

CHAPTER TEST -1
BIO-ZOOLOGY**Std / Dept : 12****Time Allowed : 40 MIN****Max. Marks : 20****5 * 1 = 5****MULTIPLE CHOICE QUESTION**

1. The mode of sexual reproduction in bacteria is by
 - a) Formation of gametes
 - b) Endospore formation
 - c) Conjugation
 - d) Zoospore formation
2. In which type of parthenogenesis are only males produced?
 - a) Arrhenotoky
 - b) Thelytoky
 - c) Amphitoky
 - d) Both a and b
3. In which mode of reproduction variations are seen
 - a) Asexual
 - b) Parthenogenesis
 - c) Sexual
 - d) Both a and b
4. Assertion : In bee society, all the members are diploid except drones.
Reason : Drones are produced by parthenogenesis.
 - a) If both A and R are true and R is correct explanation for A
 - b) If both A and R are true but R is not the correct explanation for A
 - c) If A is true but R is false
 - d) If both A and R are false
5. Assertion : Offsprings produced by asexual reproduction are genetically identical to the parent.
Reason : Asexual reproduction involves only mitosis and no meiosis.
 - a) If both A and R are true and R is correct explanation for A
 - b) If both A and R are true but R is not the correct explanation for A
 - c) If A is true but R is false
 - d) If both A and R are false

VERY SHORT ANSWER**2 * 2 = 4**

6. Which type of reproduction is effective - Asexual or sexual and why?
7. What is parthenogenesis? Give two examples from animals.

SHORT ANSWER**2 * 3 = 6**

8. Differentiate between Regeneration in lizard and Planaria.
9. How is juvenile phase different from reproductive phase?

LONG ANSWER**1 * 5 = 5**

10. Explain the different kinds of syngamy in living organisms.

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CHAPTER TEST - 2**Bio - Zoology****Std: 12****Time Allowed : 40 MIN****Max. Marks : 20****5 * 1 = 5****MULTIPLE CHOICE QUESTION**

1. The foetal membrane that forms the basis of the umbilical cord is
a) Allantois b) Amnion c) Chorion d) Yolk sac
2. The most important hormone in initiating and maintaining lactation after birth is
a) Oestrogen b) FSH c) Prolactin d) Oxytocin
3. The male sex hormone testosterone is secreted from
a) Sertoli cells b) Leydig cell
c) Epididymis d) Prostate gland
4. The Androgen Binding Protein (ABP) is produced by
a) Leydig cells b) Hypothalamus
c) Sertoli cells d) Pituitary gland
5. The site of embryo implantation is the
a) Uterus b) Peritoneal cavity
c) Vagina d) Fallopian tube

VERY SHORT ANSWER**2 * 2 = 4**

6. What is the composition of semen?
7. Define gametogenesis.

SHORT ANSWER**2 * 3 = 6**

8. Mention the importance of the position of the testes in humans.
9. Explain the role of oxytocin and relaxin in parturition and lactation.

