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National Testing Agency

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Human Genetics

Group Number :	1
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Human Genetics-1

Section Id :	512452814
Section Number :	1
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Mandatory or Optional :	Mandatory
Number of Questions :	100

Number of Questions to be attempted : 100
Section Marks : 100
Mark As Answered Required? : Yes
Sub-Section Number : 1
Sub-Section Id : 512452854
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 51245214000 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

When was the correct number of human chromosomes known?

1. 1960
2. 1958
3. 1956
4. 1950

Options :

- 51245243861. 1
- 51245243862. 2
- 51245243863. 3
- 51245243864. 4

Question Number : 2 Question Id : 51245214001 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How many prominent creases are seen on the surface of normal human palms?

1. Four
2. Three
3. Two
4. One

Options :

51245243865. 1

51245243866. 2

51245243867. 3

51245243868. 4

Question Number : 3 Question Id : 51245214002 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following chemicals are NOT used to get fingerprints?

1. Ninhydrin powder
2. Black Powder
3. Magnetic powder
4. Pepper powder

Options :

51245243869. 1

51245243870. 2

51245243871. 3

51245243872. 4

Question Number : 4 Question Id : 51245214003 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

_____ is a roadmap used to study the genetics of inherited diseases.

1. Sex-linkage
2. Dominant
3. Pedigree
4. Recessive

Options :

51245243873. 1

51245243874. 2

51245243875. 3

51245243876. 4

Question Number : 5 Question Id : 51245214004 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is an example of incomplete penetrance?

1. Lethal genes
2. Polygenes
3. Polydactyly
4. Cystic fibrosis

Options :

51245243877. 1

51245243878. 2

51245243879. 3

51245243880. 4

Question Number : 6 Question Id : 51245214005 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Ichthyosis is an example of _____ disorder.

1. Autosomal recessive
2. Autosomal dominant
3. X-linked recessive
4. X-linked dominant

Options :

51245243881. 1

51245243882. 2

51245243883. 3

51245243884. 4

Question Number : 7 Question Id : 51245214006 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which genome project was announced in 2012 by the Prime Minister of the UK?

1. 100
2. 1000
3. 10,000
4. 100,000

Options :

- 51245243885. 1
- 51245243886. 2
- 51245243887. 3
- 51245243888. 4

Question Number : 8 Question Id : 51245214007 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is CORRECT?

1. Gene is not a unit of heredity, mutation, recombination and function.
2. Gene can be a unit of heredity, mutation, recombination and not function.
3. Gene will be a unit of heredity, mutation, recombination and function.
4. Gene is a unit of heredity, mutation, recombination and function.

Options :

- 51245243889. 1
- 51245243890. 2
- 51245243891. 3
- 51245243892. 4

Question Number : 9 Question Id : 51245214008 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Chromomeres are beadlike structure visible in _____ chromosomes.

1. Polytene
2. Anaphase
3. Metaphase
4. Telophase

Options :

- 51245243893. 1
- 51245243894. 2
- 51245243895. 3
- 51245243896. 4

Question Number : 10 Question Id : 51245214009 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In _____ chromosome, the centromeric activity is distributed throughout the length of chromosomes.

1. Metacentric
2. Acrocentric
3. Monocentric
4. Holocentric

Options :

- 51245243897. 1
- 51245243898. 2
- 51245243899. 3
- 51245243900. 4

Question Number : 11 Question Id : 51245214010 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following human chromosomes have large regions of constitutive heterochromatin?

1. Chromosomes 1,18 and X
2. Chromosomes 1,18 and Y
3. Chromosomes 1,16 and X
4. Chromosomes 1,16 and Y

Options :

- 51245243901. 1
- 51245243902. 2
- 51245243903. 3
- 51245243904. 4

Question Number : 12 Question Id : 51245214011 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is mainly present in heterochromatin?

1. Active genes
2. Repetitive DNA
3. Un-methylated genes
4. Multigenes

Options :

- 51245243905. 1
- 51245243906. 2
- 51245243907. 3
- 51245243908. 4

Question Number : 13 Question Id : 51245214012 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the size of the human haploid genome?

