MID GENETICS

020 EXAM

Collected by:

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بسم الله الرحمن الرحيم

1- The shortest satge in cell cycle:
A- M
B- G0
C- G1
D- S
E- G2
Ans : A

2- If GAMETE chromosomes are 16, what is the number of chromatids before anaphase 1?
A- 8
B- 16
C- 32
D- 64
E- 128
Ans : D

3- Pair homologous chromosomes in metaphase I, how many double strand DNA in it?
A- 1 double strand DNA
B- 3 Double Strand DNA
C- 5 double strand DNA
D- 2 double strand DNA
E- 4 double strand DNA
Ans : E

4- Recombination occurs in:
A- Pachytene
B- Zygotene
C- Diplotene
D- Leptotene
E- Diakinesis
Ans : A

5- Law of segregation related to _____ and low of independent assortment related to:
A- Different chromosomes, homologous chromosomes
B- Homologous chromosomes, different chromosomes
Ans : B

6- Which of the following cannot used in karyotype?
A- Chorionic villi biopsy
B- Lymphocyte

C- Bone Marrow
D- Erythrocyte
E- Skin biopsy
Ans : D

7- The location of beta setallate:
A- p arm of Acrocentric chromosomes
B- q arm of Acrocentric chromosomes
C- p arm of Metacentric chromosomes
D- Centromere
E- Q arm of Metacentric chromosomes
Ans : A

8- Which phase of the cycle is most likely to be interrupted for smaller abnormalities detection?
A- Metaphase
B- Promeaphase
C- S phase
D- G phase
E- Anaphase
Ans : B

9- The location of alpha setallate:
A- p arm of Acrocentric chromosomes
B- Centromere
C- Telomere
D- Subtelomere
E- p arm of Metacentric chromosomes
Ans : B

10- In which phase of gametogenesis nondisjunction will produce all the cells anueoploidy?
A- G1 phase
B- S phase
C- MI
D- MII
E- G2 phase
Ans: C

***11- Which of the following cannot be seen in triploidy?**
A- 69 XXX
B- 69 XXY
C- 69 XYY
D- 69 YYY

Ans : D

12- Which of the following results in net gain genetic material?
A- Deletion
B- Duplication
C- Reciprocal translocation
D- Robertsonian translocation
E- Inversion
Ans : B

13- The most common cause of trisomy 21:
A- Maternal MII nondisjunction
B- Maternal MI nondisjunction
C- Paternal MII nondisjunction
D- Paternal MI nondisjunction
E- Mitosis
Ans : B

14- SMOH gene located in psuedoautosomal in Y chromosome, do you expect that it will be located in 46 XX?
A- Yes, because it locates in psuedoautosomal region
B- No, because we can't find Y chromosome genes on X chromosome
C- No, SMOH is only found in males
D- No, because sex chromosomes are hemizygous
E- Yes, Y and X chromosomes have the same genes
Ans : A

15- A healthy mother is married to a man who has a roberstonian 14,21 balance. What is the possibility to have a baby with down syndrome?
A- 1/4
B- 1/2
C- 1
D- 2
E- 1/6
Ans : E

16- Complete mole results from:
A- 1 maternal set of genes and 1 paternal set of genes
B- 1 maternal set of genes and 2 paternal set of genes
C- 2 maternal set of genes and 1 paternal set of genes
D- 2 maternal set of genes and 0 paternal set of genes
E- 0 maternal set of genes and 2 paternal set of genes
Ans : E

17- No fetus at all:
A- Complete molar
B- Partial molar
C- Triploidy
D- Normal pregnancy
E- Rubella infection with pregnancy
Ans : A

18- Baby with macrocephaly and severe intrauterine growth retardation:
A- Diandric
B- Digernic
Ans : B

19- 69 XYY occurs due to:
A- Dispermic
B- Endomitosis
C- Tetraploidy
D- Nondisjunction MI
E- Nondisjunction MII
Ans : A

20- Normal phenotypically will be:
A- 47, XXY
B- 45, X
C- 45, XX t(13:13)
D- 46, XY (t13:13)+13
E- 46, XYY
Ans : C

21- Pathogenic mutations in TBX5 cause Holt-Oram syndrome which includes cardiovascular (atrial septal defect, hypoplastic left heart syndrome), chest (Absent pectoralis major muscle) and skeletal anomalies (vertebral anomalies, triphalangeal thumb and carpal bone anomalies). The TBX5 phenotypic effect is related to which concept:
A. Reduced penetrance
B. Sex limited.
C. Pleiotropy
D. Multifactorial
E. Genetic heterogeneity
Ans : C

22- which of the following is a characteristic of cystic fibrosis?
Ans: accumulation of mucus in lungs and intestines

23- A fetus genetic mutation have a characteristic of cleft lip and cleft palate. This mutation occurs more if the mother is chronic alcoholic, smoker so it is:
A- multifactorial
B- multiple alleles
C- pleiotropy
Ans : A

24- X-inactivation is done to:
A- underexpess male X chromosome
B- prevent overexpression of genes on the X chromosome in females
C- overexpress the genes on both X chromosome of the female
Ans : B

25- epistasis is shown in:
A- ABO genes mask the expression of MN gene
B- Haemophilia is caused by a mutation in F8 and F9
C- Huntington is caused by a mutation in HTT
Ans : A

26- which of the following is least commonly inherited:
A- sickle cell anemia
B- cystic fibrosis
C- phenylketonuria
D- Tay Sach
E- duchenne muscular dystrophy
Ans: E

27-one of the characteristics of neurofibromatosis I:
Peripheral nerve tumors

28- which of the following describe the incomplete dominance:
Heterozygous phenotype is an intermediate between two homozygous phenotypes

29- the sentence that describe multiple alleles:
A single gene has many alleles, but 2 alleles only are found in each individual

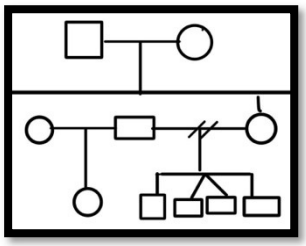
30- pedigree showing an infected male for an autosomal recessive disorder, what is the genotype for both parents?
Aa, Aa

31- characteristic of PKU:
Failure of degradation of phenylalanine

32- characteristic of Tay Sachs:

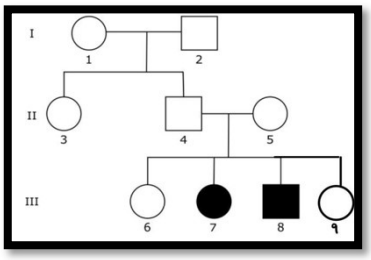
A- Gangliosides accumulation in nervous tissues
B- behavioural and psychological problems
C- progressive muscle weakness and atrophy
D- blindness and hearing loss
Ans : A

33- pedigree, choose the correct answer:



A- Ex-husband is now in relationship with her sister and the have a daughter
B- Monozygotic twins
C- They have 4 daughters
Ans : A

34- this pedigree shows what type of inheritance?



A- autosomal dominant
B- autosomal recessive
C- x-linked dominant
D- x-linked recessive
Ans : B

35- correct about haemophilia a:
A- More common in males than females
B- Females are the only possible carriers
Ans : A

باقي خمس أسئلة عن ال pedigree بس سهلين