LONG ANSWER**1 * 5 = 5**

10. Explain the various phases of the menstrual cycle.

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CHAPTER TEST 3

BIO-ZOOLOGY

Std / Dept : 12

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Max. Marks : 20

5 * 1 = 5

MULTIPLE CHOICE QUESTION

- The approach which does not give the defined action of contraceptive is
 - Hormonal contraceptive - Prevents entry of sperms, prevent ovulation and fertilization
 - Vasectomy - Prevents spermatogenesis
 - Barrier method - Prevents fertilization
 - Intra uterine device - Increases phagocytosis of sperms, suppresses sperm motility and fertilizing capacity of sperms
- Which of the following is correct regarding HIV, hepatitis B, gonorrhoea and trichomoniasis?
 - Gonorrhoea is a STD whereas others are not.
 - Trichomoniasis is a viral disease whereas others are bacterial.
 - HIV is a pathogen whereas others are diseases.
 - Hepatitis B is eradicated completely whereas others are not.
- Which one of the following groups includes sexually transmitted diseases caused by bacteria only?
 - Syphilis, gonorrhoea and candidiasis
 - Syphilis, chlamydiasis and gonorrhoea
 - Syphilis, gonorrhoea and trichomoniasis
 - Syphilis, trichomoniasis and pediculosis
- Identify the correct statements from the following.
 - Chlamydiasis is a viral disease.
 - Gonorrhoea is caused by a spirochaete bacterium, Treponema palladium.
 - The incubation period for syphilis is 2 to 14 days in males and 7 to 21 days in females.
 - Both syphilis and gonorrhoea are easily cured with antibiotics.
- Match column I with column II and select the correct option from the codes given below.

Column I

A. Copper releasing IUD

B. Hormone releasing

C. Non medicated IUD

D. Mini pills

Column II

(i) LNG-20

(ii) Lippes loop IUD

(iii) Saheli

(iv) Multiload-375

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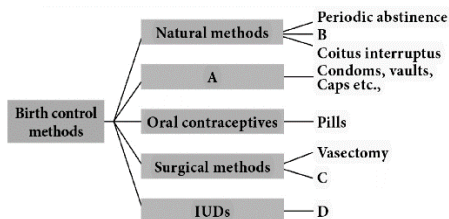
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- a) A-(iv), B-(ii), C-(i), D-(iii)
c) A-(i), B-(iv), C-(ii), D-(iii)

- b) A-(iv), B-(i), C-(iii), D-(ii)
d) A-(iv), B-(i), C-(ii), D-(iii)

VERY SHORT ANSWER**2 * 2 = 4**

6. Differentiate foeticide and infanticide.
7. Select the correct term from the bracket and complete the given branching tree.



(Barriers, Lactational amenorrhoea, CuT, Tubectomy)

SHORT ANSWER**2 * 3 = 6**

8. Which method do you suggest the couple to have a baby, if the male partner fails to inseminate the female or due to very low sperm count in the ejaculate?
9. The procedure of GIFT involves the transfer of female gametes into the fallopain tube, can gametes be transferred to the uterus to achieve the same result? Explain.

LONG ANSWER**1 * 5 = 5**

10. What are the strategies to be implemented in India to attain total reproductive health?

CHAPTER TEST -4
BIO-ZOOLOGY**Std / Dept : 12****Time Allowed : 40 MIN****Max. Marks : 20****MULTIPLE CHOICE QUESTION****5 * 1 = 5**

1. If the child's blood group is 'O' and father's blood group is 'A' and mother's blood group is 'B' the genotype of the parents will be
 - a) $I^A I^A$ and $I^B I^B$
 - b) $I^A I^O$ and $I^B I^O$
 - c) $I^A I^O$ and $I^O I^O$
 - d) $I^O I^O$ and $I^B I^B$
2. In an accident there is great loss of blood and there is no time to analyse the blood group which blood can be safely transferred?
 - a) O and Rh negative
 - b) O and Rh positive
 - c) B and Rh negative
 - d) AB and Rh positive
3. ABO blood group in man is controlled by
 - a) Multiple alleles
 - b) Lethal genes
 - c) Sex linked genes
 - d) Y-linked genes
4. What can be the blood group of offspring when both parents have AB blood group?
 - a) AB only
 - b) A, B and AB
 - c) A, B, AB and O
 - d) A and B only
5. Which of the following phenotypes in the progeny are possible from the parental combination $A \times B$?
 - a) A and B only
 - b) A, B and AB only
 - c) AB only
 - d) A, B, AB and O

VERY SHORT ANSWER**2 * 2 = 4**

6. Brief about female heterogamety.
7. What is Lyonisation?

SHORT ANSWER**2 * 3 = 6**

8. What is haplodiploidy?
9. Explain the genetic basis of ABO blood grouping in man.

LONG ANSWER**1 * 5 = 5**

10. What are the applications of Karyotyping?

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CHAPTER TEST - 5
BIO-ZOOLOGY**Std / Dept : 12****Time Allowed : 40 MIN****Max. Marks : 20****MULTIPLE CHOICE QUESTION****5 * 1 = 5**

