

Mid-West University
Examinations Management Office
End Semester Examinations 2081

Bachelor level/ B. Sc./ 5th Semester

Time: 3 hours

Subject: Cell biology, Genetics and Molecular biology (ZOO453)

Full Marks: 60

Pass Marks: 30

Candidates are required to give their answer in their own words as far as Practicable. The figures in the margin indicate full marks.

Group A

Answer the following questions.

[4x8=32]

1. What is sex linked inheritance? Describe it in human beings.
2. What is determination of sex? Describe hormonally and environmentally controlled theory for determination of sex.
3. Describe the structure of polytene and lamp brush chromosomes.
4. What is linkage? Describe different types of linkage with examples.

OR

What are lysosomes? Describe different types of lysosomes with necessary diagrams and also mention their functions.

Group B

Answer the following questions in brief.

[7x3=21]

5. Discuss the structure and function of mitochondria.
6. Write short note on polytene chromosome.
7. Give the structure of DNA as proposed by Watson and Crick.
8. Describe gene mutation in short.
9. Discuss dominant epistasis with an example.
10. What is genetic balance mechanism? State in brief.
11. Define PCR and discuss its types.

OR

Mention the uses of DNA fingerprinting.

Group C

Answer the following questions in very short (any seven).

[7x1=7]

12. Mention the types of ribosomes.
13. Who discovered golgi bodies?
14. Name the nitrogenous bases present in RNA.
15. What do you mean by synapsis?
16. How is sex determined in butterfly?
17. What do you mean by lethal gene?
18. Define co-dominance.
19. Mitochondria is called semi- autonomous organelle, why?
20. What do you mean by degenerate code?

The End