Test Bank

Subject:

MG-Mid

Collected by:

Hiba Abuhayyah

Hadeel Alkayed

Ameen Alsaras

بسم الله الرحمن الرحيم

Medical Genetics-Mid

1-All of the following regarding telomeres is true EXCEPT:

a. Telomeres consist of a repeated sequence of TTAGGG
b. Telomeres are shortened by each cycle of DNA replication
c. It codes for important genes.
d. Prevents end-to-end fusion of chromosomes
e. Cancer cells are characterized by high telomerase activity

2-One of the following is true about telomerase :

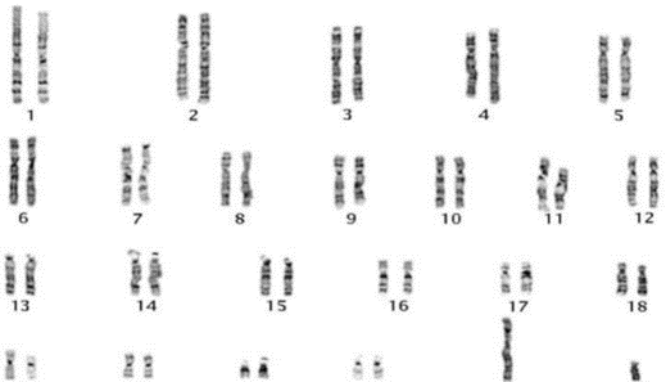
a. inactivation of telomerase contributes for the extended lifespan of cancer cells.
b. it uses DNA template
c. it extends the daughter DNA strand to become longer than the parental DNA
d. whole telomere has the same sequence
e. activity of telomerase increases with age

3-A cell is in G0 phase. How many chromosomes does it have?

a. 46
b. 23
c. 92

4-What is the karyotype shown in the figure?

a. 46XX
b. 47XY
c. 46XY



5-Which one of the following pairs is mismatched?

a. Patau syndrome: 47,XX,+13
b. Edward syndrome: 47, XX, +18
c. Down Syndrome: 47, XX, +18

6-Pattern baldness, moustaches and beard in human males are examples of

a. Autosomal recessive traits
b. Sex-influenced traits
c. Sex-linked traits

7-A female with a flattened face, small head, short neck, protruding tongue, small ears, and a poor muscle tone (hypotonia). She probably has a genetic disorder that's caused by_____

a. Trisomy 21
b. Monosomy X
c. Trisomy X

8-Which of the following genetic changes is associated with a female whose karyotype is 46,XY ?

a. SRY gene mutations (deletions, translocations, ...etc).
b. Monosomy X
c. Triple X syndrome

9-The main treatment for PKU includes_____

a. A lifetime diet with very limited intake of carbohydrate
b. A lifetime diet with very limited intake of protein
c. Neutral amino acid therapy

10-Chronic myeloid leukemia is caused by_____

a. t(9;22); a translocation that fuses part of the ABL1 gene from chromosome 9

with part of the BCR gene from chromosome 22, creating a gene called BCRABL1

b. Having 3 copies of chromosome number 18
c. Trisomy 13

11-The most common aneuploidy that infants can survive with is _____ (most compatible with life)

a. Trisomy 18 (Edwards syndrome)
b. Monosomy X (Turner syndrome)
c. Trisomy 21 (Down syndrome)

12-Which of the following statements is NOT associated with multifactorial disease inheritance

a. Factors are usually both genetic and environmental
b. Increased incidence of the siblings having the disease if a person has the disease late in life
c. Examples include multiple sclerosis, diabetes, and cancer

13-Angelman syndrome (AS) and Prader-Willi syndrome (PWS) are examples of disorders that can be caused by_____

a. Trisomy 18
b. Trisomy 13
c. Uniparental disomy

14-The most commonly used stain for metaphase chromosomes is_____

a. Quinacrine stain
b. Giemsa stain
c. Trypsin

15-The study of chromosomes and cell division is called:

a. Cytogenetics
b. Cytology

c. Pedigree

16-The most stable chromosome of the following is:

a. 46 OY
b. 47 XY – trisomy 14
c. 45 XY t(14,21)

17-A patient with klinefelter syndrome can be seen as:

a. A male with 47 XXY
b. A female with 47 XXY
c. A female with 45 OX

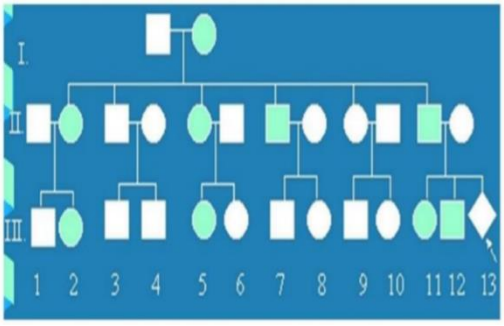
18-Expressivity can be described as:

a. One mutant gene can cause multiple phenotypic effects
b. The degree to which a gene is expressed depending on other genetic or environmental factors
c. All or none expression of a mutant gene

19-Which of the following is incorrect regarding Angelman syndrome?

a. It is caused by a micro deletion
b. It is also called happy puppet syndrome
c. It is characterized by gait ataxia

20-The following pedigree shows an:



a. Autosomal recessive disorder
b. Autosomal dominant disorder
c. X-linked recessive disorder

21-Which of the following is incorrect regarding mitochondrial inheritance?

a. Genes involved are called cytoplasmic genes
b. The genes involved are inherited paternally
c. Leber's neuropathy is an example of mitochondrial genes defects

22-A study about a particular disease showed that monozygotic twin had 40% correlation in disease status, while normal siblings had only 10%. The best statement describing this gene abnormality is:

a. The disease is caused by environmental factors and genes have no role
b. The disease is an autosomal recessive disease
c. Genetic abnormality contributes but doesn't determine the disease occurrence

23-Karyotyping is not used in :

a. Deletion of a chromosomal segment
b. Inversion
C. Insertion of few nucleotide

Answers

1	c	7	a	13	c	19	a
2	d	8	a	14	b	20	b
3	a	9	b	15	a	21	b
4	c	10	a	16	c	22	c
5	c	11	c	17	a	23	c
6	b	12	b	18	b	-	-

يا ربِّ أنزل على الطُّلابِ غاديةً.....من السدادِ بما جدّوا وما علموا

العلمُ علمك، والأفهامُ عاجزةً.....فإن أذنت لهم في فهمِهم، فهموا

اذكرونا بدعوة. ✨