- When lactose is present in the culture medium
 - Transcription of lac y, lac z, lac a genes occurs.
 - Repressor is unable to bind to the operator.
 - Repressor is able to bind to the operator.
 - Both (a) and (b) are correct.
- The first codon to be deciphered was _____ which codes for _____.
 - AAA, proline
 - GGG, alanine
 - UUU, Phenylalanine
 - TTT, arginine
- E. coli cell grown on ^{15}N medium are transferred to ^{14}N medium and allowed to grow for two generations. DNA extracted from these cells is ultracentrifuged in a cesium chloride density gradient. What density distribution of DNA would you expect in this experiment?
 - One high and one low density band.
 - One intermediate density band.
 - One high and one intermediate density band.
 - One low and one intermediate density band.
- Meselson and Stahl's experiment proved
 - Transduction
 - Transformation
 - DNA is the genetic material
 - Semi-conservative nature of DNA replication
- DNA and RNA are similar with respect to
 - Thymine as a nitrogen base
 - A single-stranded helix shape
 - Nucleotide containing sugars, nitrogen bases and phosphates
 - The same sequence of nucleotides for the amino acid phenyl alanine

VERY SHORT ANSWER**2 * 2 = 4**

- Differentiate - Leading strand and lagging strand.
- Why the human genome project is called a mega project?

SHORT ANSWER**2 * 3 = 6**

- How is the two-stage process of protein synthesis advantageous?
- Differentiate - Template strand and coding strand.

LONG ANSWER**1 * 5 = 5**

- Why did Hershey and Chase use radioactively labelled phosphorous and sulphur only? Would they have got the same result if they use radiolabelled carbon and nitrogen?

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CHAPTER TEST - 6
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1. The first life on earth originated
a) in air b) on land c) in water d) on mountain
2. According to Darwin, the organic evolution is due to
a) Intraspecific competition
b) Interspecific competition
c) Competition within closely related species
d) Reduced feeding efficiency in one species due to the presence of interfering species.
3. The phenomenon of " Industrial Melanism" demonstrates
a) Natural selection b) induced mutation
c) reproductive isolation d) geographical isolation
4. Which of the following was the contribution of Hugo de Vries?
a) Theory of mutation
b) Theory of natural Selection
c) Theory of inheritance of acquired characters
d) Germplasm theory
5. The age of fossils can be determined by
a) electron microscope b) weighing the fossils
c) carbon dating d) analysis of bones

VERY SHORT ANSWER**2 * 2 = 4**

6. How does Mutation theory of De Vries differ from Lamarck and Darwin's view in the origin of new species.
7. List out the major gases seems to be found in the primitive earth.

SHORT ANSWER**2 * 3 = 6**

8. Differentiate between divergent evolution and convergent evolution with one example for each.
9. How does Neanderthal man differ from the modern man in appearance?

LONG ANSWER**1 * 5 = 5**

10. Taking the example of Peppered moth, explain the action of natural selection. What do you call the above phenomenon?

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CHAPTER TEST - 7
BIO-ZOOLOGY**Std / Dept : 12****Time Allowed : 40 MIN****Max. Marks : 20****MULTIPLE CHOICE QUESTION****5 * 1 = 5**

1. A 30 year old woman has bloody diarrhoea for the past 14 hours, which one of the following organisms is likely to cause this illness?
a) Streptococcus pyogens b) Clostridium difficile
c) Shigella dysenteriae d) Salmonella enteritidis
2. AIDS virus has
a) Single stranded RNA b) Double stranded RNA
c) Single stranded DNA d) Double stranded DNA
3. Amphetamines are stimulants of the CNS, whereas barbiturates are ____.
a) CNS stimulant b) both a and b
c) hallucinogenic d) CNS depressants
4. Allergy involves
a) IgE b) IgG
c) IgA d) IgM
5. Paratope is an
a) Antibody binding site on variable regions
b) Antibody binding site on heavy regions
c) Antigen binding site on variable regions
d) Antigen binding site on heavy regions

VERY SHORT ANSWER**2 * 2 = 4**

6. Name and explain the type of barriers which involve macrophages.
7. List out chemical alarm signals produced during inflammation.

