

This question paper contains 3 printed pages]

R—67—2017

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

MARCH/APRIL, 2017

(CBCS/CGPA)

BOTANY

Paper I (CCB-I)

(Diversity of Microbes)

(MCQ+Theory)

(Saturday, 1-4-2017)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-*
- (i) Attempt *All* questions.
 - (ii) *All* questions carry equal marks.
 - (iii) Use separate answer-sheet for MCQ (OMR sheet) and descriptive questions.
 - (iv) Time allowed to MCQ and to descriptive questions is 2.00 hours.
 - (v) Draw well labelled diagrams wherever necessary.

(MCQs)

1. Choose the correct answer of the following questions :

10

- (i) Virology is the study of :
 - (a) Algae
 - (b) Bacteria
 - (c) Fungi
 - (d) Viruses
- (ii) All viruses are entirely :
 - (a) Parasitic
 - (b) Symbiotic
 - (c) Saprophytic
 - (d) Epiphytic
- (iii) The virus which kills the bacteria is called as :
 - (a) Plant virus
 - (b) Animal virus
 - (c) Bacteriophage
 - (d) None of these

P.T.O

- (iv) Conjugation was first discovered by :
- | | |
|---------------|-------------------------|
| (a) Koch | (b) Tatum |
| (c) Lederberg | (d) Lederberg and Tatum |
- (v) Nostoc is :
- | | |
|-------------------|-------------------|
| (a) Myxobacteria | (b) Archebacteria |
| (c) Cyanobacteria | (d) Bacillus |
- (vi) Eurotium belongs to class :
- | | |
|--------------------|--------------------|
| (a) Oomycetes | (b) Ascomycetes |
| (c) Basidiomycetes | (d) Deuteromycetes |
- (vii) Fungi growing on dead and decaying organic matter are called :
- | | |
|-----------------|----------------|
| (a) Saprophytic | (b) Parasitic |
| (c) Epiphytic | (d) Endophytic |
- (viii) Peculiar dual organism is :
- | | |
|--------------|-----------|
| (a) Bacteria | (b) Fungi |
| (c) Lichen | (d) Virus |
- (ix) Rusts caused by :
- | | |
|----------------|--------------|
| (a) Alternaria | (b) Eurotium |
| (c) Puccinia | (d) Bacteria |
- (x) Lichen is the association of :
- | | |
|------------------------|------------------------|
| (a) Algae and Bacteria | (b) Fungi and Bacteria |
| (c) Algae and Fungi | (d) Virus and Bacteria |

(Theory)

2. Describe the ultrastructure of bacteria cell.

Or

Describe in brief :

- (a) Yellow vein mosaic of Bhindi.
 (b) Classification of viruses based on host.

3. Describe the structure of mycelium and asexual reproduction of *Albugo*. 10

Or

Describe in brief :

- (a) Role of Fungi in industries
- (b) Asexual reproduction in *Eurotium*.

4. Describe the structure of mycelium and reproduction of *Alternaria*. 10

Or

Describe in brief :

- (a) Economic importance of Lichen
- (b) Eycnidial stage of puccinia.

This question paper contains 3 printed pages]

W—72—2018

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA Pattern)

BOTANY

Paper I

(Diversity of Microbes)

(MCQ & Theory)

(Wednesday, 17-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B.* — (i) Attempt *All* questions.
(ii) *All* questions carry equal marks.
(iii) Use separate answer-sheet for MCQ (OMR-sheet) and descriptive questions.
(iv) Draw a well labelled diagrams wherever necessary.

MCQ

1. (i) Viruses are :
- | | |
|-----------------|---------------------------|
| (a) Saprophytes | (b) Obligate parasites |
| (c) Symbiotic | (d) Facultative parasites |
- (ii) Little leaf of brinjal is caused by :
- | | |
|-----------|----------------|
| (a) Fungi | (b) Bacteria |
| (c) Virus | (d) Mycoplasma |
- (iii) Prions cause disease :
- | | |
|----------------------------|-----------------|
| (a) Mad cow | (b) Bean mosaic |
| (c) Little leaf of brinjal | (d) Ergot |

P.T.O.

- (iv) Conjugation was first described by :
- (a) R. Hook (b) Lederberg and Tatum
(c) Leeuwenhock (d) R. Koch
- (v) Nostoc is :
- (a) Archaeobacteria (b) Myxobacteria
(c) Cyanobacteria (d) Polybacteria
- (vi) Mycology is the study of :
- (a) Bacteria (b) Fungi
(c) Algae (d) Viruses
- (vii) Eurotium belongs to class :
- (a) Oomycetes (b) Basidiomycetes
(c) Deuteromycetes (d) Ascomycetes
- (viii) Fungi growing on dead and decaying organic matter are called :
- (a) Parasitic Fungi (b) Saprophytic Fungi
(c) Autotrophic Fungi (d) Symbiotic Fungi
- (ix) In Lichen thallus algal partner is called :
- (a) Phycobiont (b) Mycobiont
(c) Both (a) and (b) (d) None of the above
- (x) is used for production of alcoholic beverage.
- (a) Penicillium (b) Yeast
(c) Puccinia (d) Alternaria

Theory

2. Describe the structure of TMV and add a note on transmission of viruses.

Or

Write in brief :

- (a) Archaeobacteria
(b) Bean mosaic

WT

(3)

W-72-2018

3. Describe the ultrastructure of bacterial cell.

Or

Write in short :

- (a) Cleistothecium
 - (b) Uredial stage of puccinia.
4. Describe the structure of mycelium and reproduction in *Alternaria*.

Or

Describe in brief :

- (a) Economic importance of Lichens
- (b) Structure of Mycelium of *Albugo*.



This question paper contains 1 printed page!

X—36—2019

FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. (First Year) (First Semester) (Regular) EXAMINATION
OCTOBER/NOVEMBER, 2019

(New Course)

BOTANY

Paper-II

(Plant Ecology, Phytogeography and Environmental Biology)

(Friday, 18-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. — (i) Attempt All questions.

(ii) Illustrate your answers with suitable labelled diagrams wherever necessary.

1. Define soil. Give an account on soil formation. 15

Or

Write short notes on :

(a) Pyramid of Energy 8

(b) Biotic Components of an Ecosystem. 7

2. Describe the T.S. of Hydrilla stem. Enlist the Adaptations of Ecological interest. 15

Or

Write short notes on :

(a) Types of Soil Erosion 8

(b) Chipko Movement. 7

3. Write short notes on (any two) : 10

(a) Soil moisture

(b) General characters of Halophytes

(c) Food chain

(d) Afforestation.



This question paper contains 3 printed pages

Y—83—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) (Backlog) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CBCS/CGPA Pattern)

BOTANY

Paper I

(Diversity of Microbes)

(MCQ & Theory)

(Monday, 18-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—**
- Attempt *all* questions.
 - All questions carry equal marks.
 - Use separate answer sheet for MCQs (OMR) and descriptive questions.
 - Draw well labelled diagrams wherever necessary.

MCQ

1. Multiple Choice Questions : 10
- Virology is the study of.....
 - Bacteria
 - Fungi
 - Viruses
 - Algae
 - Yellow vein mosaic disease of bhendi is caused by.....
 - Phaseolus Virus-I
 - Hibiscus Virus-I
 - Bacterial Virus
 - Mycoplasma
 -is the most common method of a sexual reproduction in bacteria.
 - Budding
 - Binary Fission
 - Endospore Formation
 - Conjugation

P.T.O.

