

1M3N20236

(Pages : 2)

Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester M.Sc Degree Examination, November 2020

MZL3C07 – Physiology

(2019 Admission onwards)

Time: 3 hours

Max. weightage : 30

I. Answer any eight of the following: (Weightage –1)

1. What is BMR? What is its clinical significance?
2. What is juxtaglomerular apparatus?
3. What is the significance of Bohr effect in respiration?
4. What is the function of supplementary motor area?
5. Differentiate the visual pigments of rods and cones.
6. What is the principle of EEG?
7. How does Golgi tendon organ detect muscle tension?
8. Define acclimatization.
9. Human heart is said to be a double pump. Why?
10. What is the difference between olfaction and gustation?
11. In adult human beings why spinal cord is smaller than vertebral column?
12. What is the importance of surfactant?

(8 x 1= 8 weightage)

II. Answer any four of the following: (Weightage – 3)

13. What is the importance of dopamine in brain disorders?
14. What are the functions of limbic system?
15. Compare adult hemoglobin and fetal hemoglobin.
16. What is the role of vitamin A in vision?
17. Discuss the mechanism of long term memory.
18. Discuss the role of hemoglobin in the transport of gases.
19. Define renal clearance and discuss its significance.

(4 x 3 = 12 weightage)

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III. Answer any two of the following: (Weightage – 5)

20. Discuss pulmonary volumes and capacities. Add notes on their clinical significance.
21. Discuss colour vision in man. Add notes on colour blindness.
22. Explain the mechanisms involved in the regulation of respiration. Add notes on PO_2 and PCO_2
23. Discuss the mechanisms of concentration of urine.

(2 x 5 = 10 weightage)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester M.Sc Degree Examination, November 2020

MZL3C08 – Microbiology & Biotechnology

(2019 Admission onwards)

Time: 3 hours

Max. weightage : 30

I. Answer any eight of the following: - (Weightage –1)

1. Explain synchronous growth.
2. What do you mean by enriched media?
3. Write notes on pili.
4. What are the general properties of viruses?
5. Write notes on pneumonia.
6. Distinguish between homolactic and heterolactic fermenters.
7. Explain electroporation.
8. Comment on biosensors.
9. What are molecular probes? Mention their applications.
10. Differentiate between FISH and GISH.
11. Write short notes on GATT.
12. What is gene knockouts?

(8 x 1= 8 weightage)**II. Answer any four of the following: - (Weightage – 3)**

13. Describe the structural difference in cell wall of Gram positive and Gram negative bacteria.
14. Explain the influence of environmental factors on microbial growth
15. Describe the various types of media used for culture of microbes.
16. Explain the role of enzymes in rDNA technology.
17. Enumerate different types of cloning vectors.
18. Describe DNA sequencing methods.
19. Write notes on restoration of degraded lands by biotechnological methods.

(4 x 3 = 12 weightage)

III. Answer any two of the following: - (Weightage – 5)

20. Explain different methods for the control of microorganisms.
21. Write an essay on human diseases caused by viruses.
22. Describe the techniques involved in *Invitro* fertilization and embryo transfer. Add a note on its significance.
23. Write an essay on ethical and social implications of biotechnology.

(2 x 5 = 10 weightage)

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Third Semester M.Sc Degree Examination, November 2020

MZL3E01(5) – Wildlife Biology I –Biodiversity & Biota

(2019 Admission onwards)

Time: 3 hours

Max. weightage : 30

I. Answer eight of the following questions.(Weightage-1)

1. Koel
2. Palm swift
3. Flying squirrel
4. Indian flying fox
5. One horned rhinoceros
6. Gharial
7. Nesting habits of hornbills
8. Brood parasitism
9. Endemism
10. Ecological role of Woodpecker
11. Western ghat as biodiversity hot spot
12. Species diversity

(8x1=8 weightage)**II. Answer any four of the following questions. (Weightage-3)**

13. Write notes on population status, threats and conservational significance of tiger.
14. Comment on flyways and peculiarities of bird migration in the Indian subcontinent.
15. Briefly explain the major threats to the survival of Olive ridley turtle.
16. Describe the courtship and pair selection in birds.
17. Explain Gondwana principle.
18. Give an account on birds of prey.
19. Comment on territoriality and functions of territory.

(4x3=12 weightage)

III. Answer any two of the following questions. (Weightage-5)

- 20. Write an essay on the endemic birds and bird areas of India.
- 21. Give an account on the feeding and breeding habit of Apes and Monkeys.
- 22. Brief account on the endangered and endemic fishes of Western ghats.
- 23. Describe the sociobiology of elephant.

(2x5=10 weightage)