

BIO-BOTANY

NINE SET OF GOVERNMENT PUBLIC EXAM
QUESTION & ANSWERS UNITWISE

(2020 - 2024)

+2



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BIO-BOTANY

12th standard

**PUBLIC EXAM QUESTION WITH ANSWER UNITWISE
(2020 to 2024)**

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PG ASST IN BOTANY

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S.NO	PUBLIC QUESTION PAPER	PAGE NUMBER
1	Preface	
2	SEPTEMBER - 2020	3
3	MARCH -2020	4
4	AUGUST -2021	7
5	MAY -2022	9
6	JULY -2022	11
7	MARCH-2023	13
8	JUNE -2023	15
9	MARCH- 2024	17
10	JUNE - 2024	19
9	CHAPTER WISE PUBLIC QUESTIONS WITH ANSWERS	21
		23
10	chapter – 1 Asexual and sexual reproduction in plants .	24
11	chapter – 2 , Classical genetics .	27
12	chapter – 3 Chromosomal basis of inheritance	30
13	chapter – 4 Principles and processes of biotechnology.	33
14	chapter – 5 Plant tissue culture	37
15	chapter – 6 Principles of ecology	39
16	chapter –7 Ecosystem	43
17	chapter – 8 Environmental issues	46
18	chapter – 9 Plant Breeding	49
19	chapter –10 Economically useful plants and Entrepreneurial botany	52
20	all compulsory question and answers	55
21	book back one marks questions with answer	58

PREFACE**“Praise the lord”**

“Education is not the learning of facts,
But the training of the mind to think”

-Albert Einstein

“Education is the movement from darkness to light “

Respected Teachers/ Dear students

This guide is based on the nine government public 12th Bio-botany questions. This guide contains more than 207 questions with answer. And book back question with answer and important diagram.

The questions asked in government public examination are very important so Students should keep reading this well.

The purpose of creating this guide is for students to get higher marks. This guide is also created for slow learning students to pass. You have any doubt of question and answer in this material contact your botany teacher or me

I hope this guide will be very useful for Students and Teachers. Teachers or students can let me know their valuable feedback regarding this guide.

God bless all

All the best

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NOTE: Government public question paper September 2020

Government public question paper march 2020

Government public question paper August 2021

Government public question paper May 2022

Government public question paper July 2022

Government public question paper march 2023

Government public question paper june 2023

Government public question paper march 2024

Government public question paper june 2024

12th BIO BOTANY PUBLIC QUESTION WITH ANSWER UNITWISE

PUBLIC EXAMINATIONS QUESTIONS OF BIO – BOTANY

SEPTEMBER – 2020

QUESTIONS 1

TIME ALLOWED : 1 . 30 hr .

SECTION – 1

MARKS : 35 .

Note : (i) Answer all the questions.

(ii) choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer. 8x1=8

1. Alternative forms of a gene are/ is called .
 (a) Genome (b) Alleles (c) Genotype (d) Genetic code
2. Assertion (A) : Increase in temperature increase the rate of mutation .
 Reason (R) : Rise in temperature breaks the hydrogen bonds between the nucleotides.
 (a) (A) is not correct (R) is correct
 (b) (A) is correct but (R) is not correct
 (c) (A) is correct (R) is correct explanation of (A)
 (d) (A) and (R) are wrong.
3. Find the mismatch pair
 (a) Ti - plasmid – Agrobacterium tumefaciens
 (b) plasmid – E , coli.
 (c) pBR 322 – reconstructed plasmid
 (d) Transfection. – virus .
4. Solidifying agent used in plant tissue culture is
 (a) Nicotinic acid (b) cobaltous chloride (c) EDTA (d) Agar
5. Orobanche is a :
 (a) saprophyte (b) Autotroph (c) Partial parasite (d) Total parasite
6. The quantity of energy present in the universe is constant. it is started in
 (a) Third law of thermodynamics (b) second law of thermodynamics
 (c) first law of thermodynamics (d) community protectivity
7. The term Green Revolution was coined by
 (a) William S. Gaud (b) Dr. B.P. Pal (c) N.E Borlang (d) M. S. Swaminathan
8. The oldest and basic method of plant breeding is :
 (a) Introduction. (b) Selection. (c) Hybridization. (d) Mutation breeding.

SECTION – II

Answer any four questions.

4X2=8.

09. Draw and mark the part of first cell of male gametophyte.

10. Write short notes on sonara64.

12th BIO BOTANY PUBLIC QUESTION WITH ANSWER UNITWISE

PUBLIC EXAMINATIONS QUESTIONS OF BIO – BOTANY

MARCH – 2024

QUESTIONS - 8

TIME ALLOWED : 1 . 30 hr .

