



Code Number:

**A**

# Aakash

Medical | IIT-JEE | Foundations

Corp. Office: Aakash Educational Services Limited, 3rd Floor, Incuspaze Campus- 2, Plot No. 13,  
Sector- 18, Udyog Vihar, Gurugram, Haryana - 122015

Time: 3 hrs.

**Mock Test Paper for Class-XII**

Max. Marks: 70

## BIOLOGY

Roll No.

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### GENERAL INSTRUCTIONS

Read the following instructions carefully and follow them:

1. The Question paper consists of parts I & II
2. Use Blue or Black ink to write and underline and pencil to draw diagrams.
3. Answer all the questions
4. Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

**PART - I (BOTANY)**

**SECTION-1**

**Answer all the questions**

**8 x 1 = 8**

- The unit for measuring ozone thickness is:  
(a) Watt (b) Dobson (c) Kilo (d) Joule
- Fruit colour in squash is an example of:  
(a) Complementary genes (b) Recessive epistasis  
(c) Inhibitory genes (d) Dominant epistasis
- Size of pollen grain in myosotis is \_\_\_\_\_ micrometer  
(a) 10 (b) 2000 (c) 20 (d) 200
- Assertion (A):** Gamma rays are generally used to induce mutation in wheat varieties.  
**Reason (R):** Because they carry lower energy to non-ionize electrons from atom.  
(a) (A) is wrong, (R) is correct (b) (A) and (R) are correct  
(c) (A) and (R) are wrong (d) (A) is correct, (R) is wrong
- The wavelength of photosynthetically active radiation lies between the range of:  
(a) 200 – 700 nm (b) 300 – 700 nm (c) 500 – 700nm (d) 400 -700 nm
- Match the following  

Column -I	Column -II
(1) Cowpea	(i) Pusa sudabahar
(2) Wheat	(ii) Pusaswarnim
(3) Chilli	(iii) Himgiri
(4) Brassica	(iv) Pusa Komal

(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)
- The native of groundnut is:  
(a) North America  
(b) Philippines  
(c) Brazil  
(d) India
- Plasmids are:  
(a) tiny bacteria (b) circular protein molecules  
(c) confer resistance to antibiotics (d) required by bacteria

## SECTION-2

**Answer any four of the following questions**

**4 x 2 = 8**

9. Give the names of the scientists who rediscovered Mendelism.
10. What is called phyto remediation?
11. Mention the names of the enzymes required for Genetic engineering.
12. What are embryoids?
13. Pyramid of energy is always upright. Give reasons.
14. How are microbial inoculants used to increase the soil fertility?

## SECTION-3

**Answer any three of the following questions. Q.No. 19 is compulsory.**

**3 x 3 = 9**

15. What is genetic mapping? Write its uses.
16. Give an account on Cryopreservation.
17. Distinguish between habitat and niche.
18. How do forests help in maintaining the climate?
19. Draw the structure of an ovule and label its parts.

## SECTION-4

**Answer all questions.**

**2 x 5 = 10**

20. (a) What is single cell protein? Mention its applications.

**OR**

- (b) What are Millets? What are its types? Give an example for each type.

21. (a) Bring out the inheritance of chloroplast gene with an example.

**OR**

- (b) Discuss the steps involved in the microsporogenesis.

## PART - II (ZOOLOGY)

### SECTION-1

**Answer all the questions**

**8 x 1 = 8**

- The Androgen Binding Protein (ABP) is produced by:  
(a) Sertoli cells (b) Leydig cells  
(c) Pituitary gland (d) Hypothalamus
- The relationship between sucker fish and shark is:  
(a) Commensalism (b) Parasitism  
(c) Predation (d) Competition
- Paedogenetic Parthenogenesis occurs in:  
(a) Solenobia (b) Aphis (c) Gall fly (d) Honey bees
- Down's Syndrome is a genetic disorder which is caused by the presence of an extra chromosome number:  
(a) 13 (b) 20 (c) 23 (d) 21
- Exo-erythrocytic schizogony of plasmodium takes place in:  
(a) Stomach (b) RBC (c) Liver (d) Leucocytes
- The term 'Biogenesis' was coined by:  
(a) Orarin (b) Thomas Huxley (c) Haldane (d) Henry Bastian
- Project Tiger was launched in the Jim Corbett National Park in the State of \_\_\_ in 1973.  
(a) Assam (b) Uttarakhand (c) Kerala (d) Gujarat
- Adenosine deaminase deficiency causes:  
(a) SCID (b) Hemophilia (c) Hepatitis (d) AIDS

### SECTION-2

**Answer any four of the following questions:**

**4 x 2 = 8**

- Mention any two goals of the human genome project.
- Define Oligopotency with an example.
- Draw a neat labelled sketch of human Ovum.
- Which is referred as Industrial alcohol? Why is it referred so?
- What is meant by Sameer?
- Write the risk factors for cervical cancer.

### SECTION-3

**Answer any three questions. Q. No. 19 is compulsory.**

**3 x 3 = 9**

- Write a short note on Coprolites.
- Placenta is an endocrine tissue- Justify.
- Recently E-waste created dangerous effects in the environment. How will you find solution to avoid the effects due to these wastes?

18. Write the differences between r-selected and K-selected species.
19. By which event PCR help in RNA replication? Write in brief about chemical reaction of that process.

#### SECTION-4

**Answer all the questions.**

**2 x 5 =10**

20. (a) How can we contribute to promote biodiversity conservation?

**OR**

- (b) What are Hardy-Weinberg's assumptions on evolution? Explain them.

21. (a) Classify the drugs on the basis of their effects.

**OR**

- (b) Explain the different kind of syngamy in living organisms.