- (iv) In *E.coli*, DNA is.....
- | | |
|--------------|-----------------|
| (a) Circular | (b) Triangular |
| (c) Linear | (d) Rectangular |
- (v) Albugo belongs to class.....
- | | |
|--------------------|--------------------|
| (a) Ascomycetes | (b) Oomycetes |
| (c) Deuteromycetes | (d) Basidiomycetes |
- (vi) Most of the fungal cell wall contain.....
- | | |
|-------------|------------|
| (a) Chitin | (b) Pectin |
| (c) Protein | (d) Starch |
- (vii) Arrangement of conidia in *Eurotium* is.....
- | | |
|----------------|---------------|
| (a) Acropetal | (b) Irregular |
| (c) Peripheral | (d) Basipetal |
- (viii) Rust is caused by.....
- | | |
|---------------------|-----------------------|
| (a) Albugo | (b) Puccinia |
| (c) <i>Eurotium</i> | (d) <i>Alternaria</i> |
- (ix) Which of the following is called imperfect fungi ?
- | | |
|--------------|-----------------------|
| (a) Albugo | (b) <i>Eurotium</i> |
| (c) Puccinia | (d) <i>Alternaria</i> |
- (x) Lichen is an association of.....
- | | |
|------------------------|------------------------|
| (a) Algae and Bacteria | (b) Algae and Virus |
| (c) Algae and Fungi | (d) Bacteria and Fungi |

Theory

2. Describe the structure of TMV and transmission of viruses. 10

Or

Describe in brief :

- | | |
|---|---|
| (a) Mode of nutrition in bacteria. | 5 |
| (b) Classification of viruses on the basis of host. | 5 |

WT

(3)

Y—83—2019

3. Describe the ultra-structure of bacterial cell. 10

Or

Describe in brief :

(a) Telial stage in Puccinia. 5

(b) Sexual reproduction in Albugo. 5

4. Describe the structure of mycelium and reproduction in Alternaria. 10

Or

Describe in brief :

(a) Role of Fungi in Industries. 5

(b) Economic importance of Lichens. 5

Name of Examination: Winter Examination 2020			
Name of subject	Zoology		
Subject code: (As per examination time table)	B.Sc. I/Cluster Code 117		
Class:	B.Sc. First Year	Semester	I
Paper title and paper no. (As per examination time table)	Paper I: Biodiversity of Invertebrates		
Time:	01 hour	Maximum Marks:	40

- N.B. (1) All questions are compulsory.
 (2) All questions carry equal marks
 (3) Attempt all the questions

- Protozoa are also called.....
 a) procellular b) multicellular c) acellular d) prokaryote
- The presence of two types of nuclei, a macro-nucleus and a micronucleus is characteristic of protozoans are grouped under the class:
 a) Flagellata b) Sporozoa c) Sarcodina d) Ciliata
- The main function of the contractile vacuole is:
 a) chlorophyll production. b) synthesis of carbohydrate.
 c) eliminating excess water d) to be a photoreceptor to detect light
- The main basis of classification of protozoa is:
 a) Size b) Shape c) Locomotory organs d) Number of nuclei
- Class of phylum protozoa move via pseudopodia.
 a) Rhizopoda b) ciliate c) flagellate d) sporozoa
- In Euglena locomotion by
 a) Cilia b) Flagella c) Pseudopodia d) Myonemes
- In which class of Protozoa, the locomotory organelles absent:
 a) Rhizopoda b) Ciliate c) Sporozoa d) Mastigophora
- Plasmodium is the causative agent of malaria which was discovered by:
 a) Laveran b) Ross c) Golgi d) Lamble
- Malarial parasite is transmitted by.....
 a) Male anopheles b) Male culex
 c) House fly d) Female anopheles
- Poriferans are:
 a) pore bearing animals b) unicellular organisms
 c) parasitic organisms d) metamerically segmented organism
- Body wall in Coelenterate is.....
 a) Diploblastic b) Triploblastic c) Single layered d) Polyblastic

12. Phylum Cnidaria (coelenterata) is divided into classes Hydrozoa, Scyphozoa and ...
 a) Anthozoa b) Metazoa c) Protozoa d) Spermatozoa
13. Exoskeleton of corals consist of?
 a) Calcium sulphate b) Calcium carbonate c) Sodium sulphate d) Calcium aluminate
14. Polymorphism occurs in animals of the class.
 a) Hydrozoa b) Anthozoa c) Scyphozoa d) Gastropoda
15. Platyhelminthes are generally called
 a) Flat worms b) Round worms c) Tubiculus worms d) Blind worms
16. Which system is best developed in Helminthes?
 a) Neuro-sensory system b) Reproductive system c) Digestive system d) Respiratory system
17. Flame cell is typical of
 a) Annelida b) Chordata c) Porifera d) Platyhelminthes
18. Non parasitic, free living flatworms belong to the class:
 a) Trematoda b) Cestoda c) Turbellaria d) nematoda
19. Primary host and secondary host of Taenia are & Respectively.
 a) Man, sheep b) Sheep, snail c) Man, pig d) Pig, man
20. Ascaris is
 a) Free living b) Ectoparasite c) Endoparasite d) Commensal
21. Which one of these is the primary characteristic of phylum annelida?
 a) Trochophore larva in life cycle b) Metameric segmentation
 c) Excretion by flame cells d) Body covered by ciliated epidermis
22. True coelom appeared first in the course of evolution in:
 a) Echinodermata b) Annelida c) Chordata d) Aschelminthes
23. Parapodia are locomotory organs in Neries which belong to the class:
 a) Hirudinea b) Oligocheta c) Polycheta d) Arachiannelida
24. Earthworm belongs to the class:
 a) Polychaeta b) Oligochaeta c) Hirudinea d) All of the above
25. Which one is known as Nature's plough man
 a) Nereis b) Cattle leech c) Earthworm d) Polygordius
26. Phylum arthropoda is characterized by:
 a) Green gland b) Unjointed appendages c) Jointed appendages d) Protopodite
27. Which of the following phyla has the largest number of species
 a) Annelida b) Arthropoda c) Coelenterata d) Echinodermata

28. In cockroach, the first pair of wings are called:
 a) Sterna b) Terga c) Tegmina d) Halteres
29. In digestive system of cockroach grinding machine is:
 a) Crop b) Mandible c) Gizzard d) Maxilla
30. Study of insects is known as:
 a) Parasitology b) Entomology c) Acarology d) Helminthology
31. Animals having soft body, mantle and shell belong to phylum:
 a) Annelida b) Echinodermata c) Mollusca d) Arthropoda
32. Mode of respiration in mollusca is:
 a) Cutaneous b) Branchial c) Pulmonary d) All of the above
33. Oysters that produce pearls belong to the class:
 a) Cephalopoda b) Gastropoda c) Scaphopoda d) Pelecypoda
34. Molluscan shells are used in :
 a) Poultry feed b) Making road c) Cradled d) All of the above
35. Spiny skin, exclusively marine habitat and non-parasitic nature are features of:
 a) Annelida b) Echinodermata c) Hemichordate d) Coelenterata
36. The characteristic feature of echinoderms is the possession of:
 a) water vascular system b) Canal system c) Haemal d) None of the above
37. The locomotory organs of Echinoderms are called:
 a) Parapodia b) Pseudopodia c) Tube feet d) Setae
38. The surface having mouth of starfish directed towards the substratum is called as:
 a) Aboral b) Abactinal c) Oral d) dorsal
39. Which group of animal is known as invertebrate chordates:
 a) Echinodermata b) Hemichordate c) Arthropoda d) All of the above
40. Balanoglossus shows affinity with chordates as it has type of coelom:
 a) Enterocoelous b) Pseudocoelom c) Schizocoelom d) None of the above

