

Roll No.

Z-10-Y

Total No. of Questions : 16]

[Total No. of Printed Pages : 4

11th ARM(SZ)JKUT2024

1210-Y

BOTANY

(BIOLOGY)

Time : 1.30 Hours]

[Maximum Marks : 35

Section-A

1 each

Very Very Short Answer Type Questions :

1. Conjoint and closed vascular bundles with no phloem parenchyma may be observed in :

- (A) Monocot Stem ✓
(B) Monocot Root
(C) Dicot Stem
(D) Dicot Root

11th ARM(SZ)JKUT2024-1210-Y

Turn Over

Z-10-Y

2. Phylogenetic classification is based on :
- (A) Utility of organisms
 - (B) Habits of organisms
 - (C) Similarities of organisms
 - (D) Common evolutionary descent
3. Roots developed from parts of plant other than radicle are called :
- (A) Tap Roots
 - (B) Fibrous Roots
 - (C) Adventitious Roots
 - (D) Nodular Roots
4. 'Systema Naturae' is written by :
- (A) Aristotle
 - (B) Linneaus
 - (C) Hippocrats
 - (D) Darwin
5. Which pigment acts directly to convert light energy to chemical energy ?
- (A) Chlorophyll a
 - (B) Chlorophyll b
 - (C) Xanthophyll
 - (D) Carotenoids

Section-B

2 each

Very Short Answer Type Questions to be answered in **20 to 30** words :

6. In the five kingdom system of Whittaker, how many kingdoms are Eukaryotes ?
7. Define Inflorescence. Name *two* types of inflorescence.
8. Who is known as Father of Taxonomy and why ?
9. Give *two* differences between Vascular Bundles of Monocot and Dicot Stems.
10. Name *three* basic tissue systems in the Flowering Plants.

Section-C

3 each

Short Answer Type Questions to be answered in **100 to 150** words :

11. How is five-kingdom classification advantageous over two-kingdom classification ? <https://www.jkboseonline.com>
12. Why bryophytes are called amphibians of plant kingdom ?
13. Explain in 2-3 lines each of the following terms :
 - (i) Differentiation
 - (ii) De-differentiation
 - (iii) Re-differentiation

11thARM(SZ)JKUT2024-1210-Y

Z-10-Y

14. Give an account of distinguishing features of Family Solanaceae.
15. Briefly describe conditions necessary for growth.

Section-D

5 each

Long Answer Type Questions to be answered in 150 to 200 words :

16. What are the important events and end products of Light Reaction ?

Or

Describe Chemiosmotic Production of ATP.

Roll No.

Z-10-Z

Total No. of Questions : 16]

[Total No. of Printed Pages : 4

11th ARM(SZ)JKUT2024

1210-Z

BOTANY

(BIOLOGY)

Time : 1.30 Hours]

[Maximum Marks : 35

Section-A

1 each

Very Very Short Answer Type Questions :

1. Conjoint and closed vascular bundles with no phloem parenchyma may be observed in :

☒ (A) Monocot Stem

(B) Monocot Root

☒ (C) Dicot Stem

(D) Dicot Root

11th ARM(SZ)JKUT2024-1210-Z

Turn Over

Z-10-Z

2. Binomial nomenclature means :

- (A) One name given by two scientists
- ~~(B)~~ One name comprising a generic and a specific epithet
- (C) Two names, one latinised, other of a person
- (D) Two names, one scientific other local

3. Non-albuminous seed is produced in :

- (A) Maize
- (B) Castor
- (C) Wheat
- ~~(D)~~ Pea

4. The largest herbarium in India is located in :

- (A) National Botanical Garden, Lucknow
- (B) Lloyd Botanical Garden, Darjeeling
- ~~(C)~~ Indian Botanical Garden, Sibpur, Howrah
- (D) Forest Research Institute, Dehradun

5. The net gain of ATP during glycolysis is :

- (A) Six
- (B) Eight
- (C) Two
- ~~(D)~~ Four

Section-B

2 each

Very Short Answer Type Questions to be answered in 20 to 30 words :

6. Define Viruses. What are Viroids ?
7. Write general characteristics of Roots.
8. Write distinct characters of Fungi.
9. Give two differences between Vascular Bundles of Monocot and Dicot Stems.
10. Name three basic tissue systems in the Flowering Plants.

Section-C

3 each

Short Answer Type Questions to be answered in 100 to 150 words :

11. How is five-kingdom classification advantageous over two-kingdom classification ?
12. Why bryophytes are called amphibians of plant kingdom ?
13. Explain in 2-3 lines each of the following terms :
 - (i) Differentiation
 - (ii) De-differentiation
 - (iii) Re-differentiation

(4)

14. Give an account of distinguishing features of Family Solanaceae.

15. Briefly describe conditions necessary for growth.

Section-D

5 each

Long Answer Type Questions to be answered in 150 to 200 words :

16. What are the important events and end products of Light Reaction ?

Or

Describe Chemiosmotic Production of ATP.

