

NBSE Class 12 Biology Previous Year Question Paper 2017

Total number of printed pages : 3

2017
BIOLOGY

2017/XII/BIO

Total marks : 70

Time : 3 hours

General instructions:

- i) Approximately 15 minutes is allotted to read the question paper and revise the answers.
- ii) All questions are compulsory. Marks are indicated against each question.
- iii) The question paper consists of two parts – Part A and Part B.
Each part contain 14 questions.
- iv) Internal choice has been provided in some questions.
- v) Write the answers of Part A and Part B in separate answer books.
Marks shall not be awarded if the answers of both the Parts are written in one book nor marks awarded if answers of Part A are written in the answer book of Part B and vice-versa.

N.B: Check that all pages of the question paper is complete as indicated on the top left side.

PART - A

1. In porogamy, pollen tube enters the ovule through the_____ **1**
(a) chalazal (b) integument
(c) micropyle (d) nucellus
2. Grafting is not possible in monocotyledons because **1**
(a) vascular bundles are endarch
(b) vascular bundles are exarch
(c) vascular bundles are closed
(d) vascular bundles are scattered
3. According to Chargaff's rule, which one is correct? **1**
(a) $A + T = G + C$ (b) $A + C = G + T$
(c) $A + G = T + C$ (d) none of these
4. The main purpose of embryo culture is for **1**
(a) production of haploid plants
(b) production of virus free plants
(c) protoplast fusion
(d) embryo rescue

5. The species listed in Red Data Book are 1
(a) threatened (b) endangered
(c) rare (d) all of these
6. Write any two points of difference between self pollination and cross pollination. 2
7. Define productivity. Mention the two types of productivity. 2
8. Differentiate between *In situ* and *Ex-situ* approaches of conserving biodiversity. 2
9. Draw a neat labelled diagram of L.S of ovule. 3
10. a. List out the various enzymes involved in DNA replication with one function each. 3
Or
b. What is translation? Mention the various steps involved in translation.
11. What is single cell protein? Write any two uses of SCP. 3
12. a. Enumerate the essential features of genetic code. 5
Or
b. Explain the Watson and Crick model of DNA with the help of a labelled diagram.
13. a. What are cloning vectors? Give a brief account on the characteristics of cloning vectors. 5
Or
b. Explain the amplification of gene of interest using PCR.
14. a. Define ecological pyramid. Explain in brief the different types of ecological pyramids. 5
Or
b. What is green house effect? Explain the effects of global warming.

PART –B

1. The embryo at 16-celled stage is known as 1
(a) morula (b) gastrula
(c) blastula (d) blastomere

2. The function of copper-T is to prevent 1
(a) fertilization (b) egg maturation
(c) ovulation (d) implant of blastocyst
3. The recessive gene located on X-chromosome in human are always 1
(a) lethal (b) sub-lethal
(c) expressed in male (d) expressed in female
4. *Bacillus thuringiensis* is used as 1
(a) biofertilizer (b) biopesticide
(c) biocontroller (d) bioweapon
5. The association of animals when both partners are benefitted is 1
(a) commensalism (b) amensalism
(c) mutualism (d) parasitism
6. What is pleiotrophy? Give one example. 2
7. What is autoimmune disease? Give two examples. 2
8. Give significance of transgenic organisms citing two examples. 2
9. a. Differentiate between linkage and crossing over. 3
Or
b. Discuss about genetic variation in a population that leads to evolution.
10. What is gene therapy? Give a brief account on the two types. 3
11. Discuss the effects of temperature on animals. 3
12. a. What is menstrual cycle? Explain the various phases of menstrual cycle. 5
Or
b. Explain the techniques used for detection of foetal disorders during early pregnancy.
13. a. What are sex chromosomes? Explain the determination of sex in man. 5
Or
b. Explain Darwin's theory of evolution of natural selection.
14. a. What is cancer? Explain the four types of cancer. 5
Or
b. Discuss the biological methods for the control of insect pests.