## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 6 – EVOLUTION

TIME: 1.30 hrs MARKS: 35

#### II. Answer any four questions:-

4 X 2 = 8

- 9. Describe an example of adaptive radiation.
- 10. How does an analogous organ support the theory of organic evolution.
- 11. State the Biogenetic law.
- 12. What are coprolites?
- 13. What is founder's effect?
- 14. Compare relative dating with absolute dating

#### **SECTION - C**

#### III. Answer any three questions. Qn. 19 is compulsory.

 $3 \times 3 = 9$ 

- 15. Explain the types of bioremediation
- 16. Human appendix is a vestige. Give reason
- 17. Mention the main objections to Darwinism.
- 18. State the theory of spontaneous generation.
- 19. Define petrification.

### SECTION – D

## IV. Answer all the questions.

 $2 \times 5 = 10$ 

20. a) Explain the natural selection through industrial melanism.

(OR)

- b) Write a short notes stabilizing, directional and disruptive selection with example.
- 21. a) Explain Urey & Miller's experiment.

(OR)

b) Give a detailed account of Modern Synthetic Theory.

## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 7 – HUMAN HEALTH AND DISEASES

TIME: 1.30 hrs MARKS: 35

I. Choose the correct answer: -	8X1=8
1. Vector control research Centre is located in	
(a) Chennai (b) Delhi (c) Puducherry (d) Hyderabad	
2. The substance not present in tobacco is	
(a) Nicotine (b) tar (c) Morphine (d) carbon monoxide	
3 is not linked to malaria	
(a) Haemozoin (b) TNF-a (c) Phencyclidine (d) Interleuin	
4.Which is not a granulocyte?	
(a) Lymphocytes (b) Neutrophils (c) Basophils (d) Eosinophils	
5. Which of the following statement(s) is true regarding cancer cells?	
(a) Neoplasm or tumor cells show uncontrolled growth	
(b) They are metastatic	
(c) They lack contact inhibition	
(d) They may be benign or malignant	
(a) (a) only (b) (b) and (c) (c) (d) only (d) All the above	
6. Plant source of Heroin is	
(a) Poppy plants (b) Cannabis plants (c) Datura species (d) Atropa speci	ies
7. Choose the correct sequence with regard to plasmodium.	
(i) Sporozoite	
(ii) Microgametocyte	
(iii) Signet ring stag	
(iv) oocyte	
(a) i, iii, iv, ii (b) i, iii, ii, iv (c) i, iv, ii, iii (d) i, ii, iii, iv	
8 is a pandemic disease.	
(a) Polio (b) Swine flu (c) Dysentery (d) Dengue fever	

#### II. Answer any four questions:-

4 X 2 = 8

- 9. What is trophozoite?
- 10. Define bacterial resistance.
- 11. Draw the diagram and label the parts of Entamoeba histolytica
- 12. Classify antigens based on origin.
- 13. Enumerate the symptoms of Swine flu.
- 14. What are lymphoid organs? Mention its types.

#### SECTION - C

#### III. Answer any three questions. Qn. 19 is compulsory.

 $3 \times 3 = 9$ 

- 15. Write short notes on any two protozoan diseases.
- 16. Describe the structure of HIV virus.
- 17. "Smoking and Tobacco chewing is injurious to health" Comment on the statement.
- 18. Explain a) Cell Mediated Immunity b) Antibody Mediated Immunity
- 19. Point out the differences between active and passive immunity.

#### SECTION - D

## IV. Answer all the questions.

- 20. a) Write in detail about various types of antigen-antibody reactions. (OR)
  - b) List out various barrier of innate immunity and their mechanism.
- 21. a) Write short note on life cycle of plasmodium. (OR)
  - b) Write short notes on structure of lymph node.

## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 8 – MICROBES IN HUMAN WELFARE

TIME: 1.30 hrs MARKS: 35

I. Choose the correct answer: -
1. Cry toxins obtained from Bacillus thuringiensis are effective against for
(a) Mosquitoes (b) Flies (c) Nematodes (d) Bollworms
2. World Biofuel day is observed on
(a) 10th September (b) 22nd April (c) 10th August (d) 17th October
3. Plants used for bio-diesel production
(a) Anabaena (b) Jatropha (c) Pongamia (d) b and c
4. Select the correct statement from the following.
(a) Biogas is produced by the activity' of aerobic bacteria on animal waste.
(b) Methanobacterium is an aerobic bacterium found in rumen of cattle.
(c) Biogas, commonly called gober gas, is pure methane.
(d) A <mark>ctivated sl</mark> udge-sediment in <mark>. s</mark> ettlement tank of sewage treat <mark>me</mark> nt plant is a right
source of aerobic bacteria.
5. Match, the following list of microbes and their importance:
a) Sac <mark>ch</mark> aromyces cerevisiae - (i) Production of immunosuppressive agents
b) Monasus purpureus - (ii) Ripening of Swiss cheese
c) Trichoderma polysporum - (iii) Commercial production of ethonol
d) Propionibacterium shermanii - (iv) Production of blood - cholesterol lowering agents.
(a) (iv) (iii) (i) (b) (iv) (ii) (i) (iii) (c) (iii) (i) (iv) (ii) (d) (iii) (i v) (i) (ii)
6. Tetracycline is a
(i) bactericidal antibiotic (ii) bacteriastatic antibiotic
(iii) narrow spectrum antibiotic (iv) Broad spectrum antibiotic
(a) i and iii (b) ii and iii (c) i and iv (d) ii and iv
7. The flavour in the yogurt is due to
(a) Formaldehyde (b) Lactate (c) Acetaldehyde (d) Caesin
8. Assertion (A): Streptomycin is an antibiotic.
Reason (R): Antibiotic are microbial chemicals inhibits the growth of pathogenic microbe.
(a) A is right R is wrong (b) R explains A
(c) A and R are wrong (d) A and R are right R cannot explain A

#### II. Answer any four questions:-

4 X 2 = 8

- 9. What are antibiotics?
- 10. Saccharomyces cerevisiae is called as brewer's yeast. Justify
- 11. What is "clot buster"?
- 12. Name the source of statin and state its action on the human body.
- 13. Write the key features of organic farming.
- 14. What is antibiotic resistance?

#### **SECTION - C**

#### III. Answer any three questions. Qn. 19 is compulsor

 $3 \times 3 = 9$ 

- 15. Explain the types of bioremediation
- 16. Write short notes on single cell protein.
- 17. Give short notes on Biodiesel.
- 18. Justify the role of microbes as a bio-fertilizer.
- 19. a) What is oenology? b) Write the types of grape wine.
  - c) Write the alcohol content in beer, wine.

#### SECTION - D

#### IV. Answer all the questions.

- 20. a) Explain the working of a biogas plant. (OR)
  - b) Write a short notes on Microorganisms involved in bioremediation.
- 21. a) Write short notes on the following.
  - a) Brewer's yeast b) Ideonella sakaiensis c) Microbial fuel cells (OR)

  - b) Explain the process of sewage treatment.

## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 9 – APPLICATIONS OF BIOTECHNOLOGY

TIME: 1.30 hrs MARKS: 35

SE(	CTI	ON	- A	١
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I. Choose the correct answer: -
1. Vector for T – DNA is
(a) Salmonella (b) Thermus aquaticus (c) Agrobacterium tumefaciens (d) E.coli
2. A strain of golden rice contains high contents of
(a) Vitamin A (b) Vitamin C (c) Vitamin K (d) Vitamin E
3. Humulin is
(a) Carbohydrate (b) Protein (c) Hybridomas (d) Vitamin
4. PCR was developed by
(a) Engval (b) Kary Mullis (c) Anderson (d) Ian Wilmut
5. ELI <mark>SA</mark> is mainly used for
(a) Detection of mutations (b) Detection of pathogens
(c) Detection of desirable character (d) Selection of desirable traits
6. The genetic defect in the synthesis of factor VIII results in
(a)Polycythemia (b) Anaemia (c) Thalassemia (d) Haemophilia
7. Identify the incorrect statement.
(i) The first clinical gene therapy was given by French Anderson.
(ii) For a four year old boy with ADA deficiency.
(iii) ACD is a autosomal dominant metabolic disorder.
(iv) Where patients have non-functioning B -lymphocytes.
(a) i and iv only (b) ii, iii and iv (c) i, ii and iv (d) all the above
8. Through PCR technique, amplication of is possible with reverse transcriptase
(a) DNA (b) rRNA (c) tRNA (d) mRNA

#### II. Answer any four questions:-

4 X 2 = 8

- 9. Comment on SCID
- 10. What are transgenic animals? Give examples.
- 11. Define the terms (a) Totipotency (b) Unipotency
- 12. Explain how "Rosie" is different from a normal cow
- 13. What is annealing?
- 14. Comment on GI.

