

Tsi12Bio

Tenkasi District Common Examinations
First Revision Test - January 2023

**Standard 12**

Time Allowed: 3.00 Hours

BIOLOGY

Maximum Marks: 70

BIO-BOTANY**Marks: 35****8×1=8****I. Choose the correct answer:**

- 1) Solidifying agent used in plant tissue culture is
 a) Nicotinic acid b) Cobaltous chloride c) EDTA d) Agar
- 2) In which technique, Ethidium Bromide is used?
 a) Southern blotting techniques b) Western blotting techniques
 c) Polymerase chain reaction d) Agrose gel electroporosis
- 3) If haploid number in a cell is 18. The double monosomic and trisomic number will be
 a) 35 and 37 b) 34 and 35 c) 37 and 35 d) 17 and 19
- 4) **Match the following:**

I. External fertilization	i) Pollen grain
II. Androecium	ii) Antherwall
III. Male gametophyte	iii) Algae
IV. Primary parietal layer	iv) Stamens
a) I-iv; II-i; III-ii; IV-iii	b) I-iii; II-iv; III-i; IV-ii
c) I-iii; II-iv; III-ii; IV-i	d) I-iii; II-i; III-iv; IV-ii
- 5) **Assertion** : Turmeric fights various kinds of cancer.
Reason : Curcumin is an anti-oxidant present in turmeric.
 a) Assertion is correct; Reason is wrong.
 b) Assertion is wrong; Reason is correct.
 c) Both are correct.
 d) Both are wrong.
- 6) The ozone layer of troposphere is called
 a) Middle ozone b) Ozone shield c) Bad ozone d) Good ozone
- 7) From the following which one is the column of sterile tissue surrounded by the anther lobe.
 a) Periplasmodium b) Pollen chamber c) Connective tissue d) Tapetum
- 8) The group of degradable biopolymers are
 a) Cry IAC and DMH - II b) PHAs and PHB
 c) GFP and PGA d) DMH and HT

II. Answer any four of the following:**4×2=8**

- 9) Write short note on Pollen kitt.
- 10) What are multiple alleles?
- 11) Name the enzymes involved in genetic engineering.
- 12) What is pseudocereal? Give an example.
- 13) Define Food Web.
- 14) Define Habitat.

III. Answer any three of the following:**3×3=9****Q.No. 19 is compulsory.**

- 15) Give an account on Cryopreservation.
- 16) What is Albedo effect? Write their effects.
- 17) Write a note on heterosis.
- 18) What is Energy flow?
- 19) Write a short note on pBR322 plasmid.

IV. Answer all the following:**2×5=10**

- 20) a) With a suitable diagram, explain the structure of an ovule. **(OR)**
 b) What is gene mapping? Write its uses.
- 21) a) How will you protect ecosystem? **(OR)**
 b) Enumerate the anatomical adaptations of xerophytes.

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BIO-ZOOLOGY **Section - A**

Marks: 35

I. Answer all questions:

8×1=8

- 1) Which is incorrectly matched?
 - a) Monocystis - Isogamy
 - b) Protozoa - Merogamy
 - c) Aphid - Paedogamy
 - d) Trichonympha - Hologamy
- 2) Name the proteolytic enzyme present in the spermatid _____.
 - a) Testosterone
 - b) Hyaluronidase
 - c) Hyaluronic acid
 - d) Axoneme
- 3) Medical termination is extremely safe up to _____.
 - a) 11 weeks
 - b) 10 weeks
 - c) 12 weeks
 - d) 20 weeks
- 4) Patau's syndrome is due _____.
 - a) 21 Trisomy
 - b) 18 Trisomy
 - c) 13 Trisomy
 - d) 14 Trisomy
- 5) Find out correct matching sequence.

a) One gene - one enzyme hypothesis	-	1. UAA, UAG and UGA
b) RNA world	-	2. Francis Crick
c) Central dogma of protein synthesis	-	3. Beadle and Tatum
d) Non sense codon	-	4. Walter Gilbert

 - a) 3, 4, 2, 1
 - b) 4, 3, 2, 1
 - c) 2, 4, 3, 1
 - d) 1, 2, 3, 4
- 6) **Assertion** : Organs having different structural patterns but similar functions are termed as analogous structure and brings about convergent Evolution.
Reason : Darwin's finches and Australian Marsupials are the example for Adaptive radiation and its similarity is referred as Convergent Evolution.
 - a) Both 'A' and 'R' are true and 'R' is correct explanation for 'A'.
 - b) Both 'A' and 'R' are true but 'R' is not correct explanation of 'A'.
 - c) 'A' true and 'R' false.
 - d) 'A' false and 'R' true.
- 7) SMOG is derived from _____.
 - a) Smoke
 - b) Fog
 - c) Both 'A' and 'B'
 - d) Only 'A'
- 8) The relationship between shark and sucker fish is _____.
 - a) competition
 - b) commensalism
 - c) predation
 - d) parasitism

Section - B

II. Answer any four questions:

4×2=8

- 9) Write a note on colostrum.
- 10) Explain Intra - cytoplasmic sperm injection.
- 11) Any two application of Karyotyping?
- 12) Name the four different types of malaria and causative agent.
- 13) What are Heptens?
- 14) What is Acclimatisation?

Section - C

III. Answer any three questions. Q.No. 18 is compulsory:

3×3=9

- 15) What are the symptoms of Hirsutism?
- 16) What is meant by Heterogametic males?
- 17) Differentiate Connective link and Atavism?
- 18) A child suffer from non functioning of 'T' - Lymphocytes cannot elicit immunity against pathogen? What is the name of the disease? How it is corrected?
- 19) What are DNA Vaccine?

Section - D

IV. Answer all the questions:

2×5=10

- 20) What are the major tasks carried out by the Reproductive child health programme? Explain barrier method of contraception.

(OR)

What is meant by Paleontology and explain a brief account about Human evolution?

- 21) Explain the various types of innate immunity.

(OR)

Explain the following:

- (a) Interferons
- (b) Biomagnification with example

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