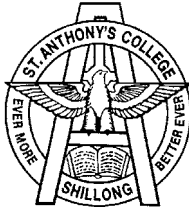


HALL TICKET NUMBER :



ST. ANTHONY'S COLLEGE, SHILLONG

**ENTRANCE TEST FOR ADMISSION INTO
POST GRADUATE PROGRAMME
2006**

BIOTECHNOLOGY Part B

DATE : 24 May 2006
TIME : 10.00 am
DURATION : 90 minutes

INSTRUCTIONS

- ♦ There are 50 questions in this part divided into two sections. Section I consists of 30 fill-in-the-blank questions and section II consists of 20 match-the-columns questions. These are to be answered in the question paper itself.
- ♦ There will be no negative marking in this part.
- ♦ Make sure that you have entered the hall ticket number properly in the place provided above.

Section I

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

1. The agglutination of RBCs is called _____.
2. _____ pathway supplies 5C sugars for biosynthesis of nucleotides.
3. The characteristics of the adaptive immune response are memory, diversity, self-nonself discrimination and _____.
4. In the context of transcription the DNA strand whose sequence is similar to that of the transcript is called _____.
5. The block of closely linked genes in humans that encodes antigen presenting molecules and other important factors of the immune system is called _____.
6. The type of gel electrophoresis that is used to separate DNA molecules larger than 60 kb is known as _____.
7. Heat is generated in brown fat tissues by _____ of the electron transport chain.
8. _____ is formed by the assembly of transcription factors at the core promoter.
9. Cancer cell are lysed by the action of _____ cells of the immune system.
10. _____ structure of transcript is required for transcription termination in prokaryotes.

Rough Work

11. _____ is mediated by cis-, medial- and trans- golgi network.
12. In eukaryotic DNA replication primer synthesis is catalysed by _____ .
13. The most frequent type hydrolytic damage of DNA is _____ of cytosine.
14. The first codon of an ORF is known as _____.
15. Ribosomes are recruited to the eukaryotic mRNA by the _____ .
16. During DNA replication, strand separation in duplex DNA is catalyzed by _____.
17. DNA damage due to replication errors can be repaired by _____ .
18. The basis of separation of biomolecules by affinity chromatography is _____
19. Reactive oxygen intermediates are used for phagocytosis by macrophages and _____ .
20. A substance that induces a specific immune response is called _____.
21. Antibodies that differ in their constant regions are placed under separate _____.
22. The consensus sequence centered at – 35 position of bacterial promoters is _____.
23. Regulation of tryptophan biosynthesis can be fine tuned by _____ .
24. Mutations that alter a single nucleotide are called _____ .
25. Potential carcinogenic effects of chemicals can be tested by _____ test.
26. Enzymes that recognize specific nucleotide sequences within a double-stranded DNA molecule and cleave the DNA at those locations are known as _____ .
27. Glycosylation of proteins occurs in the _____ and in the Golgi complex.

Rough Work

28. Proteins labeled by mannose 6-phosphate are delivered to _____ .
29. A bacterial cell containing a prophage is called _____ .
30. The ploidy status represented by $2n+1$ is called _____ .

Section II

Directions for questions 31 - 50 : Find the best fit for items in the left column with those in the right column and write your answers in the columns on the right.

- | | |
|------------------------------------|------------------------------------|
| 31. Spleen | a. Fc region |
| 32. Okazaki fragments | b. SDS |
| 33. snRNPs | c. cloning vehicle |
| 34. Single strand binding proteins | d. medium |
| 35. Wobble | e. Lambda phage |
| 36. Poly (A) tail | f. Domain |
| 37. p.m.f | g. allergy |
| 38. Ethidium bromide | h. Third position of codons |
| 39. Protein function | i. Transcription termination |
| 40. DNA fingerprinting | j. Replication fork |
| 41. Biodiesel | k. ATP synthesis |
| 42. Svedberg Unit | l. silica gel |
| 43. T helper cell | m. Microsatellites |
| 44. IgE | n. Determinant |
| 45. Paratope | o. splicing |
| 46. Tranversion | p. purine to purine |
| 47. Transition | q. tRNA processing |
| 48. Vector | r. Blood Filtration |
| 49. Radioisotope | s. probe |
| 50. Ribonuclease P | t. pyrimide to purine |
| | u. Jatropha |
| | v. lagging strand |
| | w. DNA |
| | x. Density gradient centrifugation |
| | y. HIV |

Q. No.	Answer
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
44	
45	
46	
47	
48	
49	
50	

Rough Work