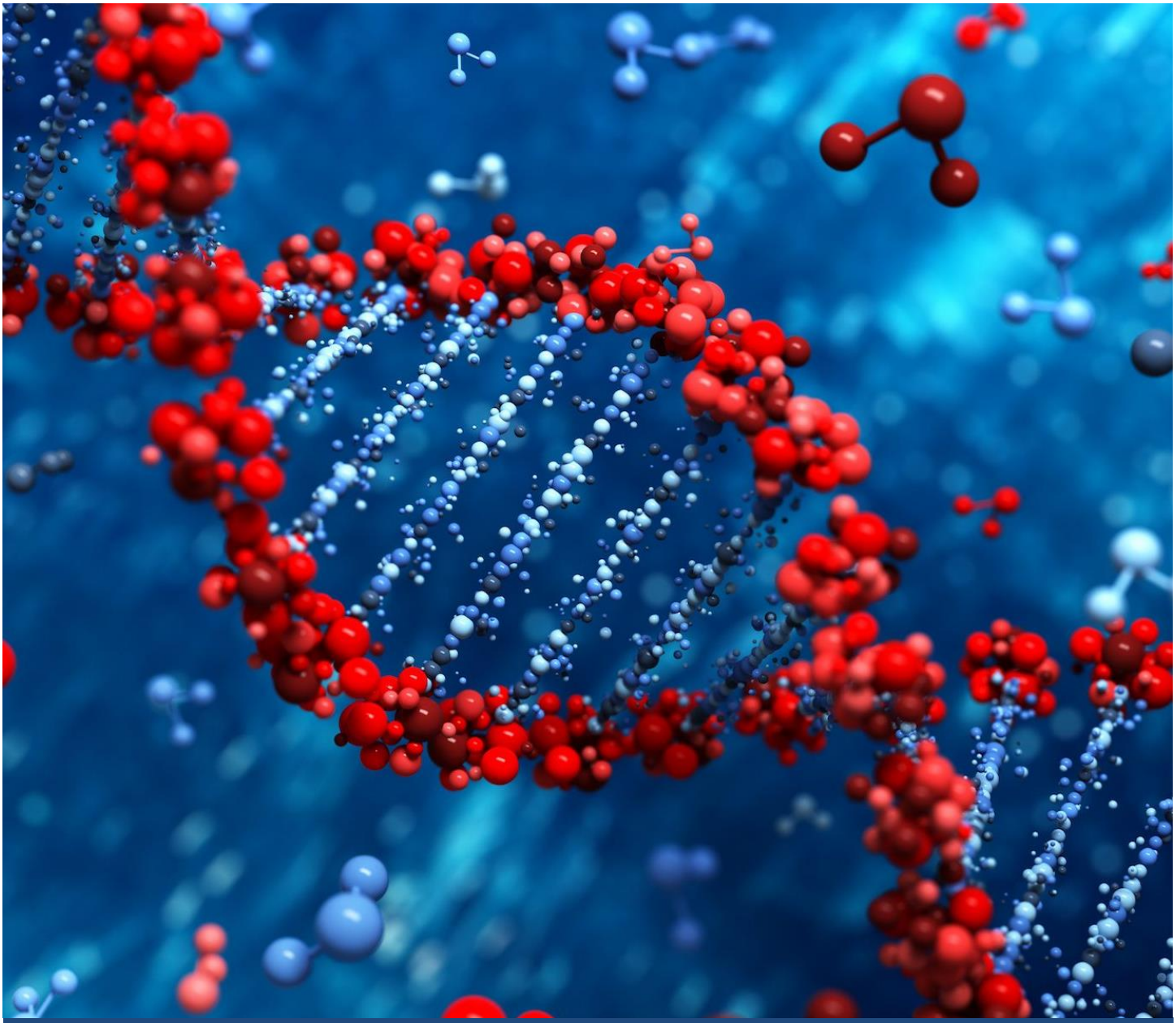

Molecular Biology MCQ

A MCQ collection of Clinical and Medical Molecular Biology topics

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Biochemistry

Introduction

Welcome to **Molecular Biology MCQ**, a comprehensive question bank designed to enhance your understanding of microbiology. This ebook contains over 500+ multiple-choice questions (MCQs) covering a wide array of topics within the field of clinical Molecular Biology.

Whether you're a medical student preparing for exams, a postgraduate aspirant aiming for success in competitive entrance tests, or a healthcare professional looking to refine your expertise, this book will serve as an invaluable resource in your learning journey. The questions in this ebook are structured to reflect the patterns seen in major medical entrance exams such as NEET PG, USMLE, AIIMS, and others, making it a perfect tool for self-assessment and revision.

