

Model Paper Quaid-i-Azam University
PAPER ZOOLOGY A
Session 2013-2014

NAME----- ROLL NO-----
ZOOLOGY PAPER –A B.Sc. –PART-II

Time: 3 Hours

Max. Marks: 26

NOTE: Cutting and over writing is not allowed in objective part. In Part –I all questions are compulsory. Attempt three question from Part-II and two from Part-III.

Q NO.1: Correct the statement. Mark tick against the correct ones. (0.25 x 8 =2)

Sr. #	Statement	True/False	Correct statement
1	Oogenesis begins in unspecialized cells called oocyte.		
2	A human disease, called Cri-du-chat, results from a loss of part of chromosome 15.		
3	In recombinant DNA techniques, ligase is used to cut DNA strands prior to inserting a piece of DNA into a plasmid.		
4	A few animals like Ascaris and some flatworms have more than two sets of chromosomes. This condition is referred to as polyploidy		
5	Co-dominance is an interaction between two alleles in which both alleles are expressed in heterozygote.		
6	During Permian period all of earth's landmasses united into a single continent called tectonic plate.		
7	Punctuated equilibrium is a model of evolution that depicts change as occurring gradually, over millions of years.		
8	Altruism is the application of human characteristics to anything not human.		

Q NO 2: Choose the best choice fore the statement from the multiple choices given below: (0.25 X 8 =2)

1 A geneticist crossed two fruit flies. Both were heterozygous for vestigial wings. Which of the following results should be expected for this cross?

- a. 1/4 wild and 3/4 vestigial b. 1/2 wild and 1/2 vestigial
c. 3/4 wild and 1/4 vestigial d. all wild

- 4: A DNA nucleotide consists of all of the following EXCEPT _____.
 a. a base. b. ribose. c. deoxyribose. d. phosphate.
- 5: After a bottleneck event has occurred _____.
 a. the genetic diversity of a population is greater
 b. the genetic diversity of a population is decreased
 c. the size of the population always increases
 d. the size of the population always decreases
- 6: The study of genetic events that occur in gene pools is called _____.
 a. evolutionary genetics b. population genetics
 c. gene pool biology d. allopatrics
- 7: Causation in animal behavior that occurs on an evolutionary time scale is a/an _____ cause.
 a. ultimate b. proximate c. ethological d. anthropomorphic
- 8: Hormones that regulate developmental aspects of behavior, for example testosterone causing the onset of male like behavior at sexual maturity, regulate _____.
 a. developmental effects b. organizational effects
 c. activational effects d. habituation effects

Q NO.3 Fill in the blank by appropriate word. (0.25 X 8=2)

- 1: During prophase I of meiosis, homologous chromosomes line up side-by-side in a process called _____.
- 2: The discovery that genes occur on chromosomes was made by _____.
- 3: A _____ that results in the movement of an arm of human chromosome 22 to chromosome 9 is the first chromosomal abnormality associated with a form of cancer.
- 4: The _____ of molecular genetics describes the relationship among the steps from DNA to production of a protein.
- 5: When an animal cell receives a foreign gene, and then an individual develops from the engineered cell, the resulting organism is termed _____.
- 6: Natural selection that narrows the phenotypic range by selecting against phenotypic extremes is called _____.
- 7: When a geographical barrier divides members of a population, _____ speciation may occur.
- 8: The study of animal behavior that focuses on evolution and the natural environment is _____.

ZOOLOGY A
(4th Year Send-up Eam-2013)

Part – II (2 X 3=) 6

Note: Give answer to any three of the following questions.

Q.4. Differentiate between the following. 1x.5=2

- i) Multiple Alleles and Polygene
- ii) Sex linked traits and sex influenced traits
- iii) Euploidy and Aneuploidy

Q.5. Give answers to the following.

(1X2=2)

- a) What is 2nd law of Mendel? Explain it.
- b) List the steps involved in translation with brief description.

Q.6. Give brief answer of the following.

(0.5+0.5+1=2)

- i) What is complementary DNA?
- ii) What is Inversion? How it different from translocation.
- iii) List the sex determination methods in animals.

Part – III (2 X7=14)

Note: Give detailed answer to any two of the following questions.

Q. 7. Write detail notes on the followings.

(3+4=7)

- a) Genetic Code
- b) Gene Insertion.

Q. 8 Write detail of the followings

- i) DNA Replication
- ii) Salient feature of Darwin evolution (3+4)

Q.9. Describe the learning behavior in detail.

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