

Roll No.

Total No. of Questions : 26]

054

[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 serialized 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

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| 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

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| 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 <i>Bacillus thuringiensis</i> 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

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| 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

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

or

Describe the various biotechnological applications in agriculture.

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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

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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.

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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.

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