Ch. 12: Genetics

1. Asexual reproduction includes _____

- Binary fission
- budding

1. Offspring of asexual reproduction _____

- are [identical] to the original cell or organism ---- [غلط Different]
- Involves inheritance of all genes from [one] parent ---- [غلط Two]

1. Binary fission _____

- means dividing in half
- Occurs in [prokaryotic cells] ----- [غلط Eukrayotic]
- produces two [identical] cells from one cell ------ [غلط Different]
- resulted in duplication of a single circular chromosome
- resulted in plasma membrane growth [inward] at the midpoint to divide the cells ---- [غلط Outward]

1. Prokaryotes are reproduced by _____

- binary fission
- asexually ---- [غلط sexually]

2. Sexual reproduction Involves _____

- Offspring are similar to parents, but show variations in traits
- inheritance of unique sets of genes from two parents

2. Eukaryotic Cell Division includes _____

- meiosis

- mitosis

- produces two identical cells from one cell

3. The sequence of Eukaryotic Cell Cycle is _____

- G1, S, G2, and M [بالترتيب]

3. The Interphase of Eukaryotic Cell Cycle includes _____ phases

- G1, S, and G2

4. _____ is a part of Eukaryotic Cell Cycle

- G1

- G2

- S

4. G1 _____

- first gap phase, growth and prepares for S-phase

4. _____ is (are) first gap phase, growth and prepares for S-phase

- G1

4. G2 _____

- second gap phase,growth and preparation for division

4. _____ is (are) second gap phase,growth and preparation for division

- G2

4. _____ is (are) DNA synthesis phase, duplication of chromosomes,each becomes two sister chromatids

- S

4. S _____

- DNA synthesis phase, duplication of chromosomes,each becomes two sister chromatids

5. The all Mitotic phases of Eukaryotic Cell Cycle are _____

- Prophase, Prometaphase, Metaphase, Anaphase, and Telophase [الترتيب مهم]

5. _____ is a part of Mitosis of the Eukaryotic Cell Cycle

- Anaphase
- Prophase
- Metaphase
- Telophase

5. Prophase _____

- Chromatin condenses and chromosomes become visible

5. _____ is (are) Chromatin condenses and chromosomes become visible

- Prophase

5. Metaphase _____

- Chromosomes align on cells midplane on top of each other

5. _____ is (are) Chromosomes align on cells midplane on top of each other

- Metaphase

5. Anaphase _____

- Sister chromatids separate, move to opposite poles

5. _____ is (are) Sister chromatids separate, move to opposite poles

- Anaphase

5. Telophase _____

- Chromosomes decondensed. Cytokinesis begins

5. _____ is (are) Chromosomes decondensed. Cytokinesis begins

- telophase

6. Duplicated chromosome is made of_____

- two identical DNA molecules

- two Sister [chromatids] ----- [chromatin أو chromosome أو chromomer غلط]

6. Sister chromatids are joined at a narrow region called the _____

- centromere

7. Cytoplasmic division _____

- is called [Cytokinesis] ------ [غلط Cytogenesis]

- overlaps with telophase ------ [بس الـ تيلو صح، اذا جاك "انافيس" أو "بروفيس" كلها غلط.. التيلوفيس صح بس]

7. Cytokinesis in plant cells _____

- A cell plate forms in the middle from vesicles

- separates the contents into two cells

- forms a cell plate

7. Cytokinesis in aanimal cells _____

- forms a cleavage furrow

8. Diploid cells _____

- are mainly somatic cells
- have two homologous sets of chromosomes (2n)

8. Haploid cells _____

- are sex cells
- have one set of chromosomes (1n)

8. Meiosis division _____

- converts diploid nuclei to haploid nuclei

8. Meiosis _____

- occurs in the testes
- occurs in the ovaries
- occurs in the [sex organs] ------ [غلط kidney] [غلط Liver]
- produces [haploid] cells ------- [غلط diploid]
- produces gametes
- produces [sperms] -------- [غلط somatic cells]
- produces sex cells
- produces eggs
- has [two] cytokimesis
- has [two] devisions
- has [one] S phase
- has [one] interphase