FACULTY OF SCIENCE

Class: B.Sc. I Year (SEM I)

Examination: Winter 2020

Subject: Botany

Title of Paper: Virus, Bacteria, Algae, Fungi, Lichens & Mycorrhiza

Paper No.: I

Cluster code: SD

107011

Date : 09/04/2021

Time : One Hour

Maximum Marks : 40

- N.B. -
- (i) One mark to each correctly answered MCQ
 - (ii) No Negative marking system is applicable
 - (iii) Darken only one circle for the answer of MCQ
 - (iv) Use black ball pen to darken the circle of correct choice

- 1) Viruses are _____
- A) Obligate parasite B) Saprophytes C) Facultative saprophyte D) None of the above
- 2) The symptom produced by viruses is _____
- A) Rust B) Canker C) Mosaic D) Mildews
- 3) TMV contains _____ as nucleic acid
- A) DNA B) RNA C) Both A & B D) None of the above
- 4) Capsid is composed of many similar small protein units called as _____
- A) Capsomere B) Nucleic acid C) Histone D) None of the above
- 5) Yellow vein mosaic of bhindi is caused by _____
- A) Phaseolus virus B) Hibiscus virus-I C) Potyvirus D) None of the above
- 6) Bacteria are primitive _____ organisms
- A) Prokaryotic B) Eukaryotic C) Monokaryotic D) None of the above
- 7) Splitting of bacterial cell into two daughter cells is called as _____
- A) Conjugation B) Binary fission C) Transduction D) Transformation
- 8) The principal structural component of bacterial cell is _____
- A) Peptidoglycan B) Protein C) Carbohydrate D) Lipid
- 9) Citrus canker is caused by
- A) *Bacillus subtilis* B) *Pseudomonas fluorescense* C) *Xanthomonas citri* D) None of the above
- 10) _____ is the process by which one bacterium transfers genetic material to another through direct contact.
- A) Conjugation B) Binary fission C) Transduction D) Transformation

- 11) Phycology is the study of _____
 A) Algae B) Fungi C) Lichen D) *Mycoplasma*
- 12) Rhodophyceae is a class of _____ algae
 A) Green B) Brown C) Red D) *Yellow-green*
- 13) Cap cells is the characteristic of _____
 A) *Oedogonium* B) *Chara* C) *Ectocarpus* D) *None of the above*
- 14) Sexual reproduction in *Oedogonium* is _____
 A) Isogamous B) Anisogamous C) Oogamous D) *All of the above*
- 15) Chloroplast in *Oedogonium* is _____
 A) Spiral B) Reticulated C) Cup shaped D) *Star shaped*
- 16) *Nostoc* is enveloped by _____
 A) Jacket layer B) Cover cells C) Gelatinous sheath D) *Peridium*
- 17) In *Nostoc* filament colourless, thick walled, empty looking cell are present between the vegetative cells are called as _____
 A) Heterocyst B) Akinetes C) Hormogonia D) *None of the above*
- 18) *Ectocarpus* is the member of class _____
 A) Chlorophyceae B) Phaeophyceae C) Rhodophyceae D) *Xanthophyceae*
- 19) Plurilocular sporangia are concerned with _____ reproduction
 A) Asexual B) Sexual C) Both A & B D) *None of the above*
- 20) Agar- agar is obtained from _____
 A) *Gelidium* B) *Nostoc* C) *Oedogonium* D) *None of the above*
- 21) Fungi growing on dead and decaying organic matter are called as _____
 A) Parasites B) Saprophytes C) Obligate parasites D) *Autotrophs*
- 22) Fungal cell wall is made up of _____
 A) Chitin B) Cellulose C) Glycogen D) *Peptidoglycan*
- 23) *Penicillium* belongs to _____
 A) Basidiomycetes B) Ascomycetes C) Deuteromycetes D) *Phycomycetes*
- 24) Number of ascospores formed in each ascus of *Penicillium* is
 A) 4 B) 8 C) 12 D) 16
- 25) *Alternaria* causes _____ disease in plants
 A) Leaf spot B) Rust C) canker D) *smut*

- 26) Sexual reproduction is absent in _____
- A) *Alternaria* B) *Albugo* C) *Penicillium* D) *Agaricus*
- 27) The sexual reproduction in *Agaricus* takes place by _____
- A) Oogametes B) Isogametes C) Anisogametes D) Somatogametes
- 28) The fruiting body of *Agaricus* is called as _____
- A) Basidiocarp B) Aszocarp C) Cleistothecium D) None of the above
- 29) *Penicillium* is used in the production of
- A) Antibiotic B) Cheese fermentation C) Both A & B D) None of the above
- 30) One of fungi used as food from following is _____
- A) *Agaricus* B) *Albugo* C) *Penicillium* D) *Aspergillus*
- 31) The algal partner in lichen is called as _____
- A) Lycobiont B) Phycobiont C) Mycobiont D) None of the above
- 32) The fungal partner in lichen is called as _____
- A) Lycobiont B) Phycobiont C) Mycobiont D) None of the above
- 33) _____ are the forms of Lichen
- A) Crustose B) Foliose C) Fruticose D) All of the above
- 34) *Usnea* is a _____ lichen
- A) Crustose B) Foliose C) Fruticose D) None of the above
- 35) Which of the following is the indicator of atmospheric pollution?
- A) Algae B) Bacteria C) Lichen D) None of the above
- 36) _____ is a symbiotic association between a green plant and a fungus
- A) Mycorrhiza B) Lichen C) Bacteria D) None of the above
- 37) _____ fungi are that they penetrate the cells in the root cortex and form Arbuscules and Vesicles
- A) Ectomycorrhiza B) Endomycorrhiza C) Both A & B D) None of the above
- 38) The ectomycorrhiza are also called as _____
- A) Hartig Net B) VAM C) Arbuscule D) None of the above
- 39) The advantage of plant with mycorrhizal association is _____
- A) Food B) Protection C) Increase absorption of minerals D) None of the above
- 40) The fungal partner in VAM belongs to the class _____
- A) Basidiomycetes B) Ascomycetes C) Glomeromycetes D) All of the above

12:00 to 1:00

Name of Examination: Winter Examination 2020			
Name of subject		Zoology	
Cluster code: (As per examination time table)		117	
Class:	B.Sc. First Year	Semester	I
Paper title and paper no. (As per examination time table)		Paper II: Biodiversity of Chordates	
Time:	01 Hour	Maximum Marks:	40

N.B. (1) Attempt all questions.

(2) All question Carry equal marks.

(3) Use OMR Answer sheet.