1. ~ 1 billion bps
2. ~ 3 billion bps
3. ~ 5 billion bps
4. ~ 8 billion bps

Options :

- 51245243909. 1
- 51245243910. 2
- 51245243911. 3
- 51245243912. 4

Question Number : 14 Question Id : 51245214013 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

According to _____ model, the histone protein bound on the outer side of DNA forms a shell around the DNA, which is referred to as 'Histone Shell'.

1. Folded fibre
2. Polyneme chromosome
3. Nucleosome
4. Taylor's Centipede

Options :

- 51245243913. 1
- 51245243914. 2
- 51245243915. 3
- 51245243916. 4

Question Number : 15 Question Id : 51245214014 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

_____base pairs of double strand DNA is wound around the histone octamer protein core.

1. 126
2. 136
3. 146
4. 156

Options :

- 51245243917. 1
- 51245243918. 2
- 51245243919. 3
- 51245243920. 4

Question Number : 16 Question Id : 51245214015 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The 'D' group chromosomes are _____.

1. 12-17
2. 13-15
3. 14-16
4. 15-18

Options :

- 51245243921. 1
- 51245243922. 2
- 51245243923. 3
- 51245243924. 4

Question Number : 17 Question Id : 51245214016 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Covalent interactions between the metal stains and the nitrogen atoms at position 7 of purine bases of the DNA resulted in _____binding.

1. Minor groove
2. Intercalate
3. Major groove
4. External chalator

Options :

- 51245243925. 1
- 51245243926. 2
- 51245243927. 3
- 51245243928. 4

Question Number : 18 Question Id : 51245214017 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The thin tube used in Chorionic villus sampling is termed as_____.

1. Fetoscope
2. Probe
3. Catheter
4. Syringe

Options :

- 51245243929. 1
- 51245243930. 2
- 51245243931. 3
- 51245243932. 4

Question Number : 19 Question Id : 51245214018 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The instrument used in fetoscopy is called as_____.

1. Stethoscope
2. Fetoscope
3. Transducer
4. Catheter

Options :

51245243933. 1
51245243934. 2
51245243935. 3
51245243936. 4

Question Number : 20 Question Id : 51245214019 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is an example of monosomy?

1. Endosperm
2. Xeroderma
3. Down syndrome
4. Turner syndrome

Options :

51245243937. 1
51245243938. 2
51245243939. 3
51245243940. 4

Question Number : 21 Question Id : 51245214020 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The delivery of semen directly into the uterus is done in _____method.

1. In vitro fertilization
2. Artificial insemination
3. Intra-cytoplasmic sperm injection
4. Intra-fallopian zygote transfer

Options :

- 51245243941. 1
- 51245243942. 2
- 51245243943. 3
- 51245243944. 4

Question Number : 22 Question Id : 51245214021 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The telomere region of the chromosome consists of _____ repeats.

1. TTACCC
2. TTAGGG
3. AATTGCC
4. GACTTT

Options :

- 51245243945. 1
- 51245243946. 2
- 51245243947. 3
- 51245243948. 4

Question Number : 23 Question Id : 51245214022 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is the most controversial approach in gene therapy?

1. Germline therapy
2. Somatic therapy
3. Ex vivo therapy
4. In vivo therapy

Options :

- 51245243949. 1
- 51245243950. 2
- 51245243951. 3
- 51245243952. 4

Question Number : 24 Question Id : 51245214023 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If a segment of a chromosome or gene occurs two or more times or repeatedly in a chromosome it is called

1. Deletion
2. Duplication
3. Inversion
4. Translocation

Options :

- 51245243953. 1
- 51245243954. 2
- 51245243955. 3
- 51245243956. 4

Question Number : 25 Question Id : 51245214024 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The haploid condition is found in _____.

1. Zygote
2. Ovum
3. Stem cell
4. Blastomere

Options :

- 51245243957. 1
- 51245243958. 2
- 51245243959. 3
- 51245243960. 4

Question Number : 26 Question Id : 51245214025 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The deletion of short arm ends on chromosome 4 (4p-) leads to _____.

