

Total number of printed pages : 3

NB/XII/ECO/I

**2024**  
**ECONOMICS**

Total marks : 80

Time : 3 hours

**General instructions:**

- i) *Approximately 15 minutes is allotted to read the question paper and revise the answers.*
  - ii) *The question paper consists of 28 questions.*
  - iii) *Marks are indicated against each question.*
  - iv) *Answers to questions carrying 2 marks should not exceed 50 words.*
  - v) *Answers to questions carrying 4 marks should not exceed 80 words.*
  - vi) *Answers to questions carrying 6 marks should not exceed 120 words.*
  - vii) *Answers to questions carrying 8 marks should not exceed 200 words.*
- N.B:** *Check that all pages of the question paper is complete as indicated on the top left side.*

**Choose the correct answer from the given alternative:**

1. Which of the following is a part of consumption goods? 1
  - a) plant
  - b) TV set
  - c) raw material
  - d) machinery
  
2. Two sector economy consists of 1
  - a) households and government
  - b) households and firms
  - c) firms and foreign
  - d) firms and government
  
3. Mr. Theja was given cash grants by the Government to encourage production of certain commodities. This will be treated as 1
  - a) scholarship
  - b) subsidies
  - c) pension
  - d) lump sum payment
  
4. Which deficit indicates the borrowing requirement of the government? 1
  - a) revenue deficit
  - b) fiscal deficit
  - c) primary deficit
  - d) budgetary deficit
  
5. Indicator that reflects the backward nature of the Indian economy on the eve of independence is 1
  - a) literacy rate
  - b) life expectancy
  - c) demographic situation
  - d) mortality rate
  
6. The apex refinancing institution for rural and agricultural credit is 1
  - a) RRBs
  - b) NABARD
  - c) NAFED
  - d) Self Help Group

7. What is the duration of long-term credit? 1  
 a) 6 – 10 years b) 2 – 5 years  
 c) 5 – 10 years d) 5 – 20 years
8. Statement I : maximum number of people are working as self-employed in both rural and urban areas  
 Statement II : the second major source of work is regular salaried category.  
 Which of the following options is correct about the given statement? 1  
 a) Statement I is correct and statement II is incorrect  
 b) Statement I is incorrect and statement II is correct  
 c) Both the statements are correct  
 d) Both the statements are incorrect
9. Who was the first chairman of Planning Commission in India? 1  
 a) Mahatma Gandhi b) Jawaharlal Nehru  
 c) Dr. Rajendra Prasad d) Dr. B R Ambedkar
10. In which five year plan did the Government set the target of creating 50 million employment? 1  
 a) second plan b) fifth plan  
 c) tenth plan d) twelfth plan
11. Distinguish between final goods and intermediate goods. 2
12. Write any two importance of macroeconomics. 2
13. Ram purchased a scooter for ` 70,000 to commute between his office and home. Should this be treated as an intermediate consumption? Give reason. 2
14. Give the differences between intrinsic value and face value. 2
15. “Agriculture sector appears to be adversely affected by the economic process”. Explain the given statement. 2
16. Define planning. Give any two drawbacks of planning. 2
17. Which institution has replaced the Planning Commission of India and in which year? 2
18. Differentiate between economic growth and economic development. 2
19. Explain any two limitations of GDP as an indicator of welfare. 4
20. What is APC? State any three features of APC. 4

21. Explain any two functions of Central Bank. 4
22. “Foreign trade was much favourable before the British rule as compared to the deteriorated condition on the eve of independence”. Justify this statement. 4
23. Explain any two fiscal policy reforms introduced under NEP, 1991. 4
24. a. Explain the sources of Net Factor Income from Abroad (NFIA). 6  
**Or**  
b. Explain the precautions required to be taken while measuring national income by final expenditure method.
25. a. Explain any three contractionary fiscal policy tools. 6  
**Or**  
b. Explain any three objectives of Government budget.
26. a. Make a comparison between India and China by population below poverty line. 6  
**Or**  
b. Make a comparative study of the growth rate of GDP between India and China.
27. a. Explain how is equilibrium achieved under S–I approach with the help of a diagram. 8  
**Or**  
b. Explain how is full equilibrium achieved with the help of a diagram.
- Alternate question for the visually impaired students:**
- a. Explain briefly the basic problems of an economy. 8  
**Or**  
b. Explain any four problems of barter exchange.
28. a. Explain any four sources of human capital formation. 8  
**Or**  
c. Explain the dimension of sustainable development.

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Total number of printed pages : 5

NB/XII/BIO/1

**2024**  
**BIOLOGY**

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 15 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. The phenomenon wherein, the ovary develops into fruit without fertilization is called **1**
  - (a) Parthenocarpy
  - (b) Apomixis
  - (c) Embryogenesis
  - (d) Syngamy
  
2. Assertion (A): During gel electrophoresis, the DNA fragments move towards the anode.  
Reason (R): DNA fragments are negatively charged molecules. **1**
  - (a) Both (A) and (R) are true and (R) is the correct explanation of (A)
  - (b) Both (A) and (R) are true but (R) is not the correct explanation of (A)
  - (c) (A) is true but (R) is false
  - (d) Both (A) and (R) are false
  
3. Match the organism's cell wall with the enzyme in which it is found **1**

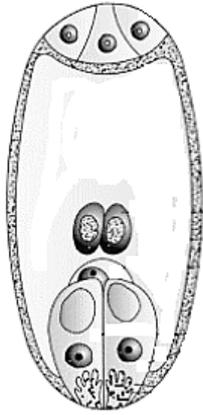
i) Bacteria	a) Cellulase
ii) Plant cells	b) Chitinase
iii) Fungus	c) Lysozyme