1. Prime diagnostic feature of phylum chordate is _____
A) Gill slits B) Larynx C) Dorsal ventral cord D) Notochord
2. The primary function of the notochord is.....
A) sensory B) digestive C) support D) respiration
3. Heart of vertebrate is
A) dorsal, muscular B) dorsal, skeletal C) ventral, muscular D) ventral, skeletal
4. In Urochordata notochord is found in
A) Head of adult B) Tail of adult C) Tail of larva D) Test of adult
5. Herdmania belongs to sub phylum _____
A) Hemichordata B) Urochordata C) Pisces D) Gnathostomata
6. The position of notochord in Cephalochordates _____
A) Extended from posterior end to anterior end B) Confined to head only
C) Confined to tail only D) None of the above.
7. The following is a cephalochordate animal:
A) Ranna B) Salpa C) Amphioxus D) None of the above
8. Agnatha is characterized by absence of _____
A) Exoskeleton B) Endoskeleton C) Jaws D) Head
9. Petromyzon belongs to class _____
A) Chondrichthyes B) Osteichthyes C) Cyclostomata D) Tunicate
10. Characteristic feature of Cyclostomata is _____
A) Round mouth B) Ventral mouth C) Terminal mouth D) None of the above
11. Which of the following is the correct taxonomy for fishes?
A) Kingdom Animalia, Phylum Chordata, Subphylum Vertebrata
B) Kingdom Animalia, Phylum Chordata, Subphylum Urochordata
C) Kingdom Animalia, Phylum Vertebrata, Subphylum Chordata
D) Kingdom Animalia, Phylum Chordata, Subphylum Pisces
12. Cartilaginous fishes are characterized by the presence of _____
A) placoid B) cycloid C) ctenoid D) ganoid

13. Scoliodon is _____
 A) Marine, herbivorous B) Fresh water, carnivorous
 C) Marine, carnivorous & predator D) Fresh water, omnivorous.
14. Tail of Scoliodon is _____
 A) Homocercal B) Heterocercal C) Hypocercal D) Hypercercal
15. Scroll valve involved in _____
 A) absorption B) digestion C) assimilation D) ejection
16. Viviparous fish is _____
 A) Dog fish B) Catla C) Mrigal D) Rohu
17. Which is limbless amphibian _____
 A) Ichthyophis B) amphiuma C) necturus D) Hyla
18. First tetrapodes are _____
 A) Reptiles B) Birds C) Mammals D) Amphibia
19. Amphibians are characterized by _____
 A) Absence of scales B) Absence of Fins C) Absence of Operculum D) All of the above
20. Summer sleep of frog is known as _____
 A) Aestivation B) Hibernation C) Paedogenesis D) Neoteny
21. The largest Indian poisonous snake is _____
 A) Blue Krait B) Cobra C) King Cobra D) Python
22. Study of snakes is called
 A) Ichthyology B) Serpentology C) Herpatology D) Entomology
23. Krait (Bungarus) can be differentiated from another snake by its....
 A) Hairy body B) Size C) Shield like scales on the head D) Vertebral scales
24. Study of reptiles is called as _____
 A) Ichthyology B) Herpetology C) Osteology D) Ornithology
25. Venom of Naja naja is _____.
 A) Neurotoxic B) Haemotoxic C) Both A and B D) None of the above
26. Aves are characterized by _____
 A) Pneumatic bones B) Solid bones C) Both A and B D) None of the Above
27. Birds are _____ animals.
 A) Cold blooded B) warm blooded C) chilled blooded D) None of the Above
28. Birds do not have _____
 A) Urinary bladder B) Swim bladder C) teeth D) All of the above

29. The study of birds is called.
 A) Ichthyology B) Herpetology C) Ornithology D) aviology
30. In birds, one is functional:
 A) Right ovary B) Left ovary C) Kidney D) None of the above
31. Body of mammals is covered by _____
 A) Scales B) Skin C) Hair D) Horn
32. Example of marsupilia is _____
 A) Horse B) Rabbit C) Elephant D) Kangaroo
33. The body cavity of mammals is divided into two parts with the help of _____.
 A) Ilium B) Ischium C) Diaphragm D) Liver
34. Flying mammals are included
 A) Rodentia B) Chiroptera C) Primates D) Cetacean
35. The body of Rat is divisible into _____
 A) Head, neck, trunk and tail B) Head, neck and trunk
 C) Head, neck and tail D) Head and trunk
36. Rectum is a part of:
 A) Intestine B) Testis C) Heart D) Stomach
37. The right lung of rat is divided into _____ lobes.
 A) Two B) Three C) Four D) Six
38. Heart of rat is _____.
 A) Two chambered B) Three chambered C) Four chambered D) None of the above
39. The formation of image in dim light is due to
 A) Rod cells B) Cone cells C) Olfactory cell D) Prokaryotic cell
40. Internal ear of rat is called as:
 A) Membranous lybrinth B) Pericardial membrane C) Pleural membrane D) Plasma membrane

This question paper contains 1 printed page|

SB—42—2022

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

MAY/JUNE, 2022

(New Pattern)

BOTANY

Paper-I

(Viruses, Bacteria, Algae, Fungi, Lichens and Mycorrhiza)

(Saturday, 11-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2.30 Hours

Maximum Marks—40

N.B. :— Attempt all questions.

1. Describe in detail replication/multiplication of Viruses.

Or

Write in brief :

(a) Asexual reproduction by zoospore formation in Oedogonium.

(b) Reproduction in Nostoc.

2. Describe in detail Asexual reproduction in Penicillium.

Or

Write in brief :

(a) Asexual reproduction in Alternaria.

(b) Types of Lichen.

3. Write short notes on (any two) :

(a) Economic importance of Viruses

(b) Economic importance of Algae

(c) Basidiocarp in Agaricus

(d) Mycorrhiza.

SB—42—2022

This question paper contains 3 printed pages]

R—80—2017

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

MARCH/APRIL, 2017

(CBCS/CGPA Pattern)

BOTANY

Paper II (CCB-I)

(Cell and Molecular Biology)

(MCQ+Theory)

(Wednesday, 5-4-2017)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—**
- (i) Attempt All questions.
 - (ii) All questions carry equal marks.
 - (iii) Use separate answer-sheet for MCQ (OMR sheet) and descriptive questions.
 - (iv) Draw well labelled diagrams wherever necessary.

(MCQs)

1. Choose the *correct* answer of the following questions : 10
- (i) The packaging and transport of proteins in eukaryotic cells is done by :
 - (a) Nucleus
 - (b) Ribosomes
 - (c) Golgi bodies
 - (d) Lysosomes
 - (ii) The hydrolytic enzymes are present in :
 - (a) E.R.
 - (b) Ribosomes
 - (c) Golgi bodies
 - (d) Lysosomes
 - (iii) The longest stage in cell cycle is :
 - (a) G₁
 - (b) S
 - (c) G₂
 - (d) M

P.T.O.

