

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2005-06 & thereafter)

SUBJECT CODE: ZL/MC/CB54

B.Sc. DEGREE EXAMINATION NOVEMBER 2008
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY
FIFTH SEMESTER

COURSE : MAJOR CORE
PAPER : CELL BIOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION – A

ANSWER ALL QUESTIONS

(10 x 3 = 30)

1. Mention the contributions of:
(a) Danielli & Davson (b) de Duve (c) Balbiani
2. **STATE TRUE / FALSE:**
(a) Chargaff in 1950 discovered the equivalence rule.
(b) Nucleolus is the site of ribosome synthesis.
(c) Krebs' cycle occurs in the mitochondria.
3. **MATCH THE FOLLOWING:**
(a) Cristae - Metaphase
(b) Equatorial plane - He La cell line
(c) Henrietta Lacks - Mitochondria
4. **FILL IN THE BLANKS:**
(a) Polynucleate cells are also called _____.
(b) Polyribosomes occur in the form of _____.
(c) Nucleus is stained by _____ stain.
5. Comment on polytene chromosomes.
6. Comment on G₁ phase.
7. List the functions of microsomes.
8. Draw and label the unit membrane model of plasma membrane.
9. What are secondary lysosomes?
10. List the three enzymes of DNA metabolism?

SECTION – B**ANSWER ANY FIVE QUESTIONS****(5 x 6 = 30)**

11. Discuss the functions of lysosomes.
12. What are tumours? Explain with examples.
13. Describe the structure of a mRNA.
14. Describe the functions of mitochondria.
15. List out the functions of plasma membrane.
16. Describe the ultrastructure of a chloroplast.
17. Give an account on peroxisomes.

SECTION – C**ANSWER ANY TWO QUESTIONS****(2 x 20 = 40)**

18. Explain the various stages of mitosis with suitable diagrams.
19. Write a detailed account on the genetic code.
20. Write an essay on the replication of DNA.
21. Describe in detail the morphology and structure of a chromosome.
