



Final examination of first semester 2016-2017 ..

وراثه  
ژنای  
تالی

**Q1-Chose the best answer: (10 marks)**

1-.....is deal with micro molecular and macromolecular level.

- a-molecular genetics    b-cytogenetic    c-medical genetic    d-none of these

2- A sex cell having haploid set of chromosomes and arising due to meiotic cell division of diploid germ cell is known as

- a-somatic cell    b-zygote    c- gamete    d-none of these

3- The organism having two similar genes for a particular character in a homologous pair of chromosomes is known as.....

- a-heterozygous    b-homozygous    c-genetically 'pure'    d- b & c

4- The particular location of a gene on a chromosome is referred to as the .....

- a-light band    b- dark band    c-homologous    d-gene's locus

5- When a gene for a unit character contains two or more alternative forms, they are called.....

- a- allelomorphs    b-alleles    c-allelomorphs or alleles    d-None of these

6-In this cross  $RrYy \times RrYy$ , the phenotypic ratio is :

- a-1:3    b- 1:1    c-9:3:3:1    d-9:3:4

7- Deviation from mendel's dihybrid phenotypic ratio when one or both gene loci Have .....

- a- incompletely dominant alleles    b- codominant alleles  
c- lethal alleles    d- all of these are correct

8- The ability of a given gene or gene combination to be expressed phenotypically to any degree is called

- a-penetrance    b- expressivity.    c- pleiotropy    d- polygenes

9- All of the following are polygenic inheritance except.....

- a) amount of flowers    b) behavior    c) shape    d) antibodies

10) A boy is color blind (X-linked recessive) and has a straight hairline (autosomal recessive). Which could be the genotype of his mother?

- a) bbww    b)  $X^bYWw$     c)  $bbX^wX^w$     d)  $X^B X^bWw$ .

Q2) Answer only two branches of the following: (10 marks)

A- What genotypes and their proportion would be produced by the following crosses?

- a)  $IAI \times ii$     b)  $IAIB \times IAi$

B- A human disease known as cystic fibrosis is inherited as a recessive trait. A normal couple has an affected child. What is the ratio of affected and unaffected children.

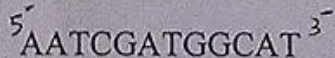
C- What is linkage? Discuss that.

Q3) What are the differences between dominance and epistasis? (5 marks).

Q4) Answer the following (5 marks)

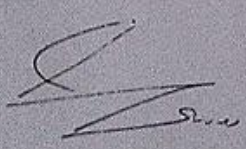
A) Draw the chemical structure of pentose sugar in DNA.

B) Write the mRNA strand for DNA template as following



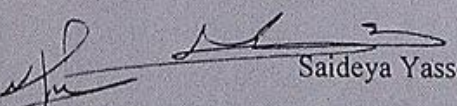
Q5) Enumerate & explain by brief steps of protein synthesis. (10 marks)

Good Luck


  
Dr. Sarab Hussien

Lecture Makeya A.A.L.-jabbar

Examiner

  
Saideya Yasser

H.O.D

  
Prof. Nabeel A. Abid

Dean