

Zoo505 Quiz#2 solution 🤔

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Zoologists

Question # 1 of 15 (start time: 08:47:24 PM, 26 December 2022)

Total Mark

To package the tremendous length of DNA into small volume of cell, each DNA molecule is coiled again and again and tightly packed around _____ proteins.

Select the correct option

☒ histone☐ Actin☐ elastin☐ Keratin

Each un-replicated chromosome of eukaryotic cells consists of _____ molecule of DNA.

Select the correct option



46



10



23



1

Question # 15 of 15 (start time: 11:05:23 PM, 26 December 2022)

One of the following did not help to provide a pivotal evidence that DNA rather than protein, is the hereditary material.

Select the correct option

☐	Avery's Experiments
☐	Griffith's Experiments
☐	Hershey-Chase experiments
☒	Louis Pasteur's Experiments

ZOO505 - Cell and Molecular Biology (Quiz No 2)

Question # 14 of 15 (**Start time: 11:04:48 PM, 26 December 2022**)

_____ with bound histones in the eukaryotes is called as chromatin.

Select the correct option

☒	DNA
☐	Both DNA and RNA
☐	Neither DNA nor RNA
☐	RNA

Question # 13 of 15 (Start time: 11:04:08 PM, 26 December 2022)

Total Mark

To package the tremendous length of DNA into small volume of cell, each DNA molecule is coiled again and again and tightly packed around _____ proteins.

Select the correct option



Keratin



Actin



Elastin



Histone

Question # 11 of 15 (Start time: 11:02:27 PM, 26 December 2022)

One of the following helped to provide a pivotal evidence that DNA rather than protein, is the hereditary material.

Select the correct option

☒	Griffith's Experiments
☐	Mendel's Experiments
☐	Watson and crick's Experiments
☐	Marie Curie's Experiments

Question # 10 of 15 (**start time: 11:01:58 PM, 26 December 2022**)

The electrostatic attraction is an important _____ force in the chromatin.

Select the correct option

☐	Repelling
☐	Scattering
☒	Stabilizing
☐	destabilizing

Question # 9 of 15 (Start time: 11:01:15 PM, 26 December 2022)

Total Marks:

The uncondensed chromatin resembles beads on a string when viewed under the electron microscope. Each bead is a _____ complex called nucleosome.

Select the correct option

☐	nitrogen base
☐	nucleus
☒	nucleoprotein
☐	protein

Click to Save Answer & Move to Next Question

The bacterial chromosome is as long as up to _____

Select the correct option



10mm



5mm



15mm



1mm

DNA is replicating during _____ phase.

Select the correct option



Synthesis (S)



gapI phase (G_I)



interphase



gapII phase (G_{II})

The bacterial DNA is arranged in super-coiled loops that are fastened to a central protein matrix, so that each loop is topologically _____ from all the others.

Select the correct option

☐

interdependent.

☐

some what-dependent

☒

independent

☐

dependent.

Specific proteins interact with the bacterial DNA to form a highly condensed _____ complex called the nucleoid.

Select the correct option



Glycoprotein



Protein



Monoprotein



Nucleoprotein

Organisms shuffle genes mostly during _____

Select the correct option



mitosis



meiosis



symbiosis



G1 phase

The nucleosome core particle consists of an _____ protein complex.

Select the correct option

☐	Pentameric
☐	Hexameric
☐	Heptameric
☒	Octameric

Nuclear division occurs during _____

Select the correct option

☐	interphase
☐	gapII phase (GII)
☐	gapI phase (GI)
☒	Mitosis (M)

Each un-replicated chromosome of eukaryotic cells consists of _____ molecule of DNA.

Select the correct option



10



23



1



46

The positively charged side chains of lysine and arginine enable histones to bind to the negatively charged _____ groups of the DNA.

Select the correct option



Methyl



Nitrogen



Amino



Phosphate

Cells that do not divide are usually arrested in _____ phase.

Select the correct option



Interphase



Mitosis (M)



gap1 phase (G₁)

G₁



gap2 phase (G₂)

Studies confirm that continued treatment of bacterial DNA with _____ increases number of relaxed loops.