1. Wolf-Hirschhorn syndrome
2. Cri du chat syndrome
3. Jacobsen syndrome
4. Pallister-killian mosaic syndrome

Options :

- 51245243961. 1
- 51245243962. 2
- 51245243963. 3
- 51245243964. 4

Question Number : 27 Question Id : 51245214026 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Phenylketonuria shows which of the following pattern of inheritance?

1. X-linked dominant
2. X-linked recessive
3. Autosomal dominant
4. Autosomal recessive

Options :

- 51245243965. 1
- 51245243966. 2
- 51245243967. 3
- 51245243968. 4

Question Number : 28 Question Id : 51245214027 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

During the production phase, the 1000 Genomes Project delivered sequence data at an average rate of about _____billion bases per day.

1. 3.2
2. 4.2
3. 6.2
4. 8.2

Options :

- 51245243969. 1
- 51245243970. 2
- 51245243971. 3
- 51245243972. 4

Question Number : 29 Question Id : 51245214028 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The term genome refers to the_____.

1. Haploid set of chromosome
2. Diploid set of chromosome
3. Triploid set of chromosome
4. Tetraploid set of chromosome

Options :

51245243973. 1

51245243974. 2

51245243975. 3

51245243976. 4

Question Number : 30 Question Id : 51245214029 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The parthenogenetic embryo will carry the_____.

1. Paternal genome
2. Maternal genome
3. Both paternal and maternal genome
4. Half of the paternal genome

Options :

51245243977. 1

51245243978. 2

51245243979. 3

51245243980. 4

Question Number : 31 Question Id : 51245214030 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Which of the following is most common in flowering plants?

1. Polyploidy
2. Monoploidy
3. Euhaploidy
4. Aneuploidy

Options :

51245243981. 1
51245243982. 2
51245243983. 3
51245243984. 4

Question Number : 32 Question Id : 51245214031 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Mutated form of proto-oncogenes are_____.

1. Proto-oncogenes
2. Oncogenes
3. Tumor suppressor genes
4. Tumor necrosis factors

Options :

51245243985. 1
51245243986. 2
51245243987. 3
51245243988. 4

Question Number : 33 Question Id : 51245214032 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The organism consist of multiple copies of the same basic chromosome set is called

_____.

1. Allopolyploid
2. Autopolyploid
3. Allohexaploid
4. Aneuploid

Options :

- 51245243989. 1
- 51245243990. 2
- 51245243991. 3
- 51245243992. 4

Question Number : 34 Question Id : 51245214033 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is an example of trisomy?

1. Turner syndrome
2. Xeroderma
3. Endosperm
4. Down syndrome

Options :

- 51245243993. 1
- 51245243994. 2
- 51245243995. 3
- 51245243996. 4

Question Number : 35 Question Id : 51245214034 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The probability of having a child with trisomic conditions increases with the maternal age above _____.

1. 18
2. 22
3. 28
4. 35

Options :

- 51245243997. 1
- 51245243998. 2
- 51245243999. 3
- 51245244000. 4

Question Number : 36 Question Id : 51245214035 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In humans, about _____ of the total DNA encodes for proteins.

1. 1.5%
2. 10%
3. 5.5%
4. 20%

Options :

- 51245244001. 1
- 51245244002. 2
- 51245244003. 3
- 51245244004. 4

Question Number : 37 Question Id : 51245214036 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

_____ is used in grocery stores to automatically recognize and bill a registered user's credit card or debit card.

1. Pedigree
2. Fingerprint
3. Recessive trait
4. Dominant trait

Options :

- 51245244005. 1
- 51245244006. 2
- 51245244007. 3
- 51245244008. 4

Question Number : 38 Question Id : 51245214037 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The formation of deletion loop can be observed during_____.

1. Recombination
2. Crossing over
3. Segregation
4. Synapsis

Options :

- 51245244009. 1
- 51245244010. 2
- 51245244011. 3
- 51245244012. 4

Question Number : 39 Question Id : 51245214038 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What happens when the chromosome is heterozygote for a deletion?