MARKS : 35 .

SECTION – 1

Note : (i) Answer all the questions.

8x1= 8

(ii) choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

1. The unit for measuring ozone thickness

- (a) Watt (b) Dobson (c) Kilo (d) Joule

2. Size of. Pollen grain in----- micrometer .

- (a) 10 (b)2000 (c)20 (d) 200

3. Assertion (A) : Gamma rays for generally used to induce mutation in wheat varieties

Reason (B) : because they carry lower energy to non ionise electrons from atom .

- (a) (A) Is wrong (B) Is correct
 (b) (A)And(B)are correct
 (c) (A)And (B)are wrong
 (d) (A)Is correct(B) is wrong.

5. the wavelength of photosynthetically active radiation lies between the range of

- (a)200 – 700 nm (b)300 – 700 nm (c) 500 – 700 nm (d)400 – 700 nm

6.Match the following

1. Cow pea - (i) PusaSadabahar
 2. Wheat. - (ii) PusaSwarnim
 3. Chilli- (iii) Himgiri
 4. Brassica. - (iv) PusaKomal .

- (a) (1) – (iv). (2) – (i). (3) – (ii). (4) – (iii)
 (b) (1) – (ii). (2) – (iv). (3) – (i). (4) – (iii)
 (c) (1) - (ii). (2) - (i). (3) – (iv). (4) – (iii)
 (d) (1) –. (iv). (2) – (iii). (3) – (i). (4) – (ii)

7. The native of groundnut is

- (a) North America. (b) Philippines (c)Brazil. (d) India

8.Plasmids are.

- (a) tiny bacteria (b) circular protein molecules
 (c) confer resistance (d) required by bacteria

PUBLIC EXAMINATIONS QUESTIONS OF BIO – BOTANY

JUNE – 2024 QUESTIONS - 9

TIME ALLOWED : 1 . 30 hr .

MARKS : 35 .

SECTION – 1

Note : (i) Answer all the questions.

8x1= 8

(ii) choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

1. Which of the following is not a sedimentary cycle ?
(a) Nitrogen cycle. (b) Phosphorus cycle (c) sulphur cycle (d) calcium cycle
2. Assertion : turmeric fights various kinds of cancer
Reason: carcumin is an anti-Oxidant present in turmeric
(a) Assertion is correct reason is wrong
(b) Assertion is wrong reason is correct
(c) Both are correct.
(d) Both are wrong
3. Transmitting tissue is found in
(a) Micropylar region of ovule (b) pollen tube wall.
(c) Stylar region of gynoecium (d) Integument
4. Depletion of which gas in the atmosphere can lead to an increased incidence of skin cancer ?
(a) Ammonia (b) methane (c) nitrous oxide. (d) Ozone
5. Dwarfing gene of wheat is .
(a) Pal 1 (b) Atomita1 (c) Norln 10. (d) Pollta 2
6. An allohexaploidy contains:
(a) Six different genomes (b) six copies of three different genomes.
(c) Two copies of three different genomes (d) Six copies of one genome
7. In soil water available for plants is
(a) Gravitational water (b) Chemically bound water.
(c) Capillary water (d) Hygroscopic water
8. Solidifying agent used in plant tissue culture is
(a) Nicotinic acid. (b) Cobaltous chloride. (c) EDTA (d) Agar

SECTION – II

Note : Answer any four questions.

4 X 2 = 8

09. Write short note on pollen kill.
10. What is the differences between missense and non missense mutation ?
11. What is bioremediation?

CHAPTER – 1

A SEXUAL AND SEXUAL REPRODUCTION IN PLANTS

ONE MARK :

1. First cell of Male gametophyte in angiosperms is :
 (a) primary endosperm (b) Microspore (c) Megaspore (d) Nucleus
2. Parthenocarpic fruits lack .
 (a) Mesocarp (b) Endocarp (c) seed (d) Epicarp.
3. The first cell of male gametophyte in angiosperm is :
 (a) Nucleus (b) Microspore
 (c) Primary Endosperm Nucleus (d) Megaspore.
4. Coleorhiza is found in _____
 (a) Paddy (b) Beans (c) Pea (d) Tridax .
5. Which of the following represent Mega gametophyte ?
 (a) Nucellus (b) Ovule (c) Endosperm (d) Embryo sac
6. The scar left by funiculus in the seed is :
 (a) tegmen (b) radicle (c) epicotyl (d) hilum.
7. Size of. Pollen grain in *Myosotis* _____ micrometer .
 (a) 10 (b) 2000 (c) 20 (d) 200
8. Transmitting tissue is found in
 (a) Micropylar region of ovule (b) pollen tube wall.
 (c) Stylar region of gynoecium (d) Integument