- (iv) The type of cell division takes place in reproductive cells in :
- (a) Mitosis (b) Meiosis
(c) Apomixis (d) None of these
- (v) Chromosomal puffs are formed in :
- (a) Polytene chromosome
(b) Lampbrush chromosome
(c) X-chromosome
(d) Y-chromosome
- (vi) In Meiosis, terminalization occurs in :
- (a) Leptotene (b) Pachytene
(c) Zygotene (d) Diakinesis
- (vii) The distance between two consecutive nucleotides in a strand of DNA is :
- (a) 1.4 Å (b) 2.4 Å
(c) 3.4 Å (d) 4.4 Å
- (viii) Albinism occurs due to absence of :
- (a) Melanin (b) Serotonin
(c) Lycopene (d) Endorphin
- (ix) According to Benzer, the point of mutation is :
- (a) Recon (b) Muton
(c) Cistron (d) Transposon
- (x) Transposable genetic elements were first reported by :
- (a) Watson (b) McClintock
(c) Morgan (d) Benzer

WT

(3)

00-00-0000

(Theory)

2. Describe the ultrastructure of prokaryotic cell. (10)

Or

Describe in brief :

(a) Ribosomes 5

(b) Sickle cell anemia 5

3. Describe the process of mitosis cell division. (10)

Or

Describe in brief :

(a) Spontaneous mutation 5

(b) Fine structure of gene. 5

4. Describe composition of DNA and elaborate Meselson and Stahl experiment of semiconservative replication of DNA. (10)

Or

Describe in brief :

(a) Polytene chromosome 5

(b) *t*-RNA. 5

This question paper contains 2 printed pages]

X—35—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) (Regular) EXAMINATION

OCTOBER/NOVEMBER, 2019

(New Pattern)

BOTANY

Paper I

(Viruses, Bacteria, Algae, Fungi, Lichens and Mycorrhiza)

(Friday, 18-10-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—** (i) Attempt All questions.
(ii) Illustrate your answers with suitably labelled diagrams wherever necessary.

1. Describe ultrastructure of bacterial cell and add a note on binary fission. 15

Or

Write notes on :

- (a) Structure of basidiocarp in Agaricus 8
(b) Classification of fungi by Alexopolous and Mims. 7
2. Describe the thallus structure of Oedogonium and add a note on asexual reproduction in Oedogonium. 15

Or

Write notes on :

- (a) Types of Lichen 8
(b) General characters of mycorrhiza. 7

P.T.O.

3. Attempt any *two* of the four :

10

- (a) Economic importance of viruses
- (b) Structure of *Nostoc* filament
- (c) Nutrition in fungi
- (d) Economic importance of Lichens.

This question paper contains 3 printed pages)

W—87—2018

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA)

BOTANY

Paper II

(Cell and Molecular Biology)

(MCQ & Theory)

(Saturday, 20-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Attempt All questions.

(ii) All questions carry equal marks.

(iii) Use separate answer-sheet for MCQs (OMR sheet) and descriptive questions.

(iv) Draw well labelled diagrams wherever necessary.

MCQ

1. Choose the *correct* answer of the following questions :

10

(i) Eukaryotic cell differs from prokaryotic cell in having :

(a) Ribosomes

(b) Plasma membrane

(c) True nucleus

(d) Nucleolus

(ii) Lysosomes were first reported by :

(a) Flemming

(b) Porter

(c) Robert Brown

(d) de Dave

(iii) Diagrammatic representation of Karyotype is called as :

(a) Idiogram

(b) Phenogram

(c) Histogram

(d) Cardiogram

P.T.O.

- (iv) Nuclear membrane disappears in :
- (a) Early prophase (b) Late prophase
(c) Metaphase (d) Anaphase
- (v) During cell division, the spindle fibres are attached to of the chromosomes.
- (a) Centromere (b) Chromatids
(c) Chromomere (d) Chromonemata
- (vi) A complex formed by deoxyribose sugar, phosphoric acid and nitrogen base is :
- (a) Nucleoside (b) Polypeptide
(c) Nucleotide (d) Amino acids
- (vii) DNA does *not* contain :
- (a) Adenine (b) Guanine
(c) Thymine (d) Uracil
- (viii) The function of *t*-RNA is :
- (a) To carry Amino Acids
(b) Production of *m*-RNA
(c) Synthesis of *r*-RNA
(d) Production of Ribosomes
- (ix) S. Benzer classified genes into :
- (a) Cistron (b) Muton
(c) Recon (d) All of these
- (x) The term mutation was coined by :
- (a) Hugo DeVries (b) G.J. Mendel
(c) T.H. Morgan (d) H.G. Khorana

Theory

2. Describe in detail ultrastructure and functions of nucleus. 10

Or

Describe in brief :

(a) Ribosomes

(b) Fine structure of gene.

3. What is Meiosis ? Describe prophase-I of meiosis. 10

Or

Describe in brief :

(a) Lampbrush chromosome

(b) AKU.

4. What are Nucleic acids ? Describe types and functions of RNA. 10

Or

Describe in brief :

(a) Cell cycle

(b) PKU.

This question paper contains 3 printed pages]

Y—101—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

(CBCS Pattern)

BOTANY

Paper II (CCB-I)

(Cell and Molecular Biology)

(MCQ & Theory)

(Thursday, 19-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—** (i) Attempt all questions.
(ii) All questions carry equal marks.
(iii) Draw well labelled diagrams wherever necessary.

MCQ

1. Choose correct answer of the following questions : 10
- (i) In prokaryotic cell, genetic material is :
- | | |
|---------------|----------------|
| (a) Nucleoid | (b) Centrosome |
| (c) Nucleolus | (d) Cytoplasm |
- (ii) The main controlling centre of the cell is :
- | | |
|---------------|---------------|
| (a) Nucleolus | (b) Nucleus |
| (c) Lysosomes | (d) Ribosomes |
- (iii) The lamp brush chromosomes occurred in the oocytes of which stage :
- | | |
|---------------|---------------|
| (a) Leptotene | (b) Zygotene |
| (c) Pachytene | (d) Diplotene |

P.T.O.

- (iv) In prophase-I of meiosis, synapsis occurs during :
- (a) Leptotene (b) Pachytene
(c) Zygotene (d) Diplotene
- (v) The correct sequence of cell cycle is :
- (a) G_1 , S, M, G_2 (b) S, M, G_1 , G_2
(c) M, S, G_2 , G_1 (d) G_1 , S, G_2 , M.
- (vi) In RNA, thymine is replaced by :
- (a) Uracil (b) Guanine
(c) Adenine (d) Cytosine.
- (vii) In DNA, the complementary base pairing is :
- (a) A = T, G = C (b) T = A, C = G
(c) A = U, G = C (d) A = U, C = G
- (viii) A sequence of three unpaired nitrogen base on t-RNA is called as :
- (a) Codon (b) Anticodon
(c) Stop codon (d) Initiation codon
- (ix) In children, phenylketonuria disease caused by the absence of enzyme :
- (a) Homogentisate oxydase
(b) Polymerase
(c) Phenyl alanine hydroxylase
(d) Ligase.
- (x) The detection of genetic abnormalities during the pregnancy is known as :
- (a) Sickle cell anemia (b) Phenyl Ketonuria
(c) Albinism (d) Amniocentesis

WT

(3)

Y—101—2019

Theory

2. Describe ultrastructure and functions of Nucleus. 10

Or

Describe in brief :

(a) 80 'S' ribosomes. 5

(b) classical concept of gene. 5

3. What is Mitosis ? Describe the process of mitosis in detail.

Or

Describe in brief :

(a) Pachytene Stage 5

(b) Alkaptonuria 5

4. What are Nucleic acids ? Describe the structure and functions of RNA. 10

Or

Describe in brief :

(a) Nucleoside and Nucleotide 5

(b) Sickle cell anemia. 5

Swami Ramanand Teerth Marathwada, University, Nanded Winter Exam-2021

Class: B.Sc. F.Y (SEM - I) Sub: Botany

M.C.Q

Paper NO. II

(Plant Ecology Phytogeography and Environmental Biology)

Cluster Code : SD

Date : 09/04/2021

Time: One Hour

127001

Maximum Marks: 40

- i) Attempt all questions.
- ii) All question carry equal marks.
- iii) Chose most appropriate answer from given alternatives.
- iv) Negative marking system is not applicable.

