

Code No:SS5603

Reg. No.....  
Sub Code: PZOM23

M.Sc. (CBCS) DEGREE SPECIAL SUPPLEMENTARY EXAMINATION,

APRIL 2020

SECOND SEMESTER

ZOOLOGY

EVOLUTION

(For those who joined in July 2016 afterwards)

Time: Three hours

Maximum : 75 marks

Part A – (10X1=10 marks)

Answer ALL the questions, Choose the correct answer

1. First experiment regarding evolution of life was performed by  
(a) Watson and Crick (b) Oparin and Haldane  
(c) Urey and Miller (d) Meselson and Stahl
2. Theory of abiogenesis was put forward by  
(a) Spallanzani (b) Redi (c) Van Helmont (d) Louis Pasteur.
3. Theory of inheritance of acquired characters was given by  
(a) Wallace (b) Lamarck (c) Darwin (d) De Vries.
4. ----- is the similarity between organs in different species based on their origin from a common ancestor  
(a) Analogy (b) Homology (c) Both(a)&(b) (d) Anaplasia
5. What does  $p^2$  in the below mentioned Hardy-Weinberg equation indicate?  
 $(p+q)^2 = p^2 + 2pq + q^2$   
(a) individuals that are heterozygous dominant  
(b) individuals having a lethal allele  
(c) individuals that are homozygous dominant  
(d) individuals that are homozygous recessive
6. Sympatric speciation develops reproductive isolation without  
(a) geographical barrier (b) barrier to mating (c) barrier to gene flow (d) genetic change
7. Evolutionary convergence is development of  
(a) common set of characters in group of different ancestry  
(b) dissimilar characters in closely related groups  
(c) common set of characters in closely related groups  
(d) random mating.
8. The model of evolution that involves a slow, progressive change at a more or less constant rate is  
(a) gradualism (b) punctuated equilibrium (c) Both(a) & (b) (d) progressive equilibrium

9. -----is the evolutionary strategy that favours the reproductive success of an organism

- (a) Kin selection (b) Kith selection (c) Both(a)&(b) (d) Altruism

10. To which primate are humans most closely related?

- \_\_\_\_ (a) Chimpanzee (b) Gorillas (c) Orangutans (d) Gibbons

PART B - (5 x 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b). Each answer should not exceed 250 words.

11.a) Justify Oparin and Haldane hypothesis

(or)

b) What are coacervates? Explain

12.a) What are fossils? Describe the process of fossilization.

(or)

b) Explain mutation theory of Darwin

13.a) Give an account on gene frequency

(or)

b) Explain the post mating mechanism of isolation

14.a) Summarize rates of evolution

(or)

b) Write a note on origin of higher taxa.

15.a) Comment on gradualism versus punctuated equilibrium.

(or)

\_\_\_\_ b) Write a note on place and time of origin

PART C - (5 x 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b). Each answer should not exceed 600 words.

16.a) Give an account on biochemical origin of life

(or)

(b) Comment on biogeny of protein and nucleic acids

17.a) Write an essay on any four evidences of evolution

(or)

(b) Describe the theory of inheritance of acquired characters

18.a) State Hardy Weinberg's law of equilibrium. Discuss its salient feature

(or)

b). Give an account on origin of species

19.a) Differentiate between three different types of evolution. Trace the inter-relationship between them

(or)

b) Give an account on pattern of evolution

20.a) Write an essay on evolutionary trends of man evolution

(or)

b). What is altruism? Explain.