



दु.क्र ०२०२४४७६९३८

Email-

sciencedept@maa.ac.in



महाराष्ट्र शासन
शालेय शिक्षण व क्रीडा विभाग
राज्य शैक्षणिक संशोधन व प्रशिक्षण परिषद, महाराष्ट्र
७०८ सदाशिव पेठ, कमठेकर मार्ग, पुणे ४११०३०.



प्रश्नपेढी (Question Bank) 2023

इयत्ता:- बारावी

माध्यम:- इंग्रजी

विषय:- जीवशास्त्र (Biology)

सूचना-

1. सदर प्रश्नपेढी ही १००% अभ्यासक्रमावर तयार करण्यात आली आहे.
2. सदर प्रश्नपेढीतील प्रश्न हे अधिकच्या सरावासाठी असून प्रश्नसंचातील प्रश्न बोर्डाच्या प्रश्नपत्रिकेत येतीलच असे नाही, याची नोंद घ्यावी.

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- 11 Grafting is not possible in monocots because of ---
 A. scattered vascular bundles
 B. open vascular bundles
 C. radial vascular bundles
D. absence of cambium
- 12 Conidia formation is commonly seen in
 A. *Amoeba*
 B. *Paramecium*
 C. *Sponges*
D. *Penicillium*
- 13 Which of the following is not the method of asexual reproduction?
 A. Budding
 B. Fragmentation
C. Sowing
 D. Binary fission
- 14 The plant part used for raising stem in grafting is –
A. Scion
 B. Stock
 C. Leafy shoot
 D. Any plant part

VERY SHORT ANSWER QUESTIONS (1 MARK EACH)

- 1 What is reproduction?
- 2 What are clones?
- 3 Give example of organism which produces zoospore.
- 4 Why anther is called as tetrasporangiate structure?
- 5 At which stage pollen grains are shed from the anther in Angiosperms?
- 6 What is hilum with respect to ovule?
- 7 What is protandry?
- 8 Name any one plant in which double fertilization was discovered?
- 9 Why fertilization process in angiosperms is called as double fertilization?
- 10 Which is the most common type of endosperm in angiospermic families?
- 11 What is the role of suspensor during the development of embryo?
- 12 What is adventive polyembryony?
- 13 Name the hormone produced by an unfertilised ovary responsible for enlargement of paracarpous fruit.

SHORT ANSWER TYPE (SA-I) QUESTIONS (2 MARK EACH)

- 1 Explain any two methods of asexual reproduction.
- 2 Explain grafting as a method of artificial method of vegetative reproduction.
- 3 Draw a well labelled diagram of T.S. anther.
- 4 Describe the structure of pollen grain.
- 5 Draw a well labelled diagram of male gametophyte of angiosperms.
- 6 Describe the structure of female gametophyte of angiosperms.
- 7 Mention various adaptations for wind pollination.
- 8 What are the different adaptations shown by bird pollinated flowers?
- 9 Explain heterostyly and herkogamy with suitable example.
- 10 Give the significance of double fertilization.
- 11 Mention significance of fruit and seed formation.
- 12 Give an account of polyembryony.

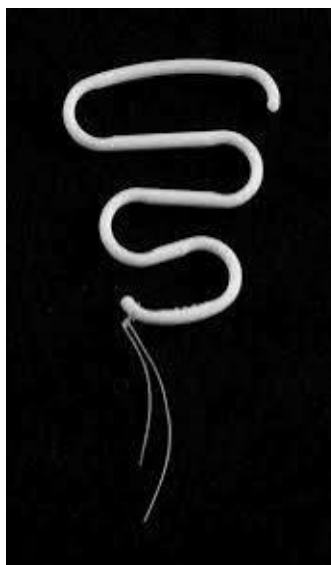
SHORT ANSWER TYPE (SA-II) QUESTIONS (3 MARKS EACH)

- 1 Explain various methods of vegetative reproduction.
- 2 How cutting, grafting and tissue culture is useful to humans?
- 3 Describe internal structure of anther (diagram is not expected).
- 4 Explain the development of male gametophyte in angiosperms (diagram is not expected).
- 5 Explain water pollination in detail with its types.
- 6 Give an account of any two biotic agents for pollination along with their adaptations.
- 7 Explain any two contrivances or outbreeding devices for pollination.
- 8 Describe the process of fertilization in angiosperms with the help of diagram.
- 9 Write a note on different types of endosperms in angiosperms.
- 10 Describe the development of dicot embryo in flowering plants.
- 11 Draw a well labelled diagram of monocot seed you have studied.
- 12 Explain various categories of apomixis.