SHORT ANSWER**2 * 3 = 6**

8. Explain the process of replication of retrovirus after it gains entry into the human body.
9. What is vaccine? What are its types?

LONG ANSWER**1 * 5 = 5**

10. Explain the structure of immunoglobulin with suitable diagram.

CHAPTER TEST - 8

BIO-ZOOLOGY

Std / Dept : 12

Time Allowed : 40 MIN

Max. Marks : 20

MULTIPLE CHOICE QUESTION

$$5 * 1 = 5$$

- The most common substrate used in distilleries for the production of ethanol is _____.
a) Soyameal b) Groundgram
c) Molasses d) Corn meal
- The gases produced in anaerobic sludge digesters are
a) Methane, oxygen and hydrogen sulphide
b) Hydrogen sulphide, methane and sulphur dioxide
c) Hydrogen sulphide, nitrogen and methane
d) Methane, hydrogen sulphide and CO₂
- Cyclosporin - A is an immunosuppressive drug produced from _____.
a) Aspergillus niger b) Monascus purpureus
c) Penicillium notatum d) Trichoderma polysporum
- CO₂ is not released during
a) Alcoholic fermentation b) Lactate fermentation
c) Aerobic respiration in animals d) Aerobic respiration in plants
- The purpose of biological treatment of waste water is to _____.
a) Reduce BOD b) Increase BOD c) Reduce sedimentation
d) Increase sedimentation

VERY SHORT ANSWER

$$2 * 2 = 4$$

6. When does antibiotic resistance develop?
7. What is bioremediation?

SHORT ANSWER

$$2 * 3 = 6$$

8. How is milk converted into curd? Explain the process of curd formation.
9. Give any two bioactive molecules produced by microbes and state their uses.

LONG ANSWER

$$1 * 5 = 5$$

10. Define the following terms: a) Antibiotics b) Zymology c) Superbug

CHAPTER TEST - 9
BIO-ZOOLOGY**Std / Dept : 12****Time Allowed : 40 MIN****Max. Marks : 20****MULTIPLE CHOICE QUESTION****5 * 1 = 5**

1. The genetic defect adenosine deaminase deficiency may be cured permanently by
 - a) Enzyme replacement therapy
 - b) Periodic infusion of genetically engineered lymphocytes having ADA cDNA
 - c) Administering adenosine deaminase activators
 - d) Introducing bone marrow cells producing ADA into embryo at an early stage of development
2. Dolly, the sheep was obtained by a technique known as
 - a) Cloning by gene transfer
 - b) Cloning without the help of gametes
 - c) Cloning by tissue culture of somatic cells
 - d) Cloning by nuclear transfer
3. Which one of the following statements is true regarding DNA polymerase used in PCR?
 - a) It is used to ligate introduced DNA in recipient cells
 - b) It serves as a selectable marker
 - c) It is isolated from a Virus
 - d) It remains active at a high temperature
4. Transgenic animals are those which have
 - a) Foreign DNA in some of their cells
 - b) Foreign DNA in all their cells
 - c) Foreign RNA in some of their cells
 - d) Foreign RNA in all their cells
5. ELISA is mainly used for
 - a) Detection of mutations
 - b) Detection of pathogens
 - c) Selecting animals having desired traits
 - d) Selecting plants having desired traits

VERY SHORT ANSWER**2 * 2 = 4**

6. If a person thinks he is infected with HIV, due to unprotected sex, and goes for a blood test. Do you think a test such as ELISA will help? If so why? If not, why?
7. What are transgenic animals? Give examples.

