



Class Test -1

Status	Finished
Started	Tuesday, 21 January 2025, 3:10 PM
Completed	Tuesday, 21 January 2025, 3:18 PM
Duration	8 mins 5 secs
Marks	12.00/12.00
Grade	10.00 out of 10.00 (100%)

Question 1

Correct

Mark 1/01 out of 1/01

Play question

Many antibiotics interfere with the transfer of genetic information from RNA to protein, preventing bacteria from growing. Which of the following processes is affected by antibiotics?

☐ a. Transmission

☒ b. Translation

☐ c. Replication

☐ d. Transcription

Your answer is correct.

The correct answer is: Translation

Question 2

Correct

Mark 1/01 out of 1/01

Play question

Based on the presence of which of the following cell structures would you claim that the cell is a eukaryotic cell?

☒ a. Nucleus

☐ b. DNA

☐ c. Cytoplasm

☐ d. Ribosomes

Your answer is correct.

The correct answer is: Nucleus

Question 3

Correct

Mark 1/01 out of 1/01

Play question

In a sample of double-stranded DNA, 10% of the nitrogenous bases are guanine (G). What percentage of the nitrogenous bases in the sample are adenine (A)?

☐ a. 90%

☐ b. 80%

☐ c. 10%

☒ d. 40%

Your answer is correct.

The correct answer is: 40%

Question 4

Correct

Mark 1/01 out of 1/01

Play question

We have thousands of SARS-CoV-2 genome sequences available in the database. What advantage is gained by re-sequencing the viral genome?

☒ a. All of the above.

☐ b. Understand how the virus is evolving.

☐ c. Identify strain-specific mutations for drug/vaccine development.

☐ d. Understand its migration pattern.

Your answer is correct.

The correct answer is: All of the above.

Question 5

Correct

Mark 1/01 out of 1/01

Play question

Which type of information carrying biopolymer evolved first?

☐ a. Both DNA and RNA evolved simultaneously.

☐ b. DNA

☐ c. Proteins

☒ d. RNA

Your answer is correct.

The correct answer is: RNA

Question 6

Correct

Mark 1/01 out of 1/01

Play question

If the length of sequence read is 100bases, and 10x coverage is desired, the number of reads that will be required to sequence a human genome (3×10^9 bases long) is

☐ a. 3×10^7

☒ b. $(3 \text{ Times } 10^{10})$

☐ c. 3×10^9

☐ d. 3×10^8

Your answer is correct.

The correct answer is: $(3 \text{ Times } 10^{10})$

Question 7

Correct

Mark 1/01 out of 1/01

Play question

One of Darwin's observations during his trip to Galapagos islands was "species can adapt to the changing environment". Is this statement:

☒ True

☐ False

The correct answer is 'True'.

Question 8

Correct

Mark 1/01 out of 1/01

Play question

Which of the following is not a difference between DNA and RNA?

☐ a. DNA contains deoxyribose and RNA contains ribose.

☐ b. RNA is single stranded and DNA is double stranded.

☐ c. DNA contains thymine whereas RNA contains uracil

☒ d. DNA contains alternating sugar-phosphate molecules whereas RNA does not contain sugar.

Your answer is correct.

The correct answer is: DNA contains alternating sugar-phosphate molecules whereas RNA does not contain sugar.

Question 9

Correct

Mark 1/01 out of 1/01

Play question

The recognition site for SmaI is GATC and is contained in the recognition site of BstXI I, GAATCC. The number of fragments generated by the two restriction enzymes will be:

☐ a. Same

☒ b. More for SmaI

☐ c. More for BstXI

Your answer is correct.

The correct answer is: More for SmaI

Question 10

Correct

Mark 1/01 out of 1/01

Play question

Template-dependent nucleotide polymerization is carried out by

☒ a. Both DNA and RNA polymerases

☐ b. Only RNA polymerase

☐ c. Only DNA polymerase

Your answer is correct.

The correct answer is: Both DNA and RNA polymerases

Question 11

Correct

Mark 1/01 out of 1/01

Play question

Which of the following DNA strands would have been the template to produce the RNA strand: 5' AAA AUG AGU AAG 3'?

☐ a. 3' AAA AUG AGU AAG 3'

☒ b. 3' TTT TAC TCA TTC 3'

☐ c. 3' UUU TAC UCA UUC 3'

☐ d. 3' TTT TAC TCA TTC 3'

Your answer is correct.

The correct answers are: 3' TTT TAC TCA TTC 3', 3' TTT TAC TCA TTC 3'

Question 12

Correct

Mark 1/01 out of 1/01

Play question

The DNA strand used as template for DNA replication is 3' TACCGATTGCA 5'. Which of the following DNA strand will be created from this template strand?

☐ a. 5' TAGGCAATGCA 3'

☐ b. 5' TGGCAATGCTA 3'

☐ c. 5' AUGGCUAACGU 3'

☒ d. 5' ATGGCTAACGT 3'

Your answer is correct.

The correct answer is: 5' ATGGCTAACGT 3'

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