

1M3N19236

(Pages : 2)

Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Third Semester M.Sc Zoology Degree Examination, November 2019

MZOL3B07 – Physiology
(2018 Admission onwards)

Time: 3 hours

Max. Weightage: 36

I. Weightage: 1 (Answer all)

1. What is the significance of BMR in healthcare?
2. Name any two abnormal constituents of urine and the diseases indicated by them.
3. What does shifting of oxygen dissociation curve to the right signify?
4. How PCO₂ affects oxygen transport?
5. Distinguish short term memory from long term memory.
6. What are the components of basal ganglia?
7. What is the reason for Shizophrenia?
8. What is the importance of GI motility?
9. How do cones differ from rods chemically?
10. Define lethal temperature.
11. What causes respiratory distress syndrome in new born babies?
12. What is the relationship between memory and synapses?
13. What is the national approach for the control of goiter in India?
14. What is acclimatization?

(14x1=14 Weightage)

II. Weightage: 2 (Answer any seven)

15. What is the role of brain stem in the regulation of respiration?
16. Describe the anatomical and functional areas of cerebellum.
17. Explain the role of Sodium-Potassium pump in nerve conduction .
18. Discuss the role of counter current mechanism in urine formation.
19. Discuss any four cardiac disorders.
20. How lymph is formed? What are its components?
21. With the help of a diagram explain the structure and function of motor cortex.
22. What is the mechanism of taste perception?
23. What is the importance of antioxidant nutrients?
24. Briefly discuss the symptoms and treatment of Parkinson's disease.

(7x2 = 14 Weightage)

III. Weightage : 4 (Answer any two)

25. Discuss the structure and functions of cerebellum with the help of suitable illustrations..
26. Discuss renal clearance in detail.
27. Discuss temperature regulation mechanisms in our body in detail.
28. Discuss pulmonary volumes and capacities in detail and add notes on their applications in medical science.

(2x4=8 Weightage)

6

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Third Semester M.Sc. Zoology Degree Examination, November 2019

MZOL3B08 – Microbiology & Biotechnology

(2018 Admission onwards)

Time: 3 hours

Max. Weightage: 36

I. Answer the following.

1. What is gene therapy?
2. Explain electroporation.
3. Distinguish between YAC and MAC.
4. Write notes on GATT.
5. What are molecular probes? Mention their applications.
6. What is shuttle vectors?
7. What is blunt end ligation?
8. What is antenatal diagnosis?
9. What are plasmids?
10. Explain synchronous growth.
11. What is Numerical Taxonomy?
12. Write notes on candidiasis.
13. Comment on structures external to cell wall.
14. What are the general structural properties of viruses?

(14 × 1=14 Weightage)

II. Answer any Seven of the following.

- 15 Explain DNA sequencing.
16. What is IPR?
17. Briefly explain different steps involved in PCR and its applications.
18. Write about gene silencing techniques.
19. Explain different blotting techniques.

20. Give an account on colony hybridization.
21. What are antibiotics? Explain the mode of action of different types of antibiotics.
22. Describe the structural difference in cell wall of gram positive and gram negative bacteria.
23. Explain the methods used for enumeration of microbial cell number.
24. Write a brief account of microbial bioremediation.

(7 × 2 = 14 Weightage)

III. Answer any *Two* of the following.

25. Explain the techniques involved in *invitro* fertilization and embryo transfer. Add a note on its significance.
26. Write an essay on ethical and social implications of biotechnology.
27. Explain different methods for the control of microorganisms.
28. Write an essay on human diseases caused by viruses.

(2 × 4 = 8 Weightage)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester M.Sc. Zoology Degree Examination, November 2019

MZOL3E01(5) – Wildlife Biology I Biodiversity Biota

(2018 Admission onwards)

Time: 3 hours

Max. Weightage: 36

I. Answer the following:-Weightage-1

1. Define alpha biodiversity.
2. Population status of NilgiriTahr
3. Endemic Bird areas.
4. Feeding habits of Giant Panda.
5. Order Chiroptera
6. Barn Owl.
7. One horned Rhinoceros.
8. Gibbon
9. Gharial
10. Define endemism giving example.
11. Define Home range and territoriality.
12. Foraging behaviour of Birds
13. Hispid hare.
14. Order Columbiformes.

(14x1=14 weightage)**II. Answer any seven of the following:-Weightage-2**

15. Feeding and breeding habits of Lion tailed macaque.
16. Briefly describe the Order Sirenia.
17. Satpura hypothesis
18. Vocalisation and its role in Birds.
19. Nesting habits of Horn bills.
20. Discuss the threats faced by the Amphibians of Western Ghats.
21. Feeding and breeding habits of estuarine crocodile.
22. Pair selection behaviour in birds.
23. Population status and distribution of small Indian Otter.
24. Threats to the survival of endemic fishes of Western Ghats.

(7x2=14 weightage)

III. Answer any two of the following:-Weightage-4

25. Globally endangered Indian birds and their classification.
26. Amphibians and Snakes endemic to Western Ghats and their major threats.
27. Flyways and peculiarities of bird migration in the Indian Subcontinent.
28. Write an essay on the Socio-biology of Elephants.

(2x4=8 weightage)