

# MP Board 12th Biology 2024 Question Paper

1. Choose and write the correct option:

(i) Mycorrhiza is an example of:

- (a) Parasitism
- (b) Commensalism
- (c) Mutualism
- (d) Decomposer...

(ii) How many chromosomes are present in endosperm (Angiosperm)?

- (a)  $n$  (Haploid)
- (b)  $2n$  (Diploid)
- (c)  $3n$  (Triploid)
- (d)  $4n$  (Tetraploid)

(iii) Persistent nucellus in the seed is known as:

- (a) lillum
- (c) Chalaza
- (b) Tegmen
- (d) Perisperm

(iv) In sickle cell anaemia glutamic acid is replaced by valine. Which one of the following triplet code is for valine?

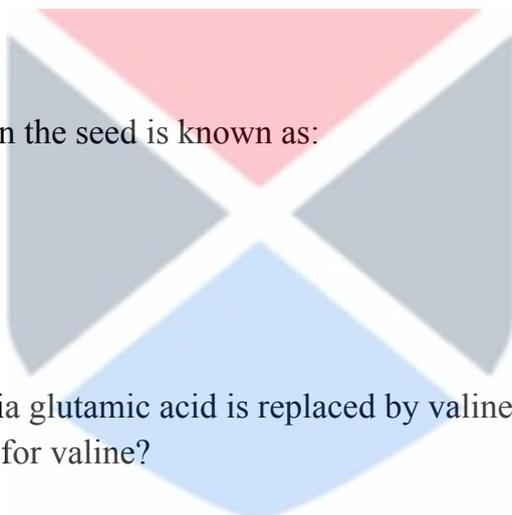
- (a) GGG
- (b) AAG
- (c) GAA
- (d) GUG

(v) In malaria, the product released by mosquito into blood that causes chill and fever:

- (a) Haematin
- (b) Schuffner's dots
- (c) Haczozoin
- (d) Haemotoxin

(vi) In agarose gel electrophoresis, DNA molecules are reported on the basis of their:

- (a) charge only
- (c) volume only
- (b) size only



(d) charge and shape

2 Fill in the blanks with the correct answer:

- (i) Proinsulin contains \_\_\_\_\_ which is not found in mature insulin.
- (ii) \_\_\_\_\_ is caused by a mutation in a gene related to the adenosine deaminase enzyme.
- iii) The green plant in the ecosystem are called \_\_\_\_\_
- (iv) The process of release of ovum from a mature follicle is called \_\_\_\_\_
- (v) DNA fingerprinting involves identifying differences in some specific regions in Sequence called \_\_\_\_\_

Answer: Repetitive DNA

(vi) Lactic acid bacteria convert milk into \_\_\_\_\_

3. Write True/False:

- (i) *Clarias gariepinus* for aquaculture purposes is posing a threat to the indigenous catfishes in our rivers.
- (ii) Humans are oviparous.
- (iii) Syphilis is a sexually transmitted disease.
- (iv) Lichens cannot be used as industrial pollution indicators.
- (v) Genes that cause cancer are called oncogenes.
- (vi) Each interferon has its own specialty

A	B
(i) PBR322	(a) detrimental interaction
(ii) <i>Corona radiata</i>	(b) z, y and a
(iii) Structural genes	(c) bone marrow
(iv) T-Lymphocytes	(d) vectors
(v) Competition	(e) ovum
	(f) RBCs

5. Write answer in the one sentence:

- (i) How do cytokine barriers provide innate immunity in humans?
- (ii) Write down the name of the bacterium which produces 'Bt' toxin.
- (iii) What is called 'lungs of the earth'?
- (iv) Write the full form of ZIFT.
- (v) What substances did Miller take in his experiments?

Answer: methane, water, hydrogen, and ammonia.

6. What is biopatent?

OR

What is golden rice? Write about it.

7 What do you understand about population density?

OR

Define camouflage and write an example.

8 What is hot spot? Write the name of a hot spot in India

OR

Name the three important components of biodiversity.

9. What is amniocentesis ? Give its significance.

OR

What is MTP? Write its safety periods,

10 What is point mutation? Give an example.

OR

The human male never passes on genes for haemophilia to his son. Why

11. What is adaptive radiation? Give an example.

OR

Write Hardy-Weinberg principle.

12' Why are cyanobacteria considered useful in paddy fields?

OR

Why does Swiss cheese have big holes?

13 Write three differences between Biopesticides and Chemical pesticides.

OR

Draw a neat and clean labelled diagram of a Biogas plant.

14 Why is the pyramid of energy always upright? Explain it.

OR

Describe the interrelationship between productivity, gross primary productivity and net productivity