LONG ANSWER TYPE (LA) QUESTIONS (4 MARKS EACH)

- 1 Explain various horticultural methods of vegetative reproduction with the help of labelled diagram.
- 2 Describe the structure of anatropus ovule with the help of labelled diagram.
- 3 Describe the development of female gametophyte of angiosperms with the help of diagram.
- 4 Give an account of various abiotic agencies used in pollination along with their adaptations for pollination.
- 5 Give an account of pollen pistil interaction in detail.
- 6 Describe the process of double fertilization in angiosperms and add a note on its significance.

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SHORT ANSWER TYPE (SA-I) QUESTIONS (2 MARKS EACH)

- 1 Draw a well labelled diagram of gemmule.
- 2 Write a note on budding.
- 3 Draw a well labelled diagram of L.S. human testis.
- 4 Describe the structure of Graafian follicle.
- 5 Write a short note on fallopian tube.
- 6 Give an account of external genitalia in human females.
- 7 Explain the structure of secondary oocyte.
- 8 Write an account of cleavage during embryonic development in humans.
- 9 Identify the parts labelled in the given diagram.



- 10 What is lactation? Which hormone is responsible for its regular secretion?
- 11 Mention any two different goals of RCH programme.
- 12 What is MTP? Upto which month it is permitted?

SHORT ANSWER TYPE QUESTIONS (SA-II) (3 MARKS EACH)

- 1 Explain various methods of asexual reproduction in lower animals.
- 2 Describe the histology of testis with help of labelled diagram.
- 3 Identify the labels from the given diagram.

- C Combined Water
D Capillary Water
- 11 To carry put plasmolysis, a cell must be placed in
A. Pure water
B. Hypertonic water
C. Hypotonic solution
D. Hypertonic solution
- 12 The liquid adsorbed during imbibition is known as
A. Solid
B. Imbibant
C. Imbibate
D. Colloids
- 13 Water moves either by apoplast or symplast pathway across the root. Ultimately it becomes symplastic at.
A. Pericycle
B. Endodermis
C. Xylem
D. Phloem
- 14 The positive hydrostatic pressure which develops due to absorption of water is called as
A. Capillary force
B. Transpiration pull
C. Root pressure
D. Transpiration
- 15 The example of amphi-stomatic leaf is
A. Nerium
B. Lotus
C. Grass
D. opuntia

VERY SHORT ANSWER TYPE QUESTIONS(1 MARK EACH)

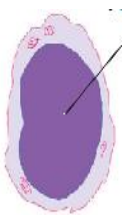
- 1 Why water acts as a thermal buffer?
- 2 Define : Root hair
- 3 What is meant by gravitational water?
- 4 What is meant by Hygroscopic water?
- 5 What is meant by Combined water?
- 6 What is meant by Capillary water?
- 7 What is the composition of outer layer of root hair?
- 8 What is the composition of inner layer of root hair?
- 9 From which type of cells, root hair is originated?
- 10 Which type of tissue is present in epiphytic roots?
- 11 Define imbibition.
12. What is DPD?
- 13 Which symbol is used to denote water potential?
- 14 What do you understand by the term lateral conduction of food?
- 15 Which organ is mainly involved in guttation?

SHORT ANSWER TYPE QUESTIONS (SA-I) (2 MARKS EACH)

- 1 Why water is called as 'Elixir of Life'?
- 2 What are the different types of water?
- 3 Draw a neat and labelled diagram of "Structure of Root hair".
- 4 Explain the structure of root hair.

LONG ANSWER TYPE QUESTIONS(LA) (4 MARKS)

1. With the help of labelled diagram explain the exchange of gases between alveolus and capillary.
2. With the help of chart identify and write the function of any **four** leucocytes.