Q1. The term ecology was first coined by:
a) Reiter
b) Haeckel
c) Odum
d) Hilaire

2. The Climatic factors consists of:
a) Light
b) Temperature
c) Humidity
d) All the above

3. The final stage of succession is a _____
a) Plant Community
b) Population
c) Climax Community
d) None of the above

4. The process of Photosynthesis and seed germination are influenced by following climatic factors.
a) Light
b) Rainfall
c) Wind
d) Humidity

5. On the basis of requirement of critical photoperiod plants are grouped into
a) Short Day Plant
b) Long Day Plant
c) Day Neutral Plants
d) All The Above

6. The process of transpiration increases due to-
a) Temperature
b) Humidity
c) Wind
d) All the above

7. The Study of soil formation is called as-
a) Pedology
b) Geology
c) Ecology
d) Embryology

8. The vertical section soil is called -
a) Soil profile
b) Pedolofineis
c) Pedology
d) Horizon

9. The mixture of clay, slit and sand is known a-
 - a) Clump
 - b) Humus
 - c) Erosion
 - d) Loam
10. The Plants which grow in abundance of water is called-
 - a) Xerophytes
 - b) Mesophytes
 - c) Hydrophytes
 - d) None These
11. Mulching is related to.....
 - a) Deforestation
 - b) Soil conservation
 - c) Pollution
 - d) Afforestation
12. Root system poorly developed in
 - a) Hydrilla
 - b) Nymphaea
 - c) Both A and B
 - d) None of These
13. The Vascular tissue is developed in
 - a) Hydrilla
 - b) Nerium
 - c) Casuarina
 - d) Maize
14. The presence of air chambers and aerenchyma is characteristics feature of
 - a) Xerophytes
 - b) Mesophytes
 - c) Hydrophytes
 - d) None of These
15. The plants which grow in scarcity of water are called as
 - a) Xerophytes
 - b) Mesophytes
 - c) Hydrophytes
 - d) None of These
16. The presence of thick cuticle is the characteristics feature of
 - a) Nerium
 - b) Nymphaea
 - c) Azolla
 - d) Hydrilla
17. The Sunken stomata are present at which surface of leaves
 - a) Upper Epidermis
 - b) Lower epidermis
 - c) Endodermis
 - d) Pericycle
18. In xerophytic plants Waxy coat helps to reduces.....in plants:
 - a) Exudation
 - b) Transpiration
 - c) Photosynthesis
 - d) Evaporation
19. The mesophyll is differentiated into palisade and spongy parenchyma in
 - a) Nerium
 - b) Hydrilla
 - c) Lotus
 - d) Salvinia

This question paper contains 2 printed pages]

SB—67—2022

FACULTY OF SCIENCE

B.Sc. (First Year) (First Semester) EXAMINATION

MAY/JUNE, 2022

(New Pattern)

BOTANY

Paper II

(Plant Ecology, Phytogeography and Environmental Biology)

(Tuesday, 14-06-2022)

Time : 10.00 a.m. to 12.30 p.m.

Time— 2½ Hours

Maximum Marks—40

- N.B. :—*
- (i) Attempt All questions.*
 - (ii) All questions carry equal marks.*
 - (iii) Draw well labelled diagrams wherever necessary.*

1. Define Soil. Give an account of soil formation processes. 15

Or

Write notes on :

- (a) Anatomical Adaptations in Hydrill astem. 8*
- (b) General Characters of Halophytes. 7*

2. Describe in detail causes, effects and control measures of Air Pollution. 15

Or

Write notes on :

- (a) Pond Ecosystem; 8*
- (b) Energy flow in an Ecosystem. 7*

P.T.O.

WT

(2)

SB--67--2022

3. Write short notes on (any two) :

10

(a) Scope of Ecology;

(b) Anatomical Adaptations of Ecological interest in Nerium leaf .

(c) Food Web

(d) Deforestation

Hall No. (04)
40

This question paper contains 3 printed pages]

R-57-2017

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

MARCH/APRIL, 2017

(CBCS/CGPA Pattern)

BOTANY

Paper III

(Diversity of Cryptogams)

(MCQ + Theory)

(Friday, 31-3-2017)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—10+30=40

- N.B. :- (i) Attempt All questions.
(ii) All questions carry equal marks.
(iii) Use separate answer-sheet for MCQ (OMR sheet) and descriptive questions.
(iv) Draw a well-labelled diagram wherever necessary.

MCQ

10

1. Choose the correct answers of the following questions :

- (1) Reticulate chloroplast is present in
(A) Batrachospermum (B) Oedogonium
(C) Ectocarpus (D) Chara
- (2) Glomerule is present in
(A) Oedogonium (B) Chara
(C) Ectocarpus (D) Batrachospermum
- (3) Ectocarpus belongs to class
(A) Pheophyceae (B) Rhodophyceae
(C) Xanthophyceae (D) Chlorophyceae

P.T.O.

WT

(2)

R-57-2017

- (4) Nucule and Globule are sex organs of
- (A) Ectocarpus (B) Batrachospermum
(C) Chara (D) Oedogonium
- (5) Riccia belongs to class
- (A) Hepaticopsida (B) Anthocerotopsida
(C) Bryopsida (D) Lycopsida
- (6) Thalloid gametophyte is present in
- (A) Funaria (B) Polytrichum
(C) Riccia (D) All of these
- (7) The number of peristomal teeth in the capsule of Funaria is
- (A) 32 (B) 8
(C) 24 (D) 16
- (8) Vallecular and carinal canals are seen in the stem of
- (A) Lycopodium (B) Marsilea
(C) Psilotum (D) Equisetum
- (9) Amphiphloic siphonostele is found in the rhizome of
- (A) Marsilea (B) Lycopodium
(C) Equisetum (D) Psilotum
- (10) Equisetum belongs to class
- (A) Pteropsida (B) Sphenopsida
(C) Psilopsida (D) Lycopsida

Theory

2. Give systematic position and describe the thallus structure of Chara. 10

Or

Explain in brief :

- (a) Nannandrium in Oedogonium 5
(b) Unilocular Sporangia in Ectocarpus. 5

WT

(3)

R-87-2017

3. Describe external and internal structure of leafy gametophyte of Funaria. 10

Or

Write in short :

- (a) Archegonium in Riccia 5
(b) Classification of Bryophytes. 5
4. Describe internal structure of internode of aerial stem of Equisetum. 10

Or

Describe in brief :

- (a) External structure of sporocarp of Marsilea. 5
(b) Classification of pteridophytes. 5

This question paper contains 3 printed pages]

W—59—2018

FACULTY OF SCIENCE
B.Sc. (First Year) (Second Semester) EXAMINATION
OCTOBER/NOVEMBER, 2018
(CBCS/CGPA Pattern)

BOTANY

Paper-III

(Diversity of Cryptogams)

(MCQ+Theory)

(Tuesday, 16-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—Two Hours

Maximum Marks—40

- N.B.* :— (i) Attempt *All* questions.
(ii) *All* questions carry equal marks.
(iii) Use separate answer-sheet for MCQ (OMR Sheet) and descriptive questions.
(iv) Draw a well-labelled diagram wherever necessary.