1. The recombinant frequency will be the same.
2. The formation of the deletion loop takes place.
3. The unpaired region of one homolog can participate in crossing over.
4. The lost region of one homolog will not make any difference.

Options :

- 51245244013. 1
- 51245244014. 2
- 51245244015. 3
- 51245244016. 4

Question Number : 40 Question Id : 51245214039 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT ionizing radiation?

1. X- rays
2. Gamma rays
3. UV rays
4. Alpha rays

Options :

- 51245244017. 1
- 51245244018. 2
- 51245244019. 3
- 51245244020. 4

Question Number : 41 Question Id : 51245214040 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

_____ is the diagrammatic representation of a karyotype based on morphological feature of the chromosomes grouped on the basis of position of the centromere and decreasing size.

1. Chromatogram
2. Chromogram
3. Idiogram
4. Cytogram

Options :

- 51245244021. 1
- 51245244022. 2
- 51245244023. 3
- 51245244024. 4

Question Number : 42 Question Id : 51245214041 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Who coined the term 'Duplication' in 1919?

1. Morgan
2. Calvin Bridges
3. Von Waldeyer
4. Hagberg

Options :

- 51245244025. 1
- 51245244026. 2
- 51245244027. 3
- 51245244028. 4

Question Number : 43 Question Id : 51245214042 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In a sequence of A-*B-C-D-E-F, the * is a centromere. Which of the following will be paracentric?

1. B-*A-C-D-E-F
2. A-*B-C-D-E-F
3. C-B-*A-D-E-F
4. A-*B-E-D-C-F

Options :

51245244029. 1
51245244030. 2
51245244031. 3
51245244032. 4

Question Number : 44 Question Id : 51245214043 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The sea urchin has _____ histones H2A variants, which are expressed at a different time during development.

1. 2
2. 4
3. 5
4. 6

Options :

51245244033. 1
51245244034. 2
51245244035. 3
51245244036. 4

Question Number : 45 Question Id : 51245214044 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which immunoglobulin can pass through the placenta?

1. IgD
2. IgE
3. IgG
4. IgA

Options :

51245244037. 1
51245244038. 2
51245244039. 3
51245244040. 4

Question Number : 46 Question Id : 51245214045 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Who has first described the useful characteristic of the polytene chromosome in 1933?

1. Theophilus S. Painter
2. Balbiani
3. Alfred Sturtevant
4. Calvin Bridges

Options :

51245244041. 1
51245244042. 2
51245244043. 3
51245244044. 4

Question Number : 47 Question Id : 51245214046 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The transfer of a segment of one chromosome to a non-homologous chromosome is termed as _____.

1. Translocation
2. Duplication
3. Insertion
4. Inversion

Options :

- 51245244045. 1
- 51245244046. 2
- 51245244047. 3
- 51245244048. 4

Question Number : 48 Question Id : 51245214047 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The chromosome which lacks centromere is called as _____ chromosome.

1. Dicentric
2. Sub-metacentric
3. Metacentric
4. Acentric

Options :

- 51245244049. 1
- 51245244050. 2
- 51245244051. 3
- 51245244052. 4

Question Number : 49 Question Id : 51245214048 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Cleft lip, Cleft palate, and the presence of extra finger are the characteristic symptoms of _____.

1. Down syndrome
2. Turner syndrome
3. Patau syndrome
4. Edward syndrome

Options :

- 51245244053. 1
- 51245244054. 2
- 51245244055. 3
- 51245244056. 4

Question Number : 50 Question Id : 51245214049 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If a diploid cell has 14 chromosomes, how many bivalents are formed during meiosis?

1. 7
2. 9
3. 14
4. 28

Options :

- 51245244057. 1
- 51245244058. 2
- 51245244059. 3
- 51245244060. 4

Question Number : 51 Question Id : 51245214050 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The delayed cord clamping is done _____ of delivery.

1. After 30-60 seconds
2. After 1 hour
3. After 2 hours
4. After 3-4 hours

Options :

- 51245244061. 1
- 51245244062. 2
- 51245244063. 3
- 51245244064. 4

Question Number : 52 Question Id : 51245214051 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In autosomal dominant condition, what is the possibility of getting a healthy child if both the parents are affected?

