

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester M.Sc Degree Examination, November 2018

MZOL3B07— PHYSIOLOGY

(2017 Admission onwards)

Max. Time: 3 hours

Max. Weightage : 36

I. Weightage: 1 (Answer all)

1. How do salivary glands assist in digestion?
2. What is renal clearance?
3. How does surfactant help in respiration?
4. What is the significance of functional residual capacity related to lung diseases?
5. How does Parkinson's disease affect the daily life of a patient?
6. What is the function of Golgi tendon body?
7. What do you mean by calorie value of food?
8. How do we perceive heat?
9. What is the relationship between stroke and circulatory system?
10. What is lethal temperature?
11. What are the functions of lymph?
12. How does acidity affect transport of gases?
13. Why antioxidants are important for our health?
14. What is renal clearance?

(1x14=14 weightage)

II. Weightage:2 (Answer any seven)

15. Discuss the roles of Broca's area and Wernicke's area in speech?
16. Discuss physiology of olfaction with suitable diagrams.
17. Respiration is under chemical and neural regulation. Discuss.
18. Discuss the mechanism of concentration of urine.
19. Heart has specialised muscles. Discuss.
20. Discuss the role of hormones in digestion.
21. Discuss the electrophysiology of vision.
22. Discuss the temperature regulatory mechanisms in our body.
23. Discuss the role of spinal cord in reflex action.
24. Describe the structure and functions of cerebellum.

(2x7=14 weightage)

III. Weightage:4 (Answer any two)

25. Human brain is challenged with several abnormalities. Discuss.
26. Discuss the digestion of proteins, lipids and carbohydrates.
27. Discuss in detail the formation and consolidation of memories.
28. What are pulmonary volumes and capacities? Discuss in detail.

(4x2=8 weightage)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Third Semester M.Sc Degree Examination, November 2018
MZOL3B08 –Microbiology & Biotechnology

(2017 Admission onwards)

Max. Time: 3 hours

Max. Weightage : 36

I. Answer the following

1. Comment on GATT
2. Write notes on *Pseudomonas putida*
3. RNA i
4. What are cell lines?
5. What is gene therapy?
6. Comment on SNPs.
7. What are Cosmids?
- 8- Comment on Bergey's manual
9. Write notes on pili and fimbriae.
10. Comment on candidiasis.
11. Give an account of DNA viruses.
12. Write notes on SARS.
13. Comment on Hassuer counting chamber.
14. What are disinfectants.

(14 x1=14 Weightage)

II. Answer any seven of the following

15. Explain blue white selection method.
16. Describe genomic libraries.
17. Explain VNTR and its applications.
18. What is DNA sequencing? Explain Sangers technique.
19. Write notes on restoration of degraded lands by biotechnological methods.
20. Give a brief account on the structure of a typical virus.
21. What are antibiotics, Describe the types, preparation and mode of action of antibiotics.
22. Briefly describe the microbiological analysis of drinking water.
23. Explain the mechanism of Gram staining.
24. Mention the methods used for enumeration of microbial cell number.

(7 x2=14 Weightage)

III. Answer any two of the following

25. Give a detailed account on PCR technology, its procedure, types and applications.
26. Write an essay on ethical and social implications of biotechnology.
27. Explain the structure of bacterial cell wall with short notes on peptidoglycan synthesis.
28. Write an essay on human diseases caused by bacteria.

(2 x 4=8 Weightage)

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Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester M.Sc Degree Examination, November 2018

MZOL3E01(5) - Wildlife Biology-1 Biodiversity and Biota

(2017 Admission onwards)

Max. Time: 3 hours

Max. Weightage : 36

I. Answer the following:-Weightage-1

1. Olive Ridley Turtle
2. Indian Giant Squirrel.
3. Nilagiri Langurs.
4. Order Cetacea.
5. Malabar Civet.
6. One horned Rhinoceros.
7. Gibbon
8. Indian Pangolin.
9. Define Endemism giving example.
10. Gharial.
11. Hot spots of India.
12. Endemic Bird Areas.
13. Foraging behaviour of Birds.
14. Feeding habits of Indian Wild Dog.

(14 x 1 = 14 weightage)

II. Answer any seven of the following:-Weightage-2

15. Feeding and Breeding habits of Lemurs.
16. Courtship and pair selection in Birds.
17. Endemic Amphibians of Western Ghats.
18. Population status and Distribution of NilgiriTahr.
19. Satpura Hypothesis.
20. Vocalisation and its role in Birds.
21. Briefly describe the Order Chiroptera.
22. Explain the economic importance of Birds.
23. Discuss the threats faced by the Amphibians of Western Ghats.
24. Territoriality and functions of territory.

(7 x 2 = 14 weightage)

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

25. Write an essay on the Socio-biology of Lion.
26. Amphibians endemic to Western Ghats and their major threats.
27. Write an essay on the Biology and major conservation strategies for the Order Cetacea.
28. Essay on Endemic Indian Birds and Endemic Bird areas.

(2 x 4 = 8 weightage)