  - (a) i(b), ii(a), iii(c)
  - (b) i(c), ii(b), iii(a)
  - (c) i(a), ii(c), iii(b)
  - (d) i(c), ii(a), iii(b)
  
4. Which of the following forest is known as the 'Lungs of the planet'? **1**
  - (a) Forest of Greenland
  - (b) Congo Basin forest
  - (c) Amazon Rain forest
  - (d) Sacred Grooves

5. The term 'The Evil Quartet' is related with four major causes of 1  
(a) Forest loss (b) Population explosion  
(c) Loss of biodiversity (d) Pollution
6. Cleistogamous flowers produce assured seed-set even in the absence of pollinators. Give reason. 2
7. Write down any two important strategies that a bisexual flower can develop to undergo xenogamy. 2
8. Mention the dual function of AUG. 2
9. a. Both micro-injection and biolistic are methods to introduce alien DNA into host cells. How does these method differ from each other? 2  
**Or**  
b. Differentiate between exonuclease and endonuclease.
10. a. Label the following in the given diagram.  
i) Scutellum ii) Coleoptile iii) Shoot apex  
iv) Coleorhiza v) Radicle vi) Epiblast



- Or** 3
- b. Label the following in the given diagram.  
i) Antipodals ii) Synergids iii) Filiform apparatus  
iv) Egg v) Central cell vi) Polar nuclei



11. a. Two claimant fathers filed a case against a lady claiming to be the father of her only daughter. How could this case be settled by identifying the real biological father?
- Or**
- b. Name the different types of RNA and give its function. **3**
12. There are some features that are required to facilitate cloning into a vector. Give a brief note on the following. **3**
- i) Ori  
ii) Selectable marker
13. With the extinction of a key species, an entire ecosystem will/may collapse. Explain with reference to 'Rivet Popper Hypothesis' by Paul Ehrlich. **3**
14. a. Explain Lac-Operon concept with the help of a diagram. **5**
- Or**
- b. Explain how Hershey and Chase experiment proved that DNA is the genetic material.
15. a. Any calculation of energy content, biomass or numbers has to include all organisms at that trophic level. Give reason for the following. **5**
- i) Trophic level represents a functional level and not the species.  
ii) Pyramid of energy is always upright and not inverted.  
iii) Pyramid of biomass in sea is generally inverted.
- Or**
- b. What is decomposition? Explain the important steps in the process of decomposition.

**PART - B**

1. Match the following and choose the correct option. 1
- |                  |                                 |
|------------------|---------------------------------|
| Column I         | Column II                       |
| 1) Ovary         | A) Androgens                    |
| 2) Corpus luteum | B) Human Chorionic gonadotropin |
| 3) Leydig cells  | C) Estrogen + Progesterone      |
| 4) Placenta      | D) Progesterone only            |
- (a) 1(A), 2(C), 3(B), 4(D)  
(b) 1(C), 2(D), 3(A), 4(B)  
(c) 1(B), 2(A), 3(C), 4(D)  
(d) 1(A), 2(B), 3(D), 4(C)
2. Lack of independent assortment of two genes 'A' and 'B' in fruit fly *Drosophila* is due to 1
- |               |                   |
|---------------|-------------------|
| (a) Repulsion | (b) Recombination |
| (c) Linkage   | (d) Crossing over |
3. The yellowish fluid colostrum secreted by mother during the initial days of lactation has antibodies 1
- |          |          |
|----------|----------|
| (a) Ig E | (b) Ig A |
| (c) Ig M | (d) Ig G |
4. BOD of waste water is estimated by measuring the amount of 1
- |                                  |
|----------------------------------|
| (a) Biodegradable organic matter |
| (b) Total organic matter         |
| (c) Oxygen evolution             |
| (d) Oxygen consumption           |
5. Baculoviruses are 1
- |  |
|--|
| (a) Species specific, narrow spectrum insecticides |
| (b) Species specific, broad spectrum insecticides  |
| (c) Non specific, narrow spectrum insecticides     |
| (d) Non specific, broad spectrum insecticides      |
6. a. Write the role of GnRH (Gonadotropin releasing hormone) on spermatogenesis. 2
- Or**
- b. What do oral pills contain and how do they act as effective contraceptives?

7. Write the importance of pedigree analysis in genetic studies. 2
8. Draw and label the structure of an antibody molecule. 2
9. What process is involved for the prevention of nematode infestation in the roots of tobacco plant? Briefly explain. 2
10. a. How is sex determination in honeybees different from human? 3  
**Or**  
b. How did Miller's experiment support the origin of life theory of Oparin and Haldane? Explain. 3
11. a. On what property is the principle of immunization/ vaccination based? Explain briefly. 3  
**Or**  
b. Explain the importance of fungi and cyano bacteria as bio fertilizers. 3
12. Write three biotechnological applications in medicine. 3
13. Write the difference between the exponential growth and logistic growth of a population. 3
14. a. The problem of infertility is on the rise. List and explain the different ways by which this infertility problem can be tackled. 5  
**Or**  
b. With the help of a diagram, explain the embryonic development that takes place from zygote till implantation. 5
15. a. Write and explain three Mendelian disorders and two chromosomal disorders. 5  
**Or**  
b. Discuss the different evidences found that support evolution. 5

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