Select the correct option

☐	Helicase
☒	Nuclease
☐	Ligase
☐	taq polymerase

Question # 15 of 15 (Start time: 05:48:40 PM, 26 December 2022)

The bacterial chromosome is looped and folded and attached at one or several points to the _____ m

Select the correct option

- | | |
|----------------------------------|-----------------------|
| ☐ | Endoplasmic reticulum |
| ☒ | Plasma |
| ☐ | Golgi bodies |
| ☐ | Nuclear |

in cytokinesis, the division of two _____ occur

Select the correct option



Two cytoplasmis



Two nuclei



Two membranes



Two ribosomes

The more extended form of chromatin is known as _____

Select the correct option



euchromatin



Neutrochromatin



Hypechromatin



Heterochromatin

DNA is replicating during ----- phase.

Select the correct option



gapII phase (GII)



gapI phase (GI)



Synthesis (S)



interphase

Each nucleosomes contains approximately ----- bp of DNA.

Select the correct option



200



50



100



150



Type here to search



What is the correct sequence of cell cycle stages?

Select the correct option



G1 > M > S > G2



G1 > S > G2 > M



G1 > G2 > S > M



M > S > G1 > G2



Type here to search



10:41 PM, 20 December 2022)

The electrostatic attraction is an important _____ force in the chromatin.

Select the correct option

- | | |
|----------------------------------|---------------|
| ☐ | destabilizing |
| ☒ | Stabilizing |
| ☐ | Repelling |
| ☐ | Scattering |

If stretched out, some human chromosomes would be several -----

Select the correct option



centimeters



Millimeters



Micrometers



meters

Genetic material should have one of the following properties.

Select the correct option



Genetic material must encode phenotype.



All of given



Genetic material must contain complex information.



Genetic material must replicate faithfully.



Type here to search



In the _____ chromatin, some of the loops are super-coiled while some are relaxed.

Select the correct option



Plant



Eukaryotic



Bacterial



Fungal

Question # 6 of 10 (Start time: 11:20:40 AM, 27 December 2022)

Relaxed loops of bacterial DNA are formed as a result of a _____ introduced

Select the correct option

☐	mutation
☒	nick
☐	sugar molecule
☐	Crack

_____ of cells die each day in humans for example blood epithelial cells.

Select the correct option

☒	Billions
☐	Hundreds
☐	Thousands
☐	Millions

A typical human cell contains about _____ million copies of each kind of histone.

Select the correct option

☐

40

☒

60

☐

100

☐

10

Highly condensed chromatin is known as _____

Select the correct option

☐	Hypechromatin
☐	euchromatin
☐	Neutrochromatin
☒	Heterochromatin

If a super-coiled DNA molecule of bacteria receives a nick, the strain of under-winding is immediately removed, and the super-coiling is _____.

Select the correct option

	mildly uncoiled
	Retained
	Recoiled
	completely lost

[click to Save Answer & Move to Next question](#)

Question # 4 of 15 (Start time: 10:33:14 AM, 27 December 2022)

Total Mark

The bacterial DNA is arranged in super-coiled loops that are fastened to a central protein matrix, so that each loop is topologically _____ from all the others.

Select the correct option



Independent



some what-dependent



Interdependent



dependent

All redoxes have a high percentage of

Select the correct option

☒	arginine and lysine
☐	Histidine and lysine
☐	arginine and Phenylalanine
☐	histamine and lysine

The DNA connecting two nucleosomes is called _____ DNA.

Select the correct option



Attaching



Connecting



Adding



Linker

Question # 2 of 15 (Start time: 10:10:17 AM, 27 December 2022)

During prophase -I of meiosis-I, the homologous chromosomes line up to form,

Select the correct option

☐ Haploid

☐ Filial

☒ Tetrad

☐ Ploid

Question # 3 of 15 (24/05/2023 10:05:38 AM, 23/05/2023 11:02)

Each nucleosome contains _____ histones

Select the correct option

0

A

B

C

D