#### **SECTION - C**

#### III. Answer any three questions. Qn. 19 is compulsory.

 $3 \times 3 = 9$ 

- 15. Briefly explain the structure of insulin
- 16. What is a stem cell bank?
- 17. Differentiate between Somatic cell gene therapy and germline gene therapy
- 18. Explain how ADA deficiency can be corrected
- 19. One of the applications of biotechnology is 'gene therapy" to treat a person born with a hereditary disease
  - i) What does "gene therapy" mean?
  - ii) Name the hereditary disease for which the first clinical gene therapy was used.
  - iii) Mention the steps involved in gene therapy to treat this disease.

## SECTION – D

#### IV. Answer all the questions.

 $2 \times 5 = 10$ 

20. a) What are stem cells? Explain its role in the field of medicine.

(OR)

- b) Explain the steps involved in the production of recombinant hGH
- 21. a) Mention the advantages and disadvantages of cloning.

(OR)

b) List the uses of transgenesis.

## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 10 – ORGANISMS AND POPULATIONS

TIME: 1.30 hrs MARKS: 35

I. Choose the correct answer: -
1. The word 'niche' was first used by
(a) Charles Elton (b) Van't Hoff (c) Bergmann (d) Jordon
2. "Birds and mammals attain greater body size in colder
regions than warmer regions." - Choose the correct option.
(a) Bergmann's rule (b) Jordon's rule (c) Sewall wright effect (d) Allen's rule
3. Animals destroyed at the feet of elephants is an example of
(a) Mutualism (b) Amensalism (c) Commensalism (d) parasitism
4. Pick out the eurythermal organism
(a) Fi <mark>sh</mark> (b) <mark>Fr</mark> og (c) Tiger ( <mark>d)</mark> Lizards
5. Loc <mark>omotory speed of an o</mark> rganism changes due to light. This phenomenon is ref <mark>er</mark> red as _
(a) Photonasty (b) Photokinesis (c) Phototropism (d) Phototaxis
6. Consider the following four conditions (A-D) and select the correct pair of them as
adaptation to environment in desert lizards.The conditions:
A) Burrowing in soil to escape high temperature.
B) Losing heat rapidly from the body during high temperature
C) Bask in sun when temperature is low
D) Insulating body due to thick fatty dermis.
(a) (A) and (C) (b) (B) and (D) (c) (A) and (B) (d) (C) and (D)
7. Animals that can move from fresh water to sea called as
(a) Stenothermal (b) Eurythermal (c) Catadromous (d) Anadromous
8. Soil best suited for plant growth is
(a) Sandy (b) Clay (c) Loam (d) Gravel

#### II. Answer any four questions:-

4 X 2 = 8

- 9. State Allen's rule.
- 10. What is competitive exclusion principle?
- 11. Differentiate between Eurytherms and Stenotherms.
- 12. What is  $Q_{10}$  value? How it is calculated?
- 13. Define phenotypic adaptations. Give an example.
- 14. Comment on Paedogenesis.

#### **SECTION - C**

#### III. Answer any three questions. Qn. 19 is compulsory.

 $3 \times 3 = 9$ 

- 15. List some adaptations seen in animals to overcome extreme winters and summers
- 16. Eurythermy is advantageous to the animal Justify.
- 17. Differentiate Natality and Mortality.
- 18. How are tropical forests classified?
- 19. Explain sigmoid growth.

## SECTION - D

#### IV. Answer all the questions.

- 20. a) Give an brief account on Tropical forest. (OR)
  - b) Explain the adaptations seen in terrestrial animals.
- 21. a) List out the properties of soil. (OR)
  - b) Write about the essential properties of water.

## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 11 – BIODIVERSITY AND ITS CONSERVATION

TIME: 1.30 hrs MARKS: 35

SECTION - A
I. Choose the correct answer: -
1. Chipko movement is concerned with
(a) Forest conservation (b) Plant breeding
(c) Conservation of natural resources (d) Project Tiger
2. The Species-Area relationship was given by
(a) Walter Rosen (b) Humboldt (c) Wilson (d) Darwin
3. Who introduced the term biodiversity?
(a) Edward Wilson (b) Walter Rosen (c) Norman Myers (d) Alice Norman
4. IUCN has its headquarters in
(a) New York (b) New Delhi (c) Columbia (d) Switzerland
5. The headquarters of National Biodiversity Authority is located in
(a) New Delhi (b) Dehradun (c) Chennai (d) Kolkata
6. The highest number of species in the world is represented by
(a) Fungi (b) Moses (c) Algae (d) Lichens
7. Assertion: Exotic species are introduced unintentionally or deliberately.
Reason: They are introduced to add to the species diversity of the local population.
(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 the correct explanation for A.
(c)A is true but R is false.
(d) Both A and R are false
8. Tilapia fish (Oreoehromis mosambieus) is exotic breed from

(a) Mexico (b) South Africa (c) Canada (d) Central America

#### II. Answer any four questions:-

4 X 2 = 8

- 9. Define biodiversity.
- 10. Define species extinction. What makes a species to become extinct.
- 11. What is the goal of "Project Tiger"?
- 12. What is Red Data Book?
- 13. Define gene pool.
- 14. List out four biodiversity hotspots in India.

#### **SECTION - C**

#### III. Answer any three questions. Qn. 19 is compulsory.

 $3 \times 3 = 9$ 

- 15. What are called endangered species? Explain with examples.
- 16. Write a note on: i) WWF ii) Protected Area iii) Wild life sancturies
- 17. What are exotic species? Give examples.
- 18. "Amazon forest is considered to be the lungs of the planet" Justify this statement.
- 19. Compare and Contrast the insitu and exsitu conservation.

#### SECTION – D

#### IV. Answer all the questions.

- 20. a) Give an account on genetic diversity and community diversity.
  - (OR)
  - b) Explain in detail about various types of extinctions.
- 21. a) List out the various causes for biodiversity losses. (OR)
  - b) Why Tropical regions are rich in biodiversity?

## XII – ZOOLOGY (MICRO TEST- 1) CHAPTER 12 – ENVIRONMENTAL ISSUES

TIME: 1.30 hrs MARKS: 35

I. Choose the correct answer: -
1. UN conference on Sustainable development in 2012 was held at
(a) Ruanda (b) Rio de Janeiro (c) Geneva (d) Stockholm
2. Increase in the concentration of the toxicant at successive trophic levels is known as
(a) Biodeterioration (b) Biotransformation
(c) Biogeochemicalcycling (d) Biomagnifications
3. The highest DDT concentration in aquatic food chain shall occur in
(a) Seagull (b) Crab (c) Cell (d) Phytoplankton
4. What is the name of the app published by Central Pollution Control Board that provides
updates on AQI
(a) Sultan Ahamed Ismail (b) Jhoan (c) Sameer (d) None of these
5. Average human consumption of oxygen per day is
(a) 280 L (b) 550 L (c) 620 L (d) 730 L
6. The 2018 UN climate change conference was held in
(a) Rwanda (b) New York (c) Russia (d) Poland
7. Assertion (A): Ozone layer protects the UV rays entering the Earth.
Reason (R): UV rays may cause melanoma
(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 the correct explanation for A.
(c)A is true but R is false.
(d) Both A and R are false
8. World Ozone Day was observed on
(a) September 16 <sup>th</sup> (b) October 12 <sup>th</sup> (c) December 1 <sup>st</sup> (d) August 18th

#### II. Answer any four questions:-

4 X 2 = 8

- 9. What is Bio-magnification?
- 10. Name the main sources of air pollution.
- 11. What is PAN?
- 12. Write notes on the following: a. Eutrophication b. Alga
- b. Algal Bloom
- 13. List any two adverse effects of air pollution.
- 14. What is 4 'R'?

