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(Pages : 2)   Reg. No:...........................

Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Zoology Degree Examination, November 2020

BZOL5B06 – Environmental Biology, Wildlife Conservation & Toxicology

(2018 Admission onwards)

Time: 3 hours   Max. Marks: 80

I.   **Answer *all* questions. Each carries 1 mark:**

1. State Leibig's law of minimum.

2. What is botulism?

3. Define biomagnification.

4. Who coined the term' Ecosystem'?

5. What is edge effect?

6. What are hot spots of biodiversity?

7. What is an exotic species?

8. Mention two national parks in Kerala.

9. What is Red data book?

10. Define competition exclusion principle.

(10x1=10 Marks)

II.   **Answer *all* questions. Each carries 2 marks:**

11. Explain the concept of ecological niche.

12. Distinguish between ex situ and in situ conservation.

13. Write a note on remote sensing.

14. Briefly explain extinction of species.

15. State the Laws of thermodynamics.

16. What are limiting factors?

17. Comment on biodiversity act.

18. What is Simpson's dominance index?

19. Differentiate natality from mortality.

20. Write briefly on behavioural toxicity.

(10x2=20 Marks)

III. Answer *any five* questions. Each carries 6 marks:

21. Comment on the following
    i) Home range   ii) Territory   iii) Carrying capacity   iv) Biotic potential

22. Write briefly on symbiotic associations.

23. What is acute toxicity? How is it commonly expressed?

24. Explain ecological impacts of tourism.

25. What are protected areas? Write on different types of protected areas.

26. Give an account on IUCN categories.

27. Explain the characteristics of community.

28. Write a short note on Project Tiger.

                                                        (5x6=30 Marks)

IV. Answer *any two* essay questions. Each carries 10 marks:

29. What is biogeochemical cycle? Explain Nitrogen cycle.

30. Elaborate the various aspects of biodiversity conservation.

31. Describe the threats to biodiversity.

32. How population grows? Explain different population growth forms and growth curves.

                                                        (2x10=20 Marks)

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Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Zoology Degree Examination, November 2020

BZOL5B07 – Ethology, Evolution and Zoogeography

(2018 Admission onwards)

Time: 3 hours   Max. Marks: 80

I. Answer all the questions each question carries 1 mark

1. Which neo-Darwinist is nicknamed as 'Darwin's bull dog'

2. Who proposed special creation theory

3. Who is the proponent of operant conditioning

4. What is atavism

5. Scientific name of the Fossil 'Lucy'

6. Name the speciation due to geographical barrier

7. Examples for homologous organs

8. What is kinesis

9. Western Ghats comes under which zoogeographical region

10. Name the theory proposed by Gould and Eldredge

(10x1=10 Marks)

II. Answer all ten questions. Each question carries 2 mark

11. Differentiate between taxis and kinesis

12. Define semi species with example

13. Comment on Homo habilis

14. Briefly explain pre adaptation

15. Comment on sympatric speciation

16. Briefly explain gene flow

17. What Lamarkism

18. Write notes on Habituation

19. What are vestigial organ give two examples

20. Comment on biological barriers of animal distribution

(10x2= 20 Marks)

III. Answer any five questions. Each question carries 6 mark

21. Give an account of Oparin and Haldane's concept

22. Briefly explain Hardy Weinberg principle

23. Explain learnt behaviour

24. Describe prezygotic isolation mechanisms

25. Comment on Neanderthal man and Cro-magnon man

26. Explain the factors upsetting Hardy Weinberg equilibrium

27. Describe Lamarkism and Darwinism

28. Explain Punctuated equilibrium and its relevance

(5 x 6= 30 Marks)

IV. Answer any two questions. Each question carries 10 mark

29. Explain various Evidences of evolution

30. Write an essay on zoogeographical realms

31. Explain Evolution of man

32. Describe different types of speciation

(2 x10= 20 Marks)

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Name: ....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Zoology Degree Examination, November 2020

BZOL5B08 – Cell Biology & Genetics

(2018 Admission onwards)

Time: 3 hours   Max. Marks: 80

I.   Answer *all* questions. Each carries 1 mark:

1. Nucleosome model was proposed by...................

2. Nucleolus is formed by a special region of the chromosome called.......

3. ....is the highly condensed chromatin.

