

Roll No. ....

054

Total No. of Questions : 26 ]

[Total No. of Printed Pages : 3

SS  
2067

ANNUAL EXAMINATION SYSTEM

BIOLOGY (Theory)  
(English Version)  
(Evening Session)

Time allowed : Three hours

Maximum marks : 70

*Note :* (i) You must write the subject-code/paper-code **054** in the box provided on the title page of your answer-book.

(ii) Make sure that the answer-book contains 30 pages (including title page) and are properly serialed as soon as you receive it.

(iii) Question/s attempted after leaving blank page/s in the answer-book would not be evaluated.

(iv) Draw well labelled diagrams, wherever necessary.

(v) The paper comprises of 26 questions.

(vi) Question Nos. 1 to 8 are of one mark each. All questions are compulsory.

(vii) Question Nos. 9 to 16 are of two marks each. All questions are compulsory.

(viii) Question Nos. 17 to 23 are of four marks each. All questions are compulsory however there is internal choice only in Question no. 22 and 23.

(ix) Question Nos. 24 to 26 are of six marks each. There will be internal choice in them.

**Attempt all questions 1 to 8,**

1. Ginger is multiplied vegetatively by means of  
(a) Bud      (b) Tuber      (c) Corm      (d) Rhizome 1
2. Ovulation is induced by a hormone called \_\_\_\_\_. 1
3. What would be the disorder caused due to presence of extra autosomal chromosome ? 1
4. Who proposed one – gene – one enzyme hypothesis ? 1

5. Expand SCID. 1
6. Name the compound which is used to stain the DNA fragments. 1
7. Who coined the term ecology? 1
8. Name the unit to measure noise pollution. 1

**Attempt all questions 9 to 16**

9. Differentiate between gametogenesis and embryogenesis. 2
10. Define vestigial organ. Give one example. 2
11. What is linkage? Give two factors affecting linkage. 2
12. Name the pathogen that causes 'pneumonia' and modes of transmission. 2
13. What are biofertilizers? What are the main sources of biofertilizers? 2
14. How is *Bacillus thuriengiensis* useful in biocontrol of insect pests? 2
15. Write a note on Bt cotton. 2
16. What is acid rain? What are its effects on plants? 2

**Attempt all questions 17 to 23**

17. Draw well-labelled diagram of female reproductive system. 4
18. What is co-dominance? Explain it with the help of an example. 4
19. Differentiate between cancerous cells and normal cells. 4
20. Name the causal agent of "filariasis". Write its symptoms and prophylaxis. 4
21. Discuss the role of Microbes as biofertilizers. 4
22. What is alcoholism? Explain ill-effects of alcohol on different parts of body. 4

( 3 )

or

Explain the terms :

- (a) Callus (b) Micro-propagation

4

23. (a) Write a brief account of genetically engineered insulin.  
(b) What are exonucleases and endonucleases.

or

Describe the various biotechnological applications in agriculture.

4

**Attempt all questions 24 to 26**

24. With a neat labelled diagram describe the parts of a typical angiosperm ovule.

or

(a) What is parturition ? Name the hormone involved in induction of parturition.

(b) Write function of :

- (i) Corpus luteum (b) Endometrium (c) Acrosome

6

25. Describe Meselson's and Stahl's experiment to prove that DNA replication is semi-conservative.

or

(a) With the help of simple sketch show the action of restriction enzyme.

(b) Show with a sketch of E-coli cloning vector showing restriction sites.

6

26. Define air-pollution and explain the primary pollutants. What are the ill effects of air pollution?

or

Explain :

(a) Catalytic converter

(b) Ex-situ conservation

(c) Pyramid of Bio-mass.

6