

PUNJAB SCHOOL EDUCATION BOARD

SAMPLE PAPER

Biology (DA Code)

Class 10+2

Max marks 70

Time 3 Hours

Note:

- Question paper has three sections A, B, and C with total 30 questions.
- Section A has 23 questions of 2 marks each. Out of these 6 questions are multiple choice questions, 5 are match the column, 6 are fill in the blanks with given options and 6 are true or false
- Section B has Question no. 24 to 27 of three marks each. There is 100% internal choice in each question.
- Section C has Question no. 28-30 of four marks each. There is 100% internal choice in each question.

Section A

Multiple Choice questions

Each question carries 2 marks

- Q1) Removal of anther from flower bud before the dehiscence of anther is called
- A. Emasculation
 - B. Bagging
 - C. Tagging
 - D. None of the above
- Q2) In man, the sperms are produced in:
- A. Seminiferous tubules
 - B. Vasa efferentia
 - C. Rete testis
 - D. Vas deferens
- Q3) Down's Syndrome occurs due to trisomy of
- A. 21st chromosome
 - B. 14th chromosome
 - C. 3rd chromosome
 - D. 15th chromosome
- Q4) Malarial parasite requires two hosts to complete its life cycle, these are
- A. Human and Mosquito
 - B. Human and Housefly
 - C. Human and pig
 - D. Mosquito and Pig
- Q5) Large Scale production of desired products of recombinant DNA technology is done in.
- A. Glass flask
 - B. Bioreactors
 - C. Steel tanks
 - D. All of the above
- Q6) Which one of the following has the largest population in a food chain?
- A. Producers
 - B. Primary Consumers
 - C. Secondary consumers
 - D. Decomposers

6X2=12

Fill in the blanks

- Q7) The process of fusion of gametes is called----- .
(Fertilisation/embryogenesis)
- Q8) *Agrobacterium tumefaciens* is known asgenetic engineer of
plants. (natural/artificial)
- Q9) The number of individuals inhabiting per unit area -----.
(Population density/Population Frequency)
- Q10) The large holes in swiss cheese are due to production of a large
amount of -----by a bacterium. (Oxygen/Carbon
dioxide)
- Q11) The organisms which can tolerate and thrive in a wide range of
temperatures are called (Eurythermal/Stenothermal)
- Q12) Dodo bird is example of ----- organism. (Extinct/Endangered)
- 6X2=12**

True or False

Each question carries 2 marks

- Q13) Leydig cells are found in ovary.
- Q14) Mendel studied total nine characters of garden pea.
- Q15) A cross between F1 hybrid and one of the dominant parent is called
test cross.
- Q16) Evolution is a discontinuous process.
- Q17) Polar bears goes into aestivation during winter..
- Q18) The green plants are called producers.
- 6X2=12**

Match the Column A with B

Each question carries 2 marks

Q19)

Column I	Column II
i. In human female, the first menstruation is called	(a) Menopause
ii. Corpus luteum secretes	(b) Menarche
	(c) Progesterone

Q20)

Column I	Column II
(i) Start codons	a) UAA,UAG,GUG
(ii) Stop codons	b) AUG, GUG
	c) UAA, UAG, UGA

Q21)

Column I	Column II
(i) Ascariasis	(a) <i>Ascaris lumbricoides</i>
(ii) Filariasis	(b) <i>Micosporum</i>
	(c) <i>Wuchereria bancrofti</i>

Q22)

Column I	Column II
----------	-----------

(i) Nicotine	(a) Alcohol
(ii) Liver Cirrhosis	(b) Tobacco plant
	(c) Caffeine

Q23)

Column I	Column II
(i) Hind II	(a) Restriction Endonuclease Enzyme
(ii) pBR322	(b) selectable marker
	(c) Cloning vector

5X2=10

Section B

Each question carries 3 marks

Q24) What are characters of flowers pollinated by insects?

OR

What is amniocentesis?

Q25) What are homologous organs. Give an example.

OR

What do you mean by semi-conservative mode of DNA replication.

Q26) Define biotechnology. Write any two applications of biotechnology.

OR

Write a short note on Gene therapy.

Q27) Define Mutualism and give one example.

OR

What makes India one of the 12 mega diversity countries of the world?

4X3=12

Section C

Each question carries 4 marks

Q28) What is triple fusion? Where and how does it take place.?

OR

Give a brief account of male reproductive system.

Q29) Differentiate between co-dominance and incomplete dominance.

OR

Write down any three points of difference between monohybrid & dihybrid cross.

Q30) List the harmful effects of alcohol or drug abuse.

OR

Name of the causative agent of Malaria. Write its symptoms also. **3X4=12**