8. sex chromosomes are _____

- different in Length

- different in Centromere position

- different in Gene locations

8. Homologous chromosomes are _____

- matched in Length

- matched in Centromere position

- matched in Gene locations

8. Pairs of autosomes _____

- have the [same] genetic information ----- [غلط different]

- [matched] in Centromere position ------ [غلط different]

- [matched] in Length ------ [غلط different]

- [matched] in Gene locations ------- [غلط different]

- have the same size

9. homologous chromosomes separate during _____

- meiosis I

- Anaphase

9. Crossing over occurs during_____

- prophase of meiosis I

- meiosis I

9. Tetrads forms during_____

- meiosis I

- metaphase of meiosis I

9. Synapsis occurs during_____

- prophase of meiosis I

- meiosis I

9. Sister chromatids separate during _____

- mitosis

- Anaphase

- meiosis II

9. During meiosis I _____

- haploid cell is produced

- homologous chromosomes separate

- The chromosome number is reduced by half 2n ? 1n

9. During meiosis II _____

- haploid cell is produced

- sister chromatids separate

- The chromosome number remains the same

10. Which of the following is Heterozygous?

- Two different alleles

- Aa

10. Which of the following is Homozygous?

- Two identical alleles

- aa

- AA

10. Which of the following statements are true

- The allele that disappear in the [F1] generation is called [recessive] allele ----- [غلط dominat]

- dominant allele [appears] in the [F2] generation ------- [disappear]

- dominant allele appears in the F1 generation

- Recessive allele [appears] in the [F2] generation ---------- [disappear]

10. Copy of a gene is called _____

- alleles

10. In Mendel experiment, the heritable factors is now known as _____

- genes

11. Open square in human pedigree is symbol for _____

- normal male

11. Filled square in human pedigree is symbol for _____

- affected male

11. Open circle in human pedigree is symbol for _____

- normal female

11. Filled circle in human pedigree is symbol for _____

- affected female

11. Normal male in genetic pedigree is represented by _____

- open square

11. Affected male in genetic pedigree is represented by _____

- Fillrd square

11. Normal female in genetic pedigree is represented by _____

- Open circle

11. Affected female in genetic pedigree is represented by _____

- Filled circle

12. _____ is referred to as Heterozygote has intermediate phenotype

- Incomplete dominance

12. Incomplete dominance is referred to _____

- Heterozygote has intermediate phenotype

12. _____ is referred to as The phenomenon of one gene mutation being responsible for or affecting more than one phenotypic characteristic

- Pleiotropy

12. Pleiotropy is referred to _____

- The phenomenon of one gene mutation being responsible for or affecting more than one phenotypic characteristic

12. _____ is referred to Heterozygote expresses phenotypes of both homozygotes

- Codominance

12. Codominance is referred to _____

- Heterozygote expresses phenotypes of both homozygotes

12. _____ is referred to as Three or more alleles in a population for the same locus

- Multiple alleles

12. Multiple alleles is referred to _____

- Three or more alleles in a population for the same locus

12. _____ is referred to as Multiple independent pairs of genes may have similar and additive effects on the phenotype

- Polygenes

12. Polygenes is referred to _____

- Multiple independent pairs of genes may have similar and additive effects on the phenotype

12. Which of the following is an exception to Mendels Laws?

- Pleiotropy
- Polygenes
- Incomplete dominance
- Co-dominance
- Multiple alleles

13. Which of the following is ture in bees sex determination system?

- Diploid = female

- haploid = male

13. Which of the following is ture in mammals sex determination system?

- XX = female

- XY = male

13. Which of the following is ture in grasshoppers sex determination system?

- XX = female

- XO = male

13. Which of the following is ture in birds sex determination system?

- ZW = female

- ZZ = male