1. 1/4
2. 1/2
3. 3/4
4. 0

Options :

- 51245244065. 1
- 51245244066. 2
- 51245244067. 3
- 51245244068. 4

Question Number : 53 Question Id : 51245214052 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

NF2 gene codes for a protein is called_____.

1. Neurofibromin
2. Fibrillin
3. Merlin
4. Huntingtin

Options :

- 51245244069. 1
- 51245244070. 2
- 51245244071. 3
- 51245244072. 4

Question Number : 54 Question Id : 51245214053 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is UNTRUE about the autosomal recessive condition?

1. For autosomal recessive inheritance, two copies of the gene should be affected to cause the phenotype.
2. A person with one abnormal copy of the gene is called a carrier.
3. Carrier parents cannot pass their abnormal gene to their children.
4. Carrier parents can show normal phenotype.

Options :

- 51245244073. 1
- 51245244074. 2
- 51245244075. 3
- 51245244076. 4

Question Number : 55 Question Id : 51245214054 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The *HEXA* gene encodes the protein _____.

1. Phenyl hydroxylase
2. β -globin
3. Beta-hexosaminidase A
4. Glycosidase

Options :

- 51245244077. 1
- 51245244078. 2
- 51245244079. 3
- 51245244080. 4

Question Number : 56 Question Id : 51245214055 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The gene affected in dermal hypoplasia is _____.

1. *FMR1*
2. *CFTR*
3. *PORCN*
4. *OPN1LW*

Options :

- 51245244081. 1
- 51245244082. 2
- 51245244083. 3
- 51245244084. 4

Question Number : 57 Question Id : 51245214056 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following human chromosome was completely sequenced in December 1999?

1. Chromosome 20
2. Chromosome 21
3. Chromosome 22
4. Y chromosome

Options :

- 51245244085. 1
- 51245244086. 2
- 51245244087. 3
- 51245244088. 4

Question Number : 58 Question Id : 51245214057 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT correct about inversion?

1. Inversion can cause chromosome breakage.
2. Two DNA strands with an inverted loop will pair.
3. Inverted chromosomes are generally viable.
4. Inversion, including centromere, is known as paracentric.

Options :

- 51245244089. 1
- 51245244090. 2
- 51245244091. 3
- 51245244092. 4

Question Number : 59 Question Id : 51245214058 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Edward syndrome is the condition of having _____.

1. Trisomy 21
2. Trisomy 18
3. Trisomy 13
4. Trisomy 12

Options :

- 51245244093. 1
- 51245244094. 2
- 51245244095. 3
- 51245244096. 4

Question Number : 60 Question Id : 51245214059 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Duchene muscular dystrophy shows_____ inheritance.

1. Autosomal recessive
2. X-linked recessive
3. X-linked dominant
4. Autosomal dominant

Options :

- 51245244097. 1
- 51245244098. 2
- 51245244099. 3
- 51245244100. 4

Question Number : 61 Question Id : 51245214060 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Diabetes mellitus is caused by the_____.

1. decrease in blood glucose level
2. Increase in blood glucose level
3. Increase in insulin level
4. Increase in lipid level

Options :

- 51245244101. 1
- 51245244102. 2
- 51245244103. 3
- 51245244104. 4

Question Number : 62 Question Id : 51245214061 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In mitochondria, how many genes codes for rRNA?

1. 37
2. 22
3. 13
4. 2

Options :

- 51245244105. 1
- 51245244106. 2
- 51245244107. 3
- 51245244108. 4

Question Number : 63 Question Id : 51245214062 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which enzyme helps to catalyze the production of ATP from ADP and Pi?

1. ATP Phosphatase
2. ATP synthase
3. ATP transferase
4. ATP hydrolase

Options :

- 51245244109. 1
- 51245244110. 2
- 51245244111. 3
- 51245244112. 4

Question Number : 64 Question Id : 51245214063 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following statement is NOT correct about SNPs?

