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.

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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.

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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
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Rough Work