11th ARM(SZ)JKUT2024-1210-Z

Z-10-Z

Roll No.

Y-10-A

Total No. of Questions : 16]

[Total No. of Printed Pages : 4

11thARA(HZ)JKLEHUT2024

1410-A

BOTANY

(BIOLOGY)

Time : 1½ Hours]

[Maximum Marks : 35

Section-A

each

(Very Very Short Answer Type Questions)

1. Read the following statements about viruses. How many of them is/are true ?

- (i) They are obligate parasites.
- (ii) They have complete cellular structure.
- (iii) Viruses can be precipitated.
- (iv) Viruses can mutate :

(A) One

(B) Two

(C) Three

(D) Four

11thARA(HZ)JKLEHUT2024-1410-A

Turn Over

Y-10-A

2. A flower which can be divided in two similar halves, only in one vertical plane is called :
 - (A) Actinomorphic
 - (B) Zygomorphic
 - (C) Heteromorphic
 - (D) None of these
3. Fibrous root system is mostly found in :
 - (A) Pteridophytes
 - (B) Bryophytes
 - (C) Monocots
 - (D) Dicots
4. The process of conversion of pyruvic acid to acetyl CoA is called :
 - (A) Oxidative dephosphorylation
 - (B) Oxidative dehydrogenation
 - (C) Oxidative dehydration
 - (D) Oxidative decarboxylation
5. Senescence is inhibited by :
 - (A) Ethylene
 - (B) ABA
 - (C) Gibberellic Acid
 - (D) Cytokinin

(3)

Section-B

2 each

(Very Short Answer Type Questions)

6. Name any two traits in which fungi resemble animalia.
7. Describe a spike.
8. Distinguish between open and closed vascular bundles.
9. Name three layers of Pericarp. Which of them is edible in mango fruit ?
10. Define RQ. What is the RQ when carbohydrates are broken down anaerobically ?

Section-C

3 each

(Short Answer Type Questions)

11. Who gave Binomial System of Nomenclature ? List rules of this system of nomenclature.
12. What are the general characteristics of Monera ?
13. With well labelled diagram, describe various parts of a typical leaf.
14. Describe the anatomy of a typical dicot root.
15. Describe different phases of growth. How will you demonstrate the phases of growth in a seedling ?

11thARA(HZ)JKLEHUT2024-1410-A

Turn Over

Y-10-A

(4)

Section-D

5

(Long Answer Type Question)

16. Give the schematic representation of Hatch and Slack Pathway. What is its Significance ?

Or

Where does glycolysis occur in a cell ? Give schematic representation of various steps of Glycolysis.

11thARA(HZ)JKLEHUT2024-1410-A

Y-10-A

Roll No.

V-10-C

Total No. of Questions . 16+14]

[Total No. of Printed Pages : 8

XIAPB/AUTJK2024

2010-C

BOTANY

(BIOLOGY)

(New/Old Course)

Time : 1½ Hours]

[Maximum Marks : 35

NOTE :— The questions in the question paper are based on revised and pre-revised syllabus marked as "New Course" and "Old Course" respectively and candidates are advised to appear in the relevant course meant for them. Candidates who may attempt the questions partly from "New Course" and partly from "Old Course" will not be awarded. Candidates are also advised to record "New Course" or "Old Course" as the case may be, on the front page of the answer-book.

XIAPB/AUTJK2024 – 2010-C (New)

Turn Over

V-10-C

Section-A

(Very-Very Short Answer Type Questions)

1 each

1. All Eukaryotic unicellular organisms belong to
 - (A) Monera
 - (B) Protista
 - (C) Fungi
 - (D) Bacteria
2. Which one produce seeds but not fruits ?
 - (A) Pinus
 - (B) Pipal
 - (C) Maize
 - (D) Mint
3. Define term Inflorescence.
4. Which one of the plant growth regulators would you use if you are asked to quickly ripen a fruit ?
5. How many molecules of ATP are produced in TCA cycle ?

XIAPB/AUTJK2024-2010-C (New)

V-10-C

Section-B

(Very Short Answer Type Questions)

2 each

6. What are the universal rules of Nomenclature ?
7. Explain with suitable example the different types of Phyllotaxy.
8. Describe the important features of family Solanaceae.
9. Name the *three* basic tissue systems in the flowering plants. Give the tissue names under each system. <https://www.jkboseonline.com>
10. Give difference between C_3 and C_4 pathways.

Section-C

(Short Answer Type Questions)

3 each

11. Write the distinct features of fungi.
12. Highlight the criteria used for five kingdom system of classification.

XIAPB/AUTJK2024-2010-C (New)

Turn Over

V-10-C

13. Differentiate between internal structure of dicot stem and *শিমুল* stem.
14. Describe the important characteristics of Gymnosperm.
15. Both growth and differentiation in higher plants are open. Comment.

Section-D

(Long Answer Type Questions)

5 each

16. Define Photophosphorylation. Differentiate between cyclic and non-cyclic photophosphorylation.

Or

Give schematic representation of glycolysis. Explain ETS.