Purpose

The primary goal of this ebook is to provide a reliable and extensive resource that students and professionals can use to test their knowledge, improve their diagnostic skills, and solidify key microbiological concepts. With the included detailed answers and explanations, this book goes beyond just helping you answer questions — it enables you to understand the reasoning behind each answer, facilitating deeper learning.

How This Ebook Can Help You

- **For Students**: The MCQs in this book are designed to match the rigor and format of real exam questions. By practicing regularly, you'll not only enhance your knowledge but also gain confidence in approaching exam challenges.
- **For Professionals**: This ebook helps professionals stay updated with the latest developments in clinical microbiology and refresh critical concepts required in day-to-day practice.
- **For Educators**: Teachers and educators can use this collection to formulate quizzes, exams, or as supplementary teaching material for their students.

Compilation and Sources

This ebook is a compilation of publicly available online content. Each question has been carefully selected and curated to ensure relevance and accuracy. While this material is sourced from multiple platforms, it has been reorganized and edited to provide a streamlined learning experience.

We hope this book becomes an essential part of your academic and professional toolkit, helping you achieve your goals in Biochemistry.

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Questions

1-: Nucleic acids absorb UV light maximally at the wavelength of

1: 260nm

2: 280 nm

3: 410 nm

4: 320 nm

2-: Same amino acid is coded by multiple codons d/t following :

1: Degeneracy

2: Frame-shift mutation

3: Transcription

4: Mutation

3-: Nucleosomes are

1: DNA+RNA

2: DNA+Histones

3: RNA+Histones

4: DNA+RNA+Histones

4-: All of the following are synonymous codon pair EXCEPT

1: CAU & CAC

2: AUU & AUC

3: AUG & AUA

4: AAU & AAC

5-: Which of the following is not a pyrimidine base?

1: Cytosine

2: Uracil

3: Guanine

4: Thymine

6-: A four-year-old child is diagnosed with Duchenne muscular dystrophy, an X-linked recessive disorder. Genetic anylysis shows that the patient&;s gene for the muscle protein dystrophin contains a mutation in its promoter region. What would be the most likely effect of this mutation?

1: Tailing of dystrophin mRNA will be defective

2: Capping of dystropin mRNA will be defective

3: Termination of dystrophin transcription will be deficient.

4: Initiation of dystrophin transcription will be deficient

7-: Unwinding Enzyme in DNA synthesis:

1: Helicase

2: Primase

3: DNA Polymerase

4: Transcriptase

8-: True about nucleosome

1: Use only one type of histone protein

2: Each complex is separated from each other by non histone proteins

3: Regular repeating structure of DNA & histone proteins

4: Reflect small nucleus

9-: Glycine is useful in all of the following except

1: Purine synthesis

2: Creatine synthesis

3: Spermine synthesis

4: Heme synthesis

10-: Deficiency of purine nucleoside phosphorylase causes

1: Complement deficiency

2: Cellular immunodeficeincy

3: Humoral immunodeficeincy

4: Combined immunodeficeincy

11-: Which of the following is true regarding Okazaki fragment?

1: Are segments of RNA attached to an RNA initiator component

2: Are related to the leading strand

3: Several Okazaki fragments must be sequentially synthesized for each replication fork

4: Helicase acts on the leading strand to unwind dsDNA

12-: Nucleosome consist of

1: Histone

2: DNA

3: RNA

4: DNA & RNA both

13-: Splicing is a process of

1: Activation of protein

2: Removal of introns

3: Synthesis of protein

4: Replication of DNA

14-: Defect in Snurps causes-

1: Sickle cell anemia

2: Thalassemia

3: Marfan syndrome

4: EDS

15-: In PCR, DNA polymerase is used in

1: DNA replication

2: DNA Elongation

3: DNA Mulitiplication

4: All

16-: Non-coding RNAs are

1: siRNA

2: miRNA

3: tRNA

4: mRNA

17-: Urea cycle components are all except

1: Urease

2: Arginase

3: Transcarbamoylase

4: Arginosuccinase

18-: RNA which contains codon for specific amino acid

1: tRNA

2: rRNA

3: mRNA

4: None

19-: Frame shift mutation DOESN'T occur in multiples of:

1: 2

2: 3

3: 4

4: 5

20-: True about DNA structure

1: Purines are adenine and guanine & pyrimidines are uracil and cytosine

2: Waston and Crick discovered structure in 1973

3: Deoxyribose - phosphate backbone with bases stacked inside

4: Mainly consists of left handed helix

21-: Banding technique most commonly employed for cytogenetic analysis

1: G banding

2: C banding

3: R banding

4: Q banding

22-: 7-Methyl guanosine cap is present in

1: M-RNA

2: t-RNA

3: r-RNA

4: DNA

23-: Histone acetylation causes

1: Increased Heterochromatin formation

2: Increase Euchromatin formation

3: Methylation of cystine

4: DNA replication

24-: What is the function of DNA ligase ?

