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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Fourth Semester B.Sc Degree Examination, March/April 2020  
BZOO(PSY4)C04 – Human Physiology  
(2018 Admission onwards)

Time: 3 hours

Max. Marks : 80

### PART A

Answer all questions. Each question carries 1 mark.

Choose the correct answer from the options given below

During early fetal development, \_\_\_\_\_ has the capacity to develop into male reproductive system

- a) Mullerian duct      b) Wolffian duct      c) Parotid duct      d) Corpus luteum

The disease in which the immune system attacks the myelin sheath of neurons is

- a) Focal epilepsy      b) Multiple sclerosis      c) Necrosis      d) Parkinson's disease

The frontal lobes contain which of the following?

- a) Auditory association area      b) The amygdala      c) Visual cortex      d) Primary motor cortex

The intracellular fluid compartment refers to all the water found in

- a) Cerebro spinal fluid      b) Areas outside the cells  
c) areas within the gastro intestinal tract      d) all cells of the body

Compulsive eating disorder that involves consumption of nonfood items is known as

- a) Anorexia nervosa      b) Bulimia      c) Cachexia      d) Pica

The interstitial cells of Leydig secrete

- a) Luteinizing hormone      b) Follicle stimulating hormone      c) Testosterone      d) Inhibin

#### in the blanks

Stimulation of \_\_\_\_\_ nucleus in hypothalamus causes a sense of satiety.

Kluver- Bucy syndrome is associated with bilateral lesions of the \_\_\_\_\_.

\_\_\_\_\_ is a hormone produced in the gut, and is often termed as the hunger hormone.

Male sex hormones are collectively known as \_\_\_\_\_.

A stroke that involves bleeding into the brain is called a \_\_\_\_\_ stroke.

\_\_\_\_\_ thirst is caused due to significant depletion of extracellular fluid.

( 12 x 1 = 12 marks)

## PART B

Answer any seven questions. Each question carries 2 marks.

3. Write a note about estrogens.
4. Explain what diabetes insipidus is.
5. What is the role of the limbic system in the brain?
6. What is pica? What are the possible causes for pica?
7. Differentiate menarche from menopause.
8. Give a brief note on apoptosis.
9. Briefly explain puberty.
10. What is genital ridge? Why is it said to be bipotential?
1. Write a note on anorexia nervosa.

( 7 x 2 = 14 marks)

## PART C

Answer any six questions. Each question carries 5 marks.

2. Explain how rage is associated with the punishment centers?
3. Differentiate between the male and female secondary sexual characteristics.
4. Explain the causes, symptoms and characteristic brain wave pattern of Petit mal epilepsy.
5. Mention the site of production of cholecystokinin and its role in the regulation of gastrointestinal activities.
6. Briefly describe the probable causes and manifestations of Alzheimer's disease.
7. Describe the more important stimuli that trigger thirst.
8. Explain the role of frontal lobes in emotion.
9. Elucidate the role of different hypothalamic centers in feeding regulation.

( 6 x 5 = 30 marks)

## PART D

Answer any three questions as essays. Each question carries 8 marks.

1. Explain how fetal hormones influence the development of an embryo into a male or a female fetus.
2. What is Grand Mal Epilepsy? What all can initiate a Grand Mal attack and what stops the attack?
3. How do glucostatic, aminostatic and lipostatic theories explain long-term regulation of food intake?
4. How does the renin-angiotensin-aldosterone system maintain electrolyte concentrations in extracellular fluids?
5. Describe the role of amygdala in emotion and general behavior.

( 3 x 8 = 24 marks)

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Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester B.Sc Botany Degree Examination, March/April 2020

**BZOL4C04 – Genetics and Immunology**

(2018 Admission onwards)

Time: 3 hours

Max. Marks : 64

*Give illustrations wherever necessary*

**A. Answer all ten questions.**

1. The metabolic error in which Phenyl alanine accumulates.
2. The chromosomal characteristics of a cell is called -----
3. Who reported jumping genes? Barbara
4. ----- formed mainly of euchromatin.
5. Name the sterile female cattle with some male features.
6. Name the mutant, imperfect and non-functional genes.
7. Which is the organ where Adison's disease affected ?
8. Thebranchofgeneticswhich dealswith scienceof better living.
9. Closely associated genes behave as a single functional unit called -----.
10. Name from which cells carcinoma originates?

**(10 X 1 = 10 Marks)**

**B. Short answer question: Answer any seven of the following. .**

11. What are the features of split genes?
12. Distinguish between euthenics and euphenics.
13. Enlist the characteristics of antigens'
14. What is free martin?
15. Write notes on in dosage compensation
16. Give an account of restriction endonucleases
17. What are phasmids?
18. Briefly explain the features of acquired immunity. '
19. What is MALT?
20. What are monoclonal antibodies?'

**(7 X 2= 14 Marks)**

**C. Paragraph questions: Answer any four**

21. Write an account of southern blotting techniques'
22. What is prenatal diagnosis? Explain different methods of prenatal diagnoses
23. Describe the practical applications of genetic engineering'
24. Give an account of immunoglobulins.
25. What is a vector? Write an account of various vectors used in genetic engineering.
26. Write an account on IVF and test tube baby.

**(4x5=20 Marks)**

**D .Essay Questions. Attempt any two.**

27. DNA as the genetic material, illustrate with experimental evidence.
28. Explain the characteristics of cancer cells.
29. Write an account on Sex Determination in animals.
30. What is vaccines? Explain advances in vaccine production.

**(2 x 10 = 20Marks)**

## FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Fourth Semester B.Sc Zoology Degree Examination, March/April 2020

BZOL4B04 – Animal Diversity – Chordata Part II

(2018 Admission onwards)

Time: 3 hours

Max. Marks : 80

**Part A****Answer ALL questions. Each carries ONE mark**

1. Give the scientific name of National bird of India?
2. What is Synsacrum?
3. What are the major subclasses of class Aves?
4. What is pecten?
5. In *Columba* which ovary is developed into functional ovary?
6. Write the scientific name of Horse?
7. Name any two egg laying mammals?
8. Give the dental formula of *Oryctolagus*.
9. Name the duct of parotid gland in Rabbit.
10. Fibrous capsule in the liver of Rabbit is.....

**(10 x 1=10 marks)****Part B****Answer any TEN questions. Each carries TWO marks**

11. Comment on Steller's sea cow?
12. What is syrinx?
13. What is SA node?
14. Give the adaptations of *Bubo*?
15. What are the peculiarities of *Eudynamis*?
16. Differentiate between gustatory receptors and Tingo receptors?
17. What is organ of Corti?
18. What are Edentates? Give an example
19. Give the features of Phoenicopteriformes with an example.
20. What are the differences between old world and new world monkeys?
21. Name the air sacs in pigeon?
22. Mention about the ventricles of brain in *Oryctolagus*?

**(10 x 2=20 marks)**

### Part C

Answer any FIVE questions. Each carries SIX marks.

23. Write the evolutionary significance of Archaeopteryx?
24. Explain the features of Ratitae?
25. What are Ciconiiformes? give examples
26. Give the characteristics of Cetacea?
27. Explain marsupials with examples?
28. Write notes any five extinct birds?
29. What are the adaptations of *Pteropus*?
30. Write notes on any three Apes?

(5 x 6 = 30 marks)

### Part D

Answer any TWO questions. Each carries TEN marks

31. Explain the digestive system of *Oryctolagus*.
32. Explain the respiratory mechanism in *Oryctolagus*.
33. With the help of diagrams explain the feathers in *Columba*.
34. Describe the flight muscles and flight adaptations in *Columba*.

(2 x 10 = 20 marks)