1. There can be about 10 million SNPs in the human genome
2. SNPs occur throughout the genome
3. SNPs are present only in coding regions
4. Both transversion and transition result in SNP

Options :

- 51245244113. 1
- 51245244114. 2
- 51245244115. 3
- 51245244116. 4

Question Number : 65 Question Id : 51245214064 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Philadelphia chromosome is formed by the translocation between two chromosomes. Select the right one from Group I and Group II.

Group I	Group II
A. Chromosome 6	I. Chromosome 22
B. Chromosome 7	II. Chromosome 21
C. Chromosome 8	III. Chromosome 20
D. Chromosome 9	IV. Chromosome 19

1. A and IV
2. B and III
3. C and II
4. D and I

Options :

- 51245244117. 1
- 51245244118. 2
- 51245244119. 3
- 51245244120. 4

Question Number : 66 Question Id : 51245214065 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is seen in male honey bee?

1. Trisomy
2. Polyploidy
3. Triploidy
4. Haploidy

Options :

- 51245244121. 1

51245244122. 2

51245244123. 3

51245244124. 4

Question Number : 67 Question Id : 51245214066 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Nijmegen breakage syndrome (NBS) is caused by the defect in _____protein.

1. Nibrin
2. ATM
3. CHK1
4. Retinoblastoma

Options :

51245244125. 1

51245244126. 2

51245244127. 3

51245244128. 4

Question Number : 68 Question Id : 51245214067 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following are the basic histone proteins?

1. H₁, H_{2A}, H_{2B}, H₃, and H₅
2. H₁, H_{2A}, H_{2B}, H_{3A}, and H₄
3. H₁, H_{3A}, H_{3B}, H₄, and H₅
4. H₁, H_{2A}, H_{2B}, H₃, and H₄

Options :

51245244129. 1

51245244130. 2

51245244131. 3

51245244132. 4

Question Number : 69 Question Id : 51245214068 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following protein is the inhibitor of p53?

1. MDM2
2. P21
3. P14
4. CHK1

Options :

- 51245244133. 1
- 51245244134. 2
- 51245244135. 3
- 51245244136. 4

Question Number : 70 Question Id : 51245214069 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Chromosome staining involves the formation of a thiazine-eosin precipitate in a _____molar ratio.

1. 2:1
2. 3:1
3. 4:1
4. 1:1

Options :

- 51245244137. 1
- 51245244138. 2
- 51245244139. 3
- 51245244140. 4

Question Number : 71 Question Id : 51245214070 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

DMD gene codes for a protein are called _____.

1. Fibrillin
2. Dystrophin
3. Myosin
4. Huntingtin

Options :

- 51245244141. 1
- 51245244142. 2
- 51245244143. 3
- 51245244144. 4

Question Number : 72 Question Id : 51245214071 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The T lymphocytes gets originated in_____.

1. Thymus
2. Bone marrow
3. Spleen
4. Lymph node

Options :

- 51245244145. 1
- 51245244146. 2
- 51245244147. 3
- 51245244148. 4

Question Number : 73 Question Id : 51245214072 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is a primary lymphoid organ?

1. Spleen
2. Thymus
3. Lymph node
4. MALT

Options :

51245244149. 1

51245244150. 2

51245244151. 3

51245244152. 4

Question Number : 74 Question Id : 51245214073 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is located in the spleen's white pulp?

1. Lymphocytes
2. Capsules
3. Macrophages
4. Monocytes

Options :

51245244153. 1

51245244154. 2

51245244155. 3

51245244156. 4

Question Number : 75 Question Id : 51245214074 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

If the duplicated segment of a chromosome is present in another chromosome in the genome it is called _____ duplication.

1. Intra-chromosomal
2. Inter-chromosomal
3. Direct tandem
4. Reverse tandem

Options :

- 51245244157. 1
- 51245244158. 2
- 51245244159. 3
- 51245244160. 4

Question Number : 76 Question Id : 51245214075 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Given below are two statements

Statement I: The autosomal recessive disease affects both males and females equally

Statement II: The autosomal recessive disease can be manifest in every generation.