MCQ

1. Choose the correct answers for the following questions : 10
- (i) Macrandrous and nannandrous type of sexual reproduction occurs in
- (a) Chara (b) Oedogonium
(c) Batrachospermum (d) Ectocarpus
- (ii) Chantransia stage is found in
- (a) Batrachospermum (b) Chara
(c) Ectocarpus (d) Oedogonium

P.T.O.

- (iii) Corona cells are present in
- | | |
|---------------------|----------------|
| (a) Batrachospermum | (b) Oedogonium |
| (c) Ectocarpus | (d) Chara |
- (iv) Batrachospermum belongs to Class
- | | |
|------------------|-------------------|
| (a) Rhodophyceae | (b) Xanthophyceae |
| (c) Pheophyceae | (d) Chlorophyceae |
- (v) Phycocyanin and phycoerythrin pigments are found in the class
- | | |
|-------------------|-------------------|
| (a) Chlorophyceae | (b) Rhodophyceae |
| (c) Pheophyceae | (d) Xanthophyceae |
- (vi) In Bryophyta, leafy gametophyte is present in
- | | |
|----------------|----------------|
| (a) Riccia | (b) Funaria |
| (c) Marchantia | (d) Anthoceros |
- (vii) The number of peristomal teeth in the capsule of funaria is
- | | |
|--------|--------|
| (a) 32 | (b) 28 |
| (c) 18 | (d) 26 |
- (viii) Riccia belongs to class
- | | |
|----------------------|-------------------|
| (a) Anthocerotopsida | (b) Hepaticopsida |
| (c) Lycopsida | (d) Bryopsida |
- (ix) Amphiphloic siphonostele is found in the rhizome of
- | | |
|----------------|---------------|
| (a) Lycopodium | (b) Equisetum |
| (c) Psilotum | (d) Marsilea |
- (x) Elaters are present on the spores of :
- | | |
|---------------|----------------|
| (a) Equisetum | (b) Lycopodium |
| (c) Marsilea | (d) Psilotum |

Theory

2. Give systematic position, occurrence and describe thallus structure of *Sarcosporium*. 10
- Or
- Explain in brief :
- (a) Globule in *Chara* 5
- (b) Nannandrium in *Oedogonium*. 5
3. Describe internal structure of capsule of *Funaria*. 10
- Or
- Write in short :
- (a) General characters of Bryophytes. 5
- (b) Archegonium of *Riccia*. 5
4. Give systematic position and explain the external structure of sporophyte of *Equisetum*. 10
- Or
- Describe in brief :
- (a) Antheridium of *Marsilea*. 5
- (b) General characters of Pteridophytes. 5

This question paper contains 3 printed pages]

W-78-2018

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2018

(CBCS/CGPA Pattern)

BOTANY

Paper IV

(Genetics and Plant Breeding)

(MCQ+Theory)

(Friday, 19-10-2018)

Time : 10.00 a.m. to 12.00 noon

Time—Two Hours

Maximum Marks—40

- N.B. :- (i) Attempt all questions.
(ii) All questions carry equal marks.
(iii) Draw well labelled diagram wherever necessary.

MCQ

10

1. (i) is regarded as 'Father of Genetics'.
(a) Bateson (b) Morgan
(c) Watson (d) Mendel
- (ii) Genetic constitution of an organism is called as
(a) inheritance (b) genotype
(c) phenotype (d) heredity
- (iii) Dihybrid test cross ratio is
(a) 1 : 1 (b) 9 : 3 : 3 : 1
(c) 1 : 1 : 1 : 1 (d) 3 : 1

P.T.O.

WT

- (iv) Sex linked characters include
- (a) Colourblindness (b) Hypertrichosis
(c) Haemophilia (d) All of these
- (v) Nullisomy is
- (a) $2n - 2$ (b) $2n + 2$
(c) $2n - 1 - 1$ (d) $2n + 1 + 1$
- (vi) Webbed neck and gonadal dysfunction is found in syndrome.
- (a) Down (b) Klinefelter
(c) Turner (d) Patau
- (vii) Emasculation, bagging, labelling are the steps involved in
- (a) Selection (b) Hybridization
(c) Mutation (d) Introduction
- (viii) The main objective of plant breeding is to
- (a) Produce disease and pest resistance
(b) Produce high yielding varieties
(c) Both of the above
(d) None of the above
- (ix) The substance used to induce mutation is called
- (a) Oncogen (b) Nitrogen
(c) Teratogen (d) Mutagen
- (x) Introducing plant in a new locality is called
- (a) Introduction (b) Selection
(c) Hybridization (d) Mutation

WT

(3)

W-78-2018

Theory

2. Describe Duplicate gene action with suitable example.

Or

Write notes on :

(a) Sex determination in insects

(b) Down syndrome.

3. Describe sex linked inheritance in birds with reference to barred feathers.

Or

Write notes on :

(a) Clonal selection

(b) Crossing in hybridization.

4. What is Male Sterility ? Describe the types of male sterility.

Or

Write notes on :

(a) Acclimatization

(b) Application of Heterosis.

This question paper contains 3 printed pages

Y—70—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

BOTANY

Paper III

(Diversity of Cryptogams)

(MCQ & Theory)

(Monday, 23-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :-**
- Attempt *All* questions.
 - All* questions carry equal marks.
 - Use separate answer-sheet for MCQ (OMR sheet) and descriptive questions.
 - Draw a well labelled diagrams wherever necessary.

MCQ

1. Choose the *correct* answers of the following questions : 10
- Reticulate chloroplast is present in
 - Oedogonium
 - Chara
 - Ectocarpus
 - Batrachospermum
 - Glomerule is present in
 - Oedogonium
 - Batrachospermum
 - Ectocarpus
 - Chara

P.T.O.

- (iii) Which of the following is marine alga ?
- (a) Oedogonium (b) Chara
(c) Ectocarpus (d) Batrachospermum
- (iv) Globule is found in
- (a) Oedogonium (b) Ectocarpus
(c) Batrachospermum (d) Chara
- (v) Phycoerythrin pigment is present in
- (a) Phaeophyceae (b) Rhodophyceae
(c) Xanthophyceae (d) Chlorophyceae
- (vi) In Bryophyta, leafy gametophyte is present in
- (a) Funaria (b) Anthoceros
(c) Riccia (d) All of these
- (vii) Numbers of peristomal teeth in the capsule of Funaria are
- (a) 24 (b) 29
(c) 30 (d) 32
- (viii) Amphiphloic siphonostele occurs in the rhizome of
- (a) Marsilea (b) Psilotum
(c) Lycopodium (d) Equisetum
- (ix) Elaters are present in spores of
- (a) Marsilea (b) Equisetum
(c) Lycopodium (d) None of these
- (x) Heterosporous condition occurs in
- (a) Equisetum (b) Anthoceros
(c) Marsilea (d) Lycopodium

WT

(3)

Y—70—2019

Theory

2. Describe unilocular and plurilocular sporangia in *Ectocarpus*. 10
- Or*
- Explain in brief :
- (a) Nucule in chara 5
- (b) Classification of algae 5
3. Explain in detail sexual reproduction in *Funaria*. 10
- Or*
- Write in short :
- (a) External structure of thallus of *Riccia* 5
- (b) Classification of Bryophytes 5
4. Give the systematic position and describe the external structure of sporophyte of *Equisetum*.
- Or*
- Describe in brief :
- (a) Classification of Pteridophytes 5
- (b) Internal structure of petiole of *Marsilea*. 5

This question paper contains 8 printed pages

Y-70-2019

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) (Backlog) EXAMINATION

NOVEMBER/DECEMBER, 2019

BOTANY

Paper III

(Diversity of Cryptogams)

(MCQ & Theory)

(Monday, 23-12-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. — (i) Attempt All questions.
(ii) All questions carry equal marks.
(iii) Use separate answer-sheet for MCQ (OMR sheet) and descriptive questions.
(iv) Draw a well labelled diagrams wherever necessary.