#### SECTION - C

#### III. Answer any three questions. On. 19 is compulsory.

 $3 \times 3 = 9$ 

- 15. What is particulate matter?
- 16. What is the primary purpose of the Kyoto protocol?
- 17. What is colony collapse syndrome?
- 18. List the contribution of Dr. Sultan Ahmed Ismail.
- 19. Discuss the role of an individual to reduce environmental pollution.

#### SECTION - D

## IV. Answer all the questions.

- 20. a) How can air pollution be controlled? (OR)
  - b) What is the impact of agrochemicals on the living organisms?
- 21. a) Discuss briefly the following: i) Catalytic converter ii) Greenhouse gases iii) Ecosan (OR)
  - b) Write an essay an ozone depletion



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<b>12</b> <sup>th</sup>	<u>Syllabus</u>	<u>Books</u>	Study Materials – EM	Study Materials - TM	<u>Practical</u>	Online Test (EM & TM)
12	Monthly	Mid Term	Revision	PTA Book	Centum	Creative
Standard	Q&A	Q&A	Q&A	Q&A	Questions	Questions
	Quarterly	Half Yearly	Public Exam	NECT		
	<u>Exam</u>	<u>Exam</u>	Public Exam	<u>NEET</u>		

<b>11</b> <sup>th</sup>	<u>Syllabus</u>	<u>Books</u>	Study Materials – EM	Study Materials - TM	<u>Practical</u>	Online Test (EM & TM)
	Monthly	Mid Term	Revision	Centum	Creative	
Standard	<u>Q&amp;A</u>	<u>Q&amp;A</u>	<u>Q&amp;A</u>	Questions	Questions	
	Quarterly	Half Yearly	Public Exam	NEET		
	<u>Exam</u>	<u>Exam</u>	PUDIIC EXAIII	INEET		

<b>10</b> <sup>th</sup>	<u>Syllabus</u>	<u>Books</u>	Study Materials - EM	Study Materials - TM	<u>Practical</u>	Online Test (EM & TM)
	Monthly	Mid Term	Revision	PTA Book	Centum	<u>Creative</u>
Standard	Q&A	<u>Q&amp;A</u>	Q&A	Q&A	Questions	Questions
	Quarterly	Half Yearly	Public Exam	NTSE	SLAS	
	<u>Exam</u>	<u>Exam</u>	PUDIIC EXAIII	INTSE	<u>SLAS</u>	

9 <sup>th</sup>	<u>Syllabus</u>	<u>Books</u>	Study Materials	1 <sup>st</sup> Mid Term	2 <sup>nd</sup> Mid Term	3 <sup>rd</sup> Mid Term
Standard	<u>Quarterly</u> <u>Exam</u>	Half Yearly Exam	Annual Exam	RTE		

	1	-		<u>.</u> .		
Oth	Syllabus	Books	Study	1 <sup>st</sup> Mid	2 <sup>nd</sup> Mid	3 <sup>rd</sup> Mid
8 <sup>th</sup>			<u>Materials</u>	<u>Term</u>	<u>Term</u>	<u>Term</u>
Standard	Term 1	Term 2	Term 3	Public Model Q&A	<u>NMMS</u>	Periodical Test
<b>7</b> <sup>th</sup>	<u>Syllabus</u>	Books	Study Materials	1 <sup>st</sup> Mid Term	2 <sup>nd</sup> Mid Term	3 <sup>rd</sup> Mid Term
Standard	Term 1	Term 2	Term 3	Periodical Test	SLAS	
6 <sup>th</sup>	<u>Syllabus</u>	<u>Books</u>	Study Materials	1 <sup>st</sup> Mid Term	2 <sup>nd</sup> Mid Term	3 <sup>rd</sup> Mid Term
Standard	Term 1	Term 2	Term 3	Periodical Test	SLAS	
1st to 5th	<u>Syllabus</u>	Books	Study Materials	Periodical Test	SLAS	
Standard	Term 1	Term 2	Term 3	Public Model Q&A		
Exams	TET	TNPSC	<u>PGTRB</u>	Polytechnic	<u>Police</u>	Computer Instructor
LAGIIIS	DEO	BEO	LAB Asst	<u>NMMS</u>	RTE	NTSE
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