In light of the above statements, choose the **correct** answer from the options given below

1. Statement I is true but Statement II is false
2. Statement I is false but Statement II is true
3. Statement I and Statement II are false
4. Statement I and Statement II are true

Options :

- 51245244161. 1
- 51245244162. 2

51245244163. 3

51245244164. 4

Question Number : 77 Question Id : 51245214076 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following cells are involved in the synthesis of antibodies?

1. Bone marrow cells
2. T-cells
3. B-cells
4. Lymph

Options :

51245244165. 1

51245244166. 2

51245244167. 3

51245244168. 4

Question Number : 78 Question Id : 51245214077 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Crossing-over within a pericentric inversion leads to _____.

1. Dicentric chromosome and acentric fragment
2. Monocentric chromosomes with deletion and duplications
3. All normal chromosomes
4. One normal chromosome and one dicentric chromosome

Options :

51245244169. 1

51245244170. 2

51245244171. 3

51245244172. 4

Question Number : 79 Question Id : 51245214078 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following complement protein in immune system possess q, r, and s subunits?

1. C2
2. C3
3. C5
4. C1

Options :

- 51245244173. 1
- 51245244174. 2
- 51245244175. 3
- 51245244176. 4

Question Number : 80 Question Id : 51245214079 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Stomach clear out pathogen by _____.

1. Secreting HCL
2. Secreting digestive enzymes
3. Both (1) and (2)
4. Secreting H₂SO₄

Options :

- 51245244177. 1
- 51245244178. 2
- 51245244179. 3
- 51245244180. 4

Question Number : 81 Question Id : 51245214080 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

In Acquired Immune Deficiency Syndrome (AIDS), _____are affected.

1. CD4 T cells
2. B cells
3. Macrophages
4. Complement proteins

Options :

- 51245244181. 1
- 51245244182. 2
- 51245244183. 3
- 51245244184. 4

Question Number : 82 Question Id : 51245214081 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Who succeeded James Watson as a Director of Human Genome Project?

1. James Watson
2. Robert Sinsheimer
3. Craig Venter
4. Francis Collins

Options :

- 51245244185. 1
- 51245244186. 2
- 51245244187. 3
- 51245244188. 4

Question Number : 83 Question Id : 51245214082 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The DNA variation occurs when a single nucleotide change in the genome sequence is _____.

1. VNTRs
2. SNPs
3. RFLPs
4. SSLPs

Options :

- 51245244189. 1
- 51245244190. 2
- 51245244191. 3
- 51245244192. 4

Question Number : 84 Question Id : 51245214083 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following is an example for structural chromosomal abnormalities?

1. Deletion
2. Polyploidy
3. Monoploidy
4. Triploidy

Options :

- 51245244193. 1
- 51245244194. 2
- 51245244195. 3
- 51245244196. 4

Question Number : 85 Question Id : 51245214084 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is untrue about CNVs?

1. The variation caused by CNVs is significantly less than SNPs.
2. CNVs can be formed by the result of deletions, duplications, translocations, and insertions.
3. The size of the CNVs DNA sequences ranges from 1kb- 5Mb.
4. CNVs have a role in evolution.

Options :

51245244197. 1

51245244198. 2

51245244199. 3

51245244200. 4

Question Number : 86 Question Id : 51245214085 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

The small probe used for scanning in ultrasonography is called ____.

1. Stethoscope
2. Fetoscope
3. Transducer
4. Catheter

Options :

51245244201. 1

51245244202. 2

51245244203. 3

51245244204. 4

Question Number : 87 Question Id : 51245214086 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

MHC class II molecule structure has ____ subunits. Select the correct subunits from Group I and Group II.

Group I	Group II
A. α_1, α_2	I. β_3, β_4
B. α_1, α_2	II. β_2, β_4
C. α_1, α_2	III. β_2, β_3
D. α_1, α_2	IV. β_1, β_2

1. A and IV
2. B and II
3. C and I
4. D and III

Options :

- 51245244205. 1
- 51245244206. 2
- 51245244207. 3
- 51245244208. 4

Question Number : 88 Question Id : 51245214087 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Amniocentesis is done at _____ gestational period.