SHORT ANSWER**2 * 3 = 6**

8. Mention the number of primers required in each cycle of PCR. Write the role of primers and DNA polymerase in PCR. Name the source organism of the DNA polymerase used in PCR.
9. ELISA is a technique based on the principles of antigen-antibody reactions. Can this technique be used in the molecular diagnosis of a genetic disorder such as Phenylketonuria?

LONG ANSWER**1 * 5 = 5**

10. PCR is a useful tool for early diagnosis of an Infectious disease. Elaborate.

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CHAPTER TEST - 10

BIO-ZOOLOGY

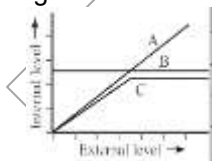
Std / Dept : 12

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MULTIPLE CHOICE QUESTION**5 * 1 = 5**

- Animals that can move from fresh water to sea called as.....
a) Stenothermal b) Eurythermal c) Catadromous d) Anadromous
- Competition between species leads to
a) Extinction b) Mutation c) Amensalism d) Symbiosis
- Which of the following is correct for r-selected species
a) Large number of progeny with small size
b) large number of progeny with large size
c) small number of progeny with small size
d) small number of progeny with large size
- The figure given below is a diagrammatic representation of response of organisms to abiotic factors. What do A, B and C represent respectively.



- A-Conformer B-Regulator C-Partial Regulator
- A-Regulator B-Partial Regulator C-Conformer
- A-Partial Regulator B-Regulator C-Conformer
- A-Regulator B-Conformer C-Partial Regulator

- Match the following and choose the correct combination from the options given below.

Column I

Column II

A. Mutualism

1. Lion and deer

B. Commensalism

2. Round worm and man

C. Parasitism

3. Birds compete with squirrels for nuts

D. Competition

4. Sea anemone on hermit crab

E. Predation

5. Barnacles attached to Whales

a) A-4, B-5, C-2, D-3, E-1

b) A-3, B-1, C-4, D-2, E-5

c) A-2, B-3, C-1, D-5, E-4

d) A-5, B-4, C-2, D-3, E-1

VERY SHORT ANSWER**2 * 2 = 4**

- Define ecological niche.
- Classify the adaptive traits found in organisms.

SHORT ANSWER**2 * 3 = 6**

- Give the characters of a Biome?
- Differentiate Natalty and Mortality.

LONG ANSWER**1 * 5 = 5**

- Describe Growth Models/Curves.

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CHAPTER TEST - 11
BIO-ZOOLOGY

Std / Dept : 12

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Max. Marks : 20

MULTIPLE CHOICE QUESTION

5 * 1 = 5

1. Which of the following is considered a hotspots of biodiversity in India
a) Western ghats b) Indo-gangetic plain
c) Eastern Himalayas d) A and C
2. Which one of the following are at high risk extinction due to habitat destruction?
a) Mammals b) Birds
c) Amphibians d) Echinoderms
3. The organization which published the red list of species is
a) WWF b) IUCN
c) ZSI d) UNEP
4. Who introduced the term biodiversity?
a) Edward Wilson b) Walter Rosen
c) Norman Myers d) Alice Norman
5. Which of the following forests is known as the lungs of the planet earth?
a) Tundra forest b) Rain forest of north east India
c) Taiga forest d) Amazon rain forest

VERY SHORT ANSWER

2 * 2 = 4

6. Define endemism.
7. What are the three levels of biodiversity?

SHORT ANSWER

2 * 3 = 6

8. How can we contribute to promote biodiversity conservation?
9. Why do we find a decrease in biodiversity distribution, if we move from the tropics towards the poles?

LONG ANSWER

1 * 5 = 5

10. Mention the major threats to biodiversity caused by human activities. Explain.