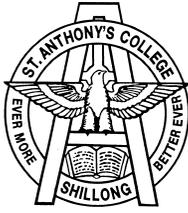


Admit Card No.

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ST. ANTHONY'S COLLEGE, SHILLONG

ENTRANCE TEST FOR ADMISSION TO M.Sc (BIOTECHNOLOGY) 2007

Part B

DATE : **24 May 2007**
TIME : **10:00 am**
DURATION : **2 hours**

INSTRUCTIONS

- ☞ This test has two parts. Part A comprises of 150 questions and is to be answered on the answer sheet provided. Part B comprises of 50 questions, which are to be answered on the question paper itself.
- ☞ The candidate is to answer as many questions as possible in the time that is allotted for this test
- ☞ For questions in Part A, each correct answer carries one mark. For each wrong answer 0.5 mark will be deducted. For questions in Part B, each correct answer carries two marks and for each wrong answer 1.0 mark will be deducted.
- ☞ Make sure that you have entered the number in the admit card in the place provided in the answer sheet.
- ☞ Please preserve your admit cards. They will be required at the time of admission.
- ☞ The names of those shortlisted for admission on the basis of the Entrance test will be published on the College notice board and College Website by 1.00 pm on 26th May, 2007. The shortlisted candidates will be required to attend an interview which will take place on 30th May, 2007. The list of those selected for admission based on the Entrance Test and the Interview will be published on the College notice boards and the College website on 4th June, 2007.

Part B

Directions for questions 1 to 30 : Fill in the blanks.

1. The _____ experiment conclusively proved that DNA is the genetic material.
2. The B cell derives its name from the _____.
3. The enzyme complex of the citric acid cycle that forms a part of the electron transfer chain is _____.
4. Aldosterone is a hormone involved in _____ metabolism.
5. In gel filtration chromatography the largest molecules are _____ from the gel.
6. A carrier gas is used in _____ chromatography.
7. A chemical shift is associated with _____ spectroscopy.
8. The HIV infects T cells and _____.
9. T cells gain the ability to distinguish between self and non-self in the _____.
10. Macrophages and _____ are phagocytic cells of the immune system.
11. Immunity developed by transfer of specific antibody from an immunized donor to a naïve recipient is called _____.
12. A technique that separates molecules according to their net charge in an electric field is called _____.
13. Bacterial enzymes that break phosphodiester bonds in DNA at specific base sequences are called _____.
14. The two animal hormones that are steroids are _____ & Estrogen.
15. Insulin has a profound influence on _____ metabolism.
16. The enzyme _____ helps preventing granulation of sugars in soft-centred candies.
17. The enzyme _____ is added to cheese in cheese making for imparting flavour to it.
18. In the manufacture of leather, the hide is made free from hair by employing _____ enzymes which hydrolyze the proteins of the hair follicles.
19. A macroscopically visible growth or cluster of microorganisms on a solid medium is called a _____.
20. The value of Absolute zero on the Fahrenheit scale is _____.
21. On treatment with nitrous acid, aniline gives _____.
22. The dipole moment of BCl_3 is _____.
23. X-ray crystallography is dependent on the phenomenon that light is _____ by crystals.
24. X-ray diffraction studies, which gave conclusive evidence about the structure of DNA was done by _____.
25. In plants _____ pressure of guard cells causes opening of stomata.
26. RuBP carboxylase, in the presence of high concentration of _____ acts as oxygenase.
27. When a cell is placed in hypotonic solution, water moves into the cell, this flow is called _____.
28. Polymorphic genes have two or more different _____.
29. Polyploids which have multiple chromosome sets from different species are called _____.
30. Division of the nucleus is referred to as _____.

Directions for questions 31 to 50: Match the items under Column A with those under Column B (write the question number of column A in the box provided with column B)

Column A		Column B
31. Mutation of β -globin gene	<input type="checkbox"/>	memory
32. Complement	<input type="checkbox"/>	Membrane attack complex
33. Position of centromere	<input type="checkbox"/>	virus infection
34. Amino acid metabolism	<input type="checkbox"/>	IgM
35. Thyroid stimulating hormone	<input type="checkbox"/>	Sickle cell anemia
36. Vaccine	<input type="checkbox"/>	Genetic mapping
37. DNA pol I	<input type="checkbox"/>	Metacentric chromosome
38. Leukoplasts	<input type="checkbox"/>	Genic imbalance
39. Centriole	<input type="checkbox"/>	pyridoxal phosphate
40. Mesosome	<input type="checkbox"/>	HGPRT
41. Salivary glands	<input type="checkbox"/>	tyrosine kinase activity
42. GU-AG intron	<input type="checkbox"/>	Graves's disease
43. Chromosomal aberration	<input type="checkbox"/>	RNA primer removal
44. CD8+ cells	<input type="checkbox"/>	DNA repair
45. DNA pol II	<input type="checkbox"/>	ribozyme
46. Group I intron	<input type="checkbox"/>	splicesome
47. Insulin receptor	<input type="checkbox"/>	starch storage
48. Primary immune response	<input type="checkbox"/>	microtubule-organizing center
49. Linkage analysis	<input type="checkbox"/>	bacterial DNA anchorage
50. Nucleotide metabolism	<input type="checkbox"/>	Lampbrush chromosome