

Questions bank

Genetics-3rd-----Asst prof-Dr-Kazhal M.Sulaiman

Biology

Q1-What is homologous chromosome, gene and alleles

Q2 - How do genes work? Give an example)

Q3-Discuss this phrase (The genetic code is degeneracy

Q4-Which part of chromosome was required for the replication and stability of the chromosome? Explain M)

Q5- What are the differences between the followings:

A- Transition and transversion mutation **B-** Germinal and somatic mutations

C-Euchromatin and heterochromatin **D-** Acrocentric and telocentric chromosome

E- Induced and spontaneous mutations

Q6-Illustrate the structure of nucleosome

Q7- Recognize different kinds of mutations (missense, non sense, frameshift) and predict the effects on amino acid sequence.

Q8- Chromosomes in Eukaryotes and prokaryotes are different, Explain

Q9-Define the followings: -

A-Chromatin /**B-** Genotype / **C-**Alleles / **D-**Homozygous /

Q10- Explain by figure all types of chromosomes according to centromere position.

Q11- Genetic code where to begin and stop?

Q12- Explain Chromosomes in Eukaryotes

Q13- What is a gene ? How do genes work? Give an example

Q14- Define the followings: -

A-Terminal deletion B- Aneuploidy C-Reciprocal translocation D-Nullisomy

Q15- Explain by figure how thymidine dimer is formed.

Q16- Explain chromosomal non disjunction and then illustrate how this case of chromosomal abnormalities happened (XYY)

Q17- What is the functions of the Genetic Material DNA?

Q18- What is the differences between the followings:-

Paracentric and pericentric inversion

A- Chromosomal mutation and gene-point mutation

Q19- Define the followings : -

B- A-Recombination

B- Genotype

C-Alleles

D-

Homozygous

Q20- More than one codon may specify the same amino acid. What is the name of this phenomena? Explain with example

Q21- Genetic code where to begin and stop

Q22- hat is telomerase ?

Q23- What is genome?.

Q24// what is heterochromatin

Q25// What is genetic code ? Where to begin and stop

Q26// Explain by Figure Chromosome Organization & DNA Packaging.

Q27// A-What is the function of genetic material

B- Recognize different kinds of mutations (missense, non sense, frameshift)
and predict the effects on amino acid sequence

Q28// - Explain chromosomal non disjunction and then illustrate how those cases of chromosomal abnormalities happened(XXX, ,XYY and X0)

Q29- Explain how thymidine dimers happened in DNA.

Q30// More than one codon may specify the same amino acid. Explain this Phenomenon.

Q31// What are the differences between the followings

A- Chromosomal and gene – point mutation

B- Somatic and germinal mutation

C- Euchromatin and heterochromatin

D- Transition and transversion

E- Paracentric and Pericentric inversion

Q32- Fill in the blanks:-

1- Detailed analysis of the nucleosome core particles has shown they contain-----
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Base pairs of DNA wrapped-----times around a histone core consisting of two molecules each of -----,-----,-----,-----.

2- Cri-du-chat syndrome result from----- in a section of ----- on chromosome-----.

3- What are the different syndrome result from Non- disjunction in Oogenesis-----
-----.

4- Move DNA from one chromosome to a non-homologous chromosome called -

Q33. Who would each of the following types of mutations affect the amount of protein that is expressed from a gene:- Non-sense, Missense, Frameshift.

Q34. What is genetic code? Where to begin and stop?

Q35. Which type of mutation have no effect on the encoded protein?

Q36. Fill in the blank:-

- 1- Karyotype is-----, while idiotype is-----.
- 2- Euchromatin region that are ----- staining, and contain most of-----, while heterochromatin region that are----- staining, and contain most of-----.
- 3- The two ends of a chromosome are known as-----, it is required for the ----- of chromosome.
- 4- What are the different syndromes result from non-disjunction in spermatogenesis-----

Q37. What is gene? How do genes work?

Q38- Explain how thymidine dimers happened in DNA

Q39. What are the differences between chromosomal mutations and gene – point Mutations?