4. The process of pairing of homologous chromosomes is known as........

5. The chemical that inhibits the polymerization of tubulin to form spindle fibres is.........

6. .... is an example for sex-linked inheritance.

7. In a gene mutation a pyrimidine base is replaced by a purine base is called........

8. .... is the structural proteins of microtubules.

9. Variants of a gene controlling the same characteristic are called.............

10. .... is caused by 180 degree turn of a segment of a chromosome.

(10x1=10 Marks)

II.   Answer *all* questions. Each carries 2 marks:

11. What are polysomes.

12. Distinguish between Euthenics and Euphenics.

13. What are holandric genes? Give one example.

14. Mention any four functions of lysosome.

15. What is nucleo-cytoplasmic index?

16. Define metastasis.

17. Comment on oxidative phosphorylation.

18. What is crossing over? Give its significance.

19. Differentiate facultative and constitutive heterochromatin.

20. Explain genic balance theory.

(10x2=20 Marks)

III.   Answer *any five* questions. Each carries 6 marks:

    21. Comment on biogenesis of ribosome.

    22. Describe the inheritance of ABO blood groups.

    23. Give an account on polytene chromosome. Write its significance.

    24. Explain GERL concept.

    25. What is pedigree? List any four symbols used in pedigree analysis.

    26. Give an account of any four disorders associated with gene mutations in humans.

    27. What is complementary gene interaction? Explain it with an example.

    28. Explain various modes of passive transport of molecules.

                                                          (5x6=30 Marks)

IV.   Answer *any two* essay questions. Each carries 10 marks:

    29. Describe the structure and significance of Lamp brush chromosome.

    30. Give a detailed account on chromosomal aberrations.

    31. What is multiple allelism? Explain with suitable examples.

    32. Explain various stages of meiosis. Add a note on its significance.

                                                          (2x10=20 Marks)

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I. Answer all questions. Each question carries one mark each

   1. The data grouped in a category is called --------------------

   2. Name the form of internet access through telephone line

   3. Who proposed Chi-square test?

   4. What is Serendipity?

   5. What is a histogram?

   6. What are patents?

   7. Define Ad hoc hypothesis

   8. What is INFLIBNET?

   9. Briefly explain soft ware piracy

   10. What is green computing?

(10x1=10 Marks)

II. Answer all ten questions. Each question carries two marks.

   11. Highlight the role of observations in the decision making of a scientist

   12. What is meant by standard error?

   13. List any four attributes of scientific attitude

   14. How is Formal science different from Natural science? Give one example each for Formal and Natural science.

   15. Briefly describe the significance of graphical representation of data?

   16. What is the importance of control experiment?

   17. Write a short note on test of significance.

   18. Explain the applications of IT in medicine.

   19. Briefly describe the impact of IT on language and culture

   20. What is cyber ethics?

(10x2=20 Marks)

III. Short essay. Answer any five questions. Each question carries six marks

21. State the conditions that lead to the transformation of a hypothesis in to a theory. Can every experiment lead to a theory? Substantiate.

22. Explain the different methods of sampling

23. Compare and contrast Induction and Deduction

24. Describe the various depositories of scientific information

25. What are the basic concepts of IPR?

26. Write a short note on different methods of internet access

27. List the features of valid hypothesis.

28. Construct a pie diagram to represent the following data on degree results of an Indian University in   March, 2018.

Item	Frequency
First class	6452
Second Class	2237
Third Class	1782
Failed	6299

(5x6=30 Marks)

IV. Answer any two questions. Each question carries ten marks.

29. Explain the importance of models, simulations and virtual testing in the formulation of theories.

30. Write an essay on Futuristic IT with special reference to Artificial intelligence, Virtual Reality and Bio computing.

