a) Flagella b) Pilli c) Trichome* d) Hormogone
19. Nitrogen fixation in rice fields is carried by _____
a) *Nostoc** b) *Chara* c) Fungi d) Virus.
20. Akinite formation is seen in _____
a) Red Algae b) Yellow Algae c) Diatoms d) Blue green Algae*.

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MCQ's

Unit-2 ALGAE

1. The stonewort's belong to _____
a) Oedogonials b) Volvocales c) Charales* d) Bryophytes
2. The vegetative reproduction in *Chara* takes place by _____
a) Amylum Starch b) Bulbils c) Secondary protonema d) All of the above*.
3. Sexual reproduction in *Chara* takes place by _____
a) Amylum star b) Nucule c) Globule d) Nucule & Globule*
4. Antherozoids of *Chara* are _____
a) Single flagellate b) Biflagellate* c) Multiflagellate d) aflagellate
5. The *Chara* plants remain covered by _____
a) Potassium carbonate b) Sodium Carbonate c) Calcium Carbonate* d) Sodium bi Carbonate.
6. The Manubrium is found in _____
a) Nucule of *Chara* b) Globule of *Chara** c) Bulbils of *Chara* d) Amylum Star of *Chara*
7. The chloroplast of *Chara* are _____
a) Girdle shaped b) Cup shaped c) Spiral d) Discoid*
8. The Corona is found in _____
a) Nucule of *Chara** b) Globule of *Chara* c) Bulbils of *Chara* d) Protenema of *Chara*
9. Secondary protonema is found in _____
a) *Oedogonium* b) *Volvox* c) *Spirogyra* d) *Chara**
10. Storage product of *Chara* is _____
a) DNA b) Starch* c) Protein d) Oils
11. It is common terrestrial Alga of drying mud _____
a) *Nostoc* b) *Chara* c) *Spirogyra* d) *Botrydium**
12. *Botrydium* belongs to class _____
a) Rhodophyceae b) Xanthophyceae* c) Cyanophyceae d) Diatoms
13. The plant body of *Botrydium* is _____
a) Unicellular b) Multinucleated c) Both a & b* d) None of the above.
14. The vesicles of *Botrydium* remain encrusted with _____
a) Sodium carbonate b) Sodium bi Carbonate c) Sodium chloride d) Calcium Carbonate
15. Photosynthetic product of *Botrydium* is _____
a) Starch b) Oil c) Fat d) Both b & c*.
16. Sexual reproduction in *Botrydium* is _____
a) Oogamous b) Anisogamous c) isogamous* d) All of the above.
17. Asexual reproduction in *Botrydium* leads to formation of _____
a) Zoospores* b) Conidia c) Meiospores d) Megaspore
18. Chromatophores in *Botrydium* are _____
a) Ribbon like b) Oval c) Discoid* d) Linear
19. Siphonous form of Algae is _____
a) *Chara* b) *Nostoc* c) *Hydrodictyon* d) *Botrydium**
20. Chief Pigment of Xanthophyceae members are _____
a) Chlorophyll-a b) Chlorophyll-e c) β carotene d) All of the above*.

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MCQ's
Unit-3 FUNGI

1. The study of Fungi is called as _____
a) Mycology* b) Cytology c) Algology d) Embryology
2. Fungi Lack _____
a) Ribosomes b) Cell wall c) Chloroplast* d) Nucleus
3. Cell wall of fungi is composed of _____
a) Cellulose b) Chitin* c) Cellulose d) Cellulose & Hemicellulose.
4. White rust of crucifers is caused by _____
a) *Puccinia*. b) *Ustilago* c) *Albugo** d) *Peziza*
5. *Albugo candida* is _____
a) Saprophytic fungus b) Parasitic fungus* c) Autotrophic fungus d) Epizotic fungus
6. In *Mucor*, during sexual reproduction, fusion occurs between two _____
a) Gametes. b) Hyphae c) Gametangia d) Sporangia.
7. The sexual spores are _____ in *Mucor*
a) Motile b) Non-motile* c) Flagellated d) Capsulated
8. The fruiting body of *Eurotium* is known as _____
a) Apothecium b) Perithecium c) Cleistothecium* d) Stroma
9. Commercial source of citric acid from sugar involves fermentation by _____
a) Citrus fruit b) Bacteria c) *Penicillium* d) *Aspergillus*
10. In *Agaricus*, the fruiting body is made up of _____
a) Primary mycelium b) Secondary mycelium c) Tertiary mycelium* d) Haploid mycelium
11. Fruiting body of *Agaricus* is called as _____
a) Ascocarp b) Basidiocarp* c) Ergot d) Stipe.
12. Umbrella like cap of mushroom is _____
a) Pileus* b) Basidium c) Gill d) Capsid.
13. Tikka disease of groundnut is caused by _____
a) *Aspergillus* b) *Albugo* c) *Alternaria* d) *Cercospora**
14. Penicillin was discovered by _____
a) Alexander Fleming*. b) AF Blakeslee c) Elie Metchinkoff d) Felix dujardin
15. Which of the following is used as human food _____
a) *Agaricus* b) *Coprinus* c) *Amanita* d) Smut.

ANSWER:*