TWO MARKS :

1. Draw and mark the part of first cell of male gametophyte.



First cell of male gametophyte

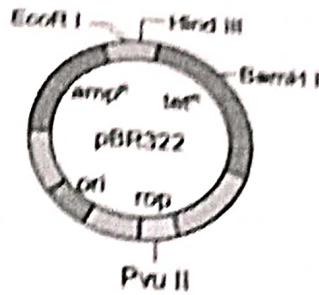
2. What is mellitophily ?

ANS : Pollination by Bees is called mellitophily.

3. What is Stomium ?

ANS: The region along the junction of the two sporangia of an anther lobe which lacks thickening is called Stomium

12th BIO BOTANY PUBLIC QUESTION WITH ANSWER UNITWISE



4. What are the materials used to grow microorganism like spirulina (SEC. TIM)

5. What is bio-remediation? Give an example. (SEC. TIM)

ANS :

i) It is defined as the use of microorganisms or plants to manage environmental pollution

Example :

ii) Phytoremediation – use of plants to bring about remediation of environmental pollutants.

iii) Mycoremediation – use of fungi to bring about remediation of environmental pollutants.

6. What do you know about the word pBR322? JUNE – 2024 (THIRD TIM)
FIVE MARKS :

1. List out any five applications of biotechnology. P- 88, SEP – 2020

2. What is a single cell protein? Mention its application. (MAR – 2024)

ANS : The dried cells of microorganism that are used as protein supplement in human foods or animal feeds are called single cell proteins.

Application of single cell proteins:

(i) It is used as protein supplement

(ii) It is used in cosmetics products for healthy hair and skin

(iii) It is used as the excellent sources of protein for feeding, cattle, birds, fishes, etc.

(iv) It is used in industries like pepper processing, leather processing, as foam stabilizers.

(v) It is used in food industry as Aroma carriers, vitamin carrier, emulsifying agents to improve the nutritive value of baked products in soups in ready to serve meals in diet recipes.

3. Mention the applications of biotechnology. JUNE – 2024.

12th BIO BOTANY PUBLIC QUESTION WITH ANSWER UNITWISE

3. Hypolimnion - The bottom layer of colder water



Thermal stratification of pond

4. Mention the types of thermal stratification (SEC. TIM)

5. Distinguish between habitat and niche. MAR - 2024

Habitat	Niche
A specific physical space occupied by an organism.	A functional space occupied by an organism in the same eco-system
Same habitat may be shared by many Organisms.	A single niche is occupied by a single species
Habitat specificity is exhibited by organism.	Organisms may change their niche with time and season

6. What is thermal stratification? Mention their types. (JUNE -2024) S Tim

ANS : The change in the temperature profile with increasing depth in a water body is called thermal stratification.

The three kinds of thermal stratifications are

(i) Epilimnion: The upper layer of warmer water.

(ii) Metalimnion : The middle layer with a zone of gradual decrease in temperature.

CHAPTER WISE COMPULSORY QUESTION AND ANSWERS QUESTION NUMBER 19 MAY BE COMPULSORY

CHAPTER – 1 ASEXUAL AND SEXUAL REPRODUCTION IN PLANTS . (TILL ASKED 3 QUESTIONS FROM THE CHAPTER)

19. Draw the diagrammatic structure of ovule and label its parts.
19. List out the functions of tapetum.
19. Draw the structure of an ovule and label its parts. **MAR – 2024**

CHAPTER – 6 PRINCIPLE OF ECOLOGY (2 ASKED)

19. Write the three differences between Habitat and Niche.
19. Distinguish habitat and niche. (SECOND TIME)

CHAPTER – 7 ECOSYSTEM. (2 ASKED)

19. Differentiate Autotrophic components from Heterotrophic components.
19. Generally human activities are against to the ecosystem where as a student how will you help to protect ecosystem?

CHAPTER – 8 ENVIRONMENTAL ISSUES. (2 ASKED)

19. What is Green house effect ? What are the gases involved in it .
19. Write short notes on Bio – monitoring

NOT YET ASKED CHAPTERS UPTO 2023 JUNE

CHAPTER – 2 CLASSICAL GENETICS .