1. 16-20 weeks
2. Before 15 weeks
3. 1-2nd weeks
4. After 20 weeks

Options :

- 51245244209. 1

51245244210. 2

51245244211. 3

51245244212. 4

Question Number : 89 Question Id : 51245214088 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The affected gene in severe combined immune-deficiency disease (SCID) is _____.

1. *ADA*
2. *CFTR*
3. *F8*
4. *DMD*

Options :

51245244213. 1

51245244214. 2

51245244215. 3

51245244216. 4

Question Number : 90 Question Id : 51245214089 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In Public cord blood bank, _____.

1. The family members cannot use the cord blood.
2. The cord blood is used only by family members
3. Charge the fee for the storage of cord blood
4. Any family can use cord blood

Options :

51245244217. 1

51245244218. 2

51245244219. 3

51245244220. 4

Question Number : 91 Question Id : 51245214090 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following processes is not a step in phagocytosis?

1. Degradation
2. Recognition
3. Adhesion
4. Engulfment

Options :

51245244221. 1

51245244222. 2

51245244223. 3

51245244224. 4

Question Number : 92 Question Id : 51245214091 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Agammaglobulinaemia inherits in _____pattern.

1. Autosomal dominant
2. Autosomal recessive
3. X-linked dominant
4. X-linked recessive

Options :

51245244225. 1

51245244226. 2

51245244227. 3

51245244228. 4

Question Number : 93 Question Id : 51245214092 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

GenomeAsia 100K Project whole-genome reference dataset is being developed from 7 global regions, 219 population groups, and _____ countries across Asia.

1. 64
2. 54
3. 44
4. 34

Options :

- 51245244229. 1
- 51245244230. 2
- 51245244231. 3
- 51245244232. 4

Question Number : 94 Question Id : 51245214093 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Genetic counselors can _____.

1. Make a decision for the couple's problem.
2. Treat or prevent genetic conditions.
3. Guide and educate the couple to make decisions
4. Lie to clients to make them better

Options :

- 51245244233. 1
- 51245244234. 2
- 51245244235. 3
- 51245244236. 4

Question Number : 95 Question Id : 51245214094 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which immune cell is responsible for the release of histamine?

1. Eosinophil
2. Lymphocyte
3. Mast cell
4. Basophil

Options :

51245244237. 1
51245244238. 2
51245244239. 3
51245244240. 4

Question Number : 96 Question Id : 51245214095 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Name the class of immunoglobulin, which mainly takes part in hypersensitivity reaction.

1. IgG
2. IgA
3. IgE
4. IgD

Options :

51245244241. 1
51245244242. 2
51245244243. 3
51245244244. 4

Question Number : 97 Question Id : 51245214096 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Genomics England, owned and funded by the Department of Health & Social Care, was set up to sequence_____whole genomes.

1. 100
2. 1000
3. 10,000
4. 100,000

Options :

- 51245244245. 1
- 51245244246. 2
- 51245244247. 3
- 51245244248. 4

Question Number : 98 Question Id : 51245214097 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The complement proteins in immune system are produced in _____.

1. Pancreas
2. Intestine
3. Kidney
4. Liver

Options :

- 51245244249. 1
- 51245244250. 2
- 51245244251. 3
- 51245244252. 4

Question Number : 99 Question Id : 51245214098 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The direct extraction of semen by injecting a needle into the epididymis through the scrotum layer is done in _____.

1. Micro-epididymal sperm aspiration
2. Percutaneous epididymal sperm aspiration
3. Intra cytoplasmic sperm injection
4. Artificial insemination

Options :

- 51245244253. 1
- 51245244254. 2
- 51245244255. 3
- 51245244256. 4

Question Number : 100 Question Id : 51245214099 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The highest number of eye facets are present in _____ *Drosophila*.

1. homozygous bar female
2. homozygous bar male
3. ultra bar female
4. heterozygous bar female

Options :

- 51245244257. 1
- 51245244258. 2
- 51245244259. 3
- 51245244260. 4