MCQ

1. Choose the correct answers of the following questions :

10

- (i) Reticulate chloroplast is present in
- (a) Oedogonium (b) Chara
(c) Ectocarpus (d) Batrachospermum
- (ii) Glomerule is present in
- (a) Oedogonium (b) Batrachospermum
(c) Ectocarpus (d) Chara

P.T.O.

- (iii) Which of the following is marine alga ?
- (a) Oedogonium (b) Chara
(c) Ectocarpus (d) Batrachospermum
- (iv) Globule is found in
- (a) Oedogonium (b) Ectocarpus
(c) Batrachospermum (d) Chara
- (v) Phycoerythrin pigment is present in
- (a) Phaeophyceae (b) Rhodophyceae
(c) Xanthophyceae (d) Chlorophyceae
- (vi) In Bryophyta, leafy gametophyte is present in
- (a) Funaria (b) Anthoceros
(c) Riccia (d) All of these
- (vii) Numbers of peristomal teeth in the capsule of Funaria are
- (a) 24 (b) 29
(c) 30 (d) 32
- (viii) Amphiphloic siphonostele occurs in the rhizome of
- (a) Marsilea (b) Psilotum
(c) Lycopodium (d) Equisetum
- (ix) Elaters are present in spores of
- (a) Marsilea (b) Equisetum
(c) Lycopodium (d) None of these
- (x) Heterosporous condition occurs in
- (a) Equisetum (b) Anthoceros
(c) Marsilea (d) Lycopodium

WT

(3)

Y-70-20

Theory

2. Describe unilocular and plurilocular sporangia in *Ectocarpus*.

Or

Explain in brief :

- (a) Nucule in chara
- (b) Classification of algae

3. Explain in detail sexual reproduction in *Funaria*.

Or

Write in short :

- (a) External structure of thallus of *Riccia*
- (b) Classification of Bryophytes

4. Give the systematic position and describe the external structure of sporophyte of *Equisetum*.

Or

Describe in brief :

- (a) Classification of Pteridophytes
- (b) Internal structure of petiole of *Marsilea*.

This question paper contains 2 printed pages

SB-30-2022

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) EXAMINATION

MAY/JUNE 2022

(New Pattern)

बिज्ञान

परीक्षा

(Bryophytes, Pteridophytes, Gymnosperms and Angiosperms)

(Monday, 18-06-2022)

Time: 10.00 a.m. to 12.00 p.m.

Time— 2.30 Hours

Maximum Marks— 40

N.B. :— (i) Attempt all questions.

(ii) Draw well labeled diagrams wherever indicated.

1. Describe in detail external morphology and adaptation of Marchantia. 10

Write in brief

(a) Phenomenon of heterospory and seed habit in pteridophyta. 8

(b) Structure of Marsilea quadrifida. 2

2. Describe in detail external features of Cycas sporophyte and add a note on structure of Pinus. 10

Write in brief

(a) Process of plant fossilization. 8

(b) Geological time scale. 2

P.T.O.

3. Write short notes on any *two* of the following :

10

- (a) Funaria Sporophyte
- (b) Economic importance of Pteridophytes
- (c) Female cone of Pinus
- (d) Ginkgo.



This question paper contains 3 printed pages]

Y—92—2019

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) (Regular) EXAMINATION

OCTOBER/NOVEMBER, 2019

BOTANY

Paper IV

(Genetics & Plant Breeding)

(MCQ & Theory)

(Tuesday, 19-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

- N.B. :—** (i) Attempt all questions.
(ii) All questions carry equal marks.
(iii) Draw well labelled diagrams wherever necessary.

MCQ

1. Multiple Choice Questions :

10

- (i) Mendel's work was rediscovered in 1900 by.....
(a) Hugo de Vries (b) Carl Carren
(c) Eric Van Tschermak (d) All of these
- (ii) Phenotypic ratio of monohybrid cross is.....
(a) 2 : 2 (b) 3 : 1
(c) 1 : 2 : 1 (d) None of these
- (iii) Sex chromosomes are also called as.....
(a) Autosome (b) Allosome
(c) Polysome (d) Ribosome
- (iv)is X-liked character.
(a) Colour Blindness (b) Haemophilia
(c) Hypertrichosis (d) Both a & b

P.T.O.

- (v) An organism with more than two genomes is called ~~abnormal~~
- (a) Monoploid (b) Diploid
(c) Polyploid (d) None of these
- (vi) Autosomal abnormality is found in.....
- (a) Down's syndrome (b) Turner's syndrome
(c) Klinefelter's syndrome (d) All of these
- (vii)is a step involved in Hybridization
- (a) Selection (b) Selfing
(c) Emasculation (d) All of these
- (viii)method is used in the improvement of vegetatively propagating crop.
- (a) Clonal selection (b) Pureline selection
(c) Mass selection (d) None of these
- (ix) Introducing plant into a new locality with different climate is called.....
- (a) Introduction (b) Selection
(c) Mutation (d) None of these
- (x) TG-26 is the variety of.....
- (a) Wheat (b) Maize
(c) Groundnut (d) Rice

Theory

2. What is interaction of gene ? Describe complementary gene action (9 : 7) with suitable example.

10

Or

Write short notes on :

- (a) Sex determination in Birds
(b) Acclimatization.

WT

(3)

Y—92—2019

3. Define sex-linked inheritance. Explain X-linked inheritance in man with reference to colour blindness. 10

Or

Write short notes on :

- (a) Turner's syndrome
- (b) Objectives of Mutational breeding.

4. Describe in detail steps involved in Hybridization. 10

Or

- (a) Clonal selection
- (b) Cytoplasmic male sterility.

This question paper contains 2 printed pages

SB-81-2022

FACULTY OF SCIENCE

B.Sc. (First Year) (Second Semester) ZIA/ST/ART/104

MAY/JUNE 2022

(New Pattern)

BOTANY

Paper-I

(Taxonomy of Angiosperms)

(Wednesday, 15-06-2022)

Time: 11:00 AM to 12:30 PM

Time— 2½ Hours

Maximum Marks—40

N.B. :- (i) Attempt all questions

(ii) Draw well labelled diagrams, wherever necessary.

1. Describe in detail Bentham and Hooker classification system. Add a note on its merits and demerits. 15

Or

Write in brief on :

(a) Botanical Gardens of India 5

(b) Typification 7

2. Describe in detail vegetative and floral characters of Solanaceae. Add a note on its economic importance. 15

Or

Write in brief on

(a) Types of Fruits 8

(b) Structure of Typical Flower (Hibiscus). 7

P.T.O.

WT

(2)

SB-81-2023

3. Write short notes on (any two) :

- (a) Principles of taxonomy
- (b) Merits and demerits of Englar and Prantl's classification
- (c) Types of Roots
- (d) Diagnostic characters of Fabaceae.