CHAPTER – 3 CHROMOSOMAL BASIS OF INHERITANCE

CHAPTER – 4 PRINCIPLES AND PROCESSES OF BIOTECHNOLOGY.

CHAPTER – 5 PLANT TISSUE CULTURE.

CHAPTER – 9 PLANT BREEDING.

CHAPTER -10 ECONOMICALLY USEFUL PLANTS AND ENTREPRENEURIAL BOTANY.

12th BIO BOTANY PUBLIC QUESTION WITH ANSWER UNITWISE

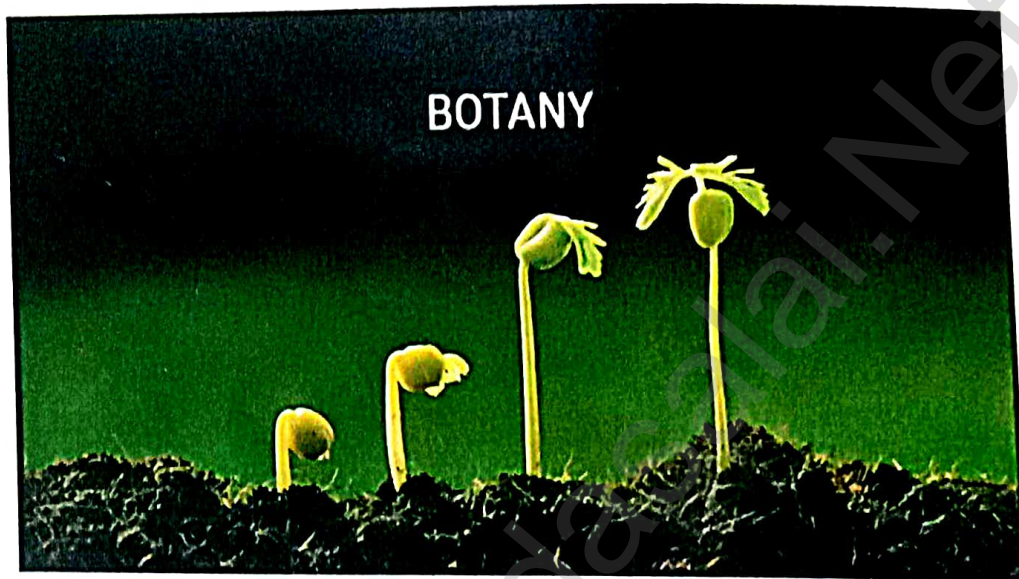
BOOK BACK ONE MARKS

1 ASEXUAL AND SEXUAL REPRODUCTION IN PLANTS

1. Choose the correct statement from the following
 - a) Gametes are involved in asexual reproduction
 - b) Bacteria reproduce asexually by budding
 - c) Conidia formation is a method of sexual reproduction
 - d) Yeast reproduce by budding
2. An eminent Indian embryologist is
 - a) S.R.Kashyap
 - b) P.Maheswari
 - c) M.S. Swaminathan
 - d) K.C.Mehta
3. Identify the correctly matched pair
 - a) Tuber - Allium cepa
 - b) Sucker - Pistia
 - c) Rhizome - Musa
 - d) Stolon - Zingiber
4. Pollen tube was discovered by
 - a) J.G.Kolreuter
 - b) G.B.Amici
 - c) E.Strasburger
 - d) E.Hanning
5. Size of pollen grain in Myosotis
 - a) 10 micrometer
 - b) 20 micrometer
 - c) 200 micrometer
 - d) 2000 micrometer
6. First cell of male gametophyte in angiosperm is
 - a) Microspore
 - b) megaspore
 - c) Nucleus
 - d) Primary Endosperm Nucleus
7. Match the following

I) External fertilization	i) pollen grain
II) Androecium	ii) anther wall
III) Male gametophyte	iii) algae
IV) Primary parietal layer	iv) stamens

 - a) I-iv; II-i; III-ii; IV-iii
 - b) I-iii; II-iv; III-i; IV-ii
 - c) I-iii; II-iv; III-ii, IV-i
 - d) I-iii; II-i; III-iv; IV-ii
8. Arrange the layers of anther wall from locus to periphery
 - a) Epidermis, middle layers, tapetum, endothecium
 - b) Tapetum, middle layers, epidermis, endothecium
 - c) Endothecium, epidermis, middle layers, tapetum
 - d) Tapetum, middle layers endothecium of epidermis



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Kindly Send Me Your Key Answer to Our email id - Padasalai.net@gmail.com