Type	Leucocytes	Name of cell	Function
Granulocytes		-----	-----
		-----	-----
		-----	-----
Agranulocytes		-----	-----
		-----	-----

- 3 Draw labelled diagram of internal structure of human heart.
Label right atrium, mitral valve, left ventricle and pulmonary semilunar valve.
Write a function of Eustachian and tricuspid valve found in human heart.

- B *Agrobacterium*
- C *Azotobacter*
- D *E. coli*.

VERY SHORT ANSWER TYPE QUESTIONS (1 MARK EACH)

- 1 In which transgenic plant the substance Flavonoids obtained as antioxidants.
- 2 What is Germline therapy?
- 3 Which Recombinant proteins is obtained for Hepatitis-B by r-DNA technology.
- 4 What is plasmid?
- 5 What is Palindromic sequence?
- 6 Alu-I is obtained from which organism?
- 7 What is the role of Taq-polymerase in PCR technology?
- 8 Bt-cotton shows adverse effect on the population of which butterfly?

SHORT ANSWER TYPE QUESTIONS(SA-I) (2 MARKS)

- 1 What is Biopiracy? Explain it with respect to Turmeric.
- 2 How Biotechnology is applicable with respect to Genomics?
- 3 Explain how transgenic fish is commercially beneficial.
- 4 Write any two human disorders and to cure which recombinant proteins are produced?
- 5 For production of edible vaccines plants are used. Explain this any one example.
- 6 Write a note on uses of somatic cell gene therapy.
- 7 Define vector? write any two examples.

SHORT ANSWER TYPE QUESTIONS(SA-II) (3 MARKS)

- 1 Explain traditional use of Biotechnology.
- 2 Define biotechnology? Which are the basic principles and process of biotechnology?
- 3 What is gene cloning? Explain different tools used for it.
- 4 Explain types of enzymes used in biotechnology?
- 5 What is Recognition sequence? Explain in brief.
- 6 Define Biotechnology? How it is used in production of Human insulin.
- 7 What is GM plant? Write its different advantages.

LONG ANSWER TYPE QUESTIONS (LA) (4 MARKS)

- 1 What is PCR? Explain different steps involved in it.
- 2 Explain the following terms with respect to rDNA technology
 - i) passenger DNA
 - ii) Chimeric DNA
 - iii) Transformed cell
 - iv) restriction site
- 3 Define biotechnology. Give any three application of it?
- 4 Which are different adverse effect of biotechnology on human health and environment?
- 5 Explain biopatent and Biopiracy with different examples?

- 10 The number of deaths under ideal conditions is known as
A **Absolute mortality** B Realized mortality
C Absolute natality D Realized natality

VERY SHORT ANSWER TYPE QUESTIONS (1 MARK EACH)

- 1 Define Absolute Mortality.
- 2 How absolute Natality differs from Realized Natality.
- 3 What is population ecology?
- 4 Define the term spatial niche.
- 5 What is ESS?
- 6 Define the term Habitat.
- 7 Rearrange the terms population, Biome, Community and Organisms in ecological hierarchy
- 8 What Allen's rule indicates in adaptation?

SHORT ANSWER TYPE QUESTIONS(SA-I) (2 MARKS)

- 1 Show the graphical representation of mean annual rainfall with respect to mean annual temperature.
- 2 Define the term Biome and population.
- 3 How Habitat differs from Niche?
- 4 How 'Temperature' as an abiotic factor plays a role in ecology?
- 5 Define the term Adaptation. State its two advantages.
- 6 What is Mortality? What are its two types?
- 7 Define the term population interactions. State its two types

SHORT ANSWER TYPE QUESTIONS(SA-II) (3 MARKS)

- 1 Define Niche with its different types.
- 2 Define mutualism. Explain its one type.
- 3 Explain any three important characteristics of population.
- 4 Explain different population interactions with examples.
- 5 What is Commensalism? Explain it with suitable example.
- 6 Explain the role of any three abiotic factors affecting the environment.
- 7 Explain different types of growth models

LONG ANSWER TYPE QUESTIONS (LA) (4 MARKS EACH)

- 1 Define population growth. Explain different types of age pyramids.
- 2 Which are different biotic and abiotic factors involved in ecology and how they play their role?
- 3 What is population interaction? Explain the interactions in Mutualism and Competition.