31. Define measures of Central Tendency? Describe the different types of measures of Central tendency

32. List and describe the various steps of scientific methods.

(2x10=20 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester B.Sc Zoology(Open Course) Degree Examination, November 2020

BZOL5D01 – Reproductive Health & Sex Education

(2018 Admission onwards)

Time: 2 hours   Max. Marks: 40

SECTION A

Answer *all* questions. Each carries one mark

1. Give the karyotype of Turner's syndrome.

2. Importance of sexual Hygiene.

3. PNDT Act

4. Name two STDs transmitted by Virus.

5. What is Tubectomy ?

6. Sex reversal.

7. What is Cryopreservation ?

8. Ovum bank.

9. What is PET scanning.

10. Merits of Ultra Sound Scanning.

(10x1=10 Marks)

SECTION B

Answer any *five* questions. Each question carries *two* marks.

11. Briefly explain the principle and applications of the following laboratory diagnostic techniques.

     a) MRI   b) Western Blot

12. Describe sex chromosomal anomalies.

13. Explain the need for sex education.

14. Hormonal control of sex determination.

15. Legal termination of pregnancy.

16. Write a short note on Ethical aspects of female foeticde.

17. Mention the different Scientific Birth control measures.

(5x2=10 marks)

SECTION C

Answer any *two* questions. Each carries five marks

18. Explain the following a) EEG   b)ECG

19. Sexual abuses and myths

20. Describe the different therapeutic methods.   **(2x 5 = 10 Marks)**

SECTION D

Answer any *one* question. The question carries *ten* marks.

21. Discuss the various Sexually transmitted infectious Diseases(STD).

22. Write an essay on various Assisted Reproductive Techniques(ART).

(1x10=10 Marks)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fifth Semester (Open Course) Degree Examination, November 2020

PE5D03 – Physical Activity Health & Wellness

(2018 Admission onwards)

Time: 2 hours   Max. Marks: 40

PART-A
Answer all the questions

1. The abnormal anterior convexity in the lumbar the vertebral region is called-------

   a)Kyposis   b)Lordosis   c)Flat foot   d)Scoliosis

2. The pressure of blood in the arteries when the heart is relaxing is known as...

   a)Hypertension   b)systolic blood pressure   c)diastolic blood pressure   d)Pulse

3. The asana which look like' Camel ' when it performed is known as......

   a)Halasana   b)Padmasana   c)Bhujangasana   d)Ushtrasana

4. Ability to change the direction of body at speed is known as .....

   a)Agility   b) strength   c)Flexibility   d)Speed endurance

5. The Clinical term used for high blood pressure is ....

   a)Hypotension   b)CHD   c)Hypertension   d)Diabetes

6. The expanded form of CHD is........................

7. Pushing against a wall is an example for ....types of exercise.

8. The Yoga is derived from ....Sanskrit word

9. The capacity of the body to perform exercise over an extended period of time with out undue fatigue is known as..................

10. Normal resting heart rate of an adult is ------beats per minute.

                                                (10 x 1=10 Marks)

PART-B
Answer any five questions

11. What is balanced diet ?

12. Elaborate the term ABC in first aid ?

13. What are the types of physical fit ?

14. Define Health ?

15. What is pranayama?

16. What are the causes of obesity ?

17. Define the physical Education ?

                                                (5 x 2 =10 Marks)

PART-C
Answer any two questions

18. What is diabetes mellitus ? How can it be managed?

19. What are the advantages of physical fitness and exercise?

20. List out the components of physical fitness ?

                                                                    (2 x 5 =10 Marks)

PART-D
Answer any one question

21. 'Physical Education is an integral part of General Education' –Elaborate this concept and Write down the Aim, objective and scope of physical education.

22. What is mean by Lifestyle diseases and explain causes, symptoms and management of any two life style diseases?

                                                                    (1 x 10 =10 Marks)