1: Unwinding (denaturation) of dsDNA to provide an ssDNA template

2: Seals the single strand nick between the nascent chain and Okazaki fragments on lagging strand

3: Initiation of DNA synthesis and elongation

4: Initiates synthesis of RNA primers

25-: Pyrimidine overproduction results in all except

1: Hyperuricemia

2: Reye syndrome

3: orotic aciduria

4: Megaloblastic anemia

26-: All are true about chaperones except

1: Cause folding of proteins

2: Are lipid in nature

3: May have ATPase activity

4: Include heat shock proteins

27-: The enzyme used for the mapping of hypersensitive sites in recombinant DNA research is?

1: DNA ligase

2: DNA polymerase I

3: DNase I

4: Polynucleotide kinase

28-: Number of t-RNA present in cells is

1: 23

2: 25

3: 28

4: 30

29-: The technique for accurate quantification of gene expression is

1: Nohern blot

2: PCR

3: Real-Time Reverse Transcriptase PCR

4: Reverse Transcriptase PCR

30-: There are 20 amino acids with three codons in spite of the no of amino acids could be formed is 64 leading to that an amino acid is represented by more than one codon is called:

1: Transcription

2: Degeneracy

3: Mutation

4: Frameshift

31-: Normal role of Micro RNA is

1: Gene Regulation

2: RNA splicing

3: Initiation of translation

4: DNA conformational change

32-: Which of the following is porphyrines gives stools their characteristics brown color?

1: Biliverdin

2: Urobilinogen

3: Heme

4: Stercobilin

33-: Which of the following is not used as vector in genetics?

1: Adeno virus

2: Proteosome

3: Liposome

4: Retrovirus

34-: Components of 60 S subunit of ribosome are

1: 5.8 S

2: 23 S

3: 16 S

4: 18 S

35-: Methods of fusing two cells in genetic recombination technique include all of the following techniques, except

1: Fusion mediated by Ethylene Glycol

2: Fusion mediated by by Electric current

3: Fusion mediated by viral transformation

4: Fusion Mediated by altering membrane viscocity

36-: Study of multiplication of proteins in disease process is called

1: Proteomics

2: Genomics

3: Glycomics

4: Nucleomics

37-: External manifestation of genome is -

1: Genotype

2: Phenotype

3: Allele

4: Polymorphism

38-: Larger DNA segments can be cloned in

1: Plasmids

2: Bacteriophage

3: Cosmids

4: Bacterial Aificial Chromosomes

39-: Urea is synthesized in all except

1: Liver

2: Kidney

3: Brain

4: Spleen

40-: Choose the true statement about mit DNA:

1: Few mutation compared to nuclear DNA

2: It has 3x109 base pairs

3: It receives 23 chromosomes from each parent

4: It codes for less than 20% of the proteins involved in respiratory chain

41-: True about DNA reconstruction technology

1: Restriction endonucleases are involved

2: DNA ligase is used

3: Acid phosphatase is used

4: Reverse transcriptase needed

42-: Reverse transcription involves

1: RNA dependent DNA synthesis

2: DNA dependent RNA synthesis

3: DNA dependent DNA synthesis

4: RNA dependent RNA synthesis

43-: A person was diagnosed with Gout. You will suggest the patient to avoid which of the following food product in his diet ?

1: Whisky & Beer

2: Spinach & Mushrooms

3: Meat & Fish

4: All

44-: Function of endonucleases:-

1: Cut DNA at specific DNA sequences

2: Enhancers

3: To find out antibiotic resistances

4: To point out the coding regions

45-: Function of UGA codon -

1: Initiates transcription

2: Translates

3: Terminates protein synthesis

4: None

46-: Gene duplication plays an impoant role in the evolution of

1: mRNA

2: rRNA

3: tRNA

4: hnRNA

47-: During post transcriptional modification of RNA the following process does not take place:

1: Splicing

2: 5'capping

3: 3'polyadenylation

4: Glycosylation

48-: DNA is selected for genetic information compared to RNA because

1: It is stable

2: Double stranted compared to RNA

3: Two strands are complementary

4: I has genes

49-: Which of the following is not involved in synthesis of pyrimidines?

1: Glutamine

2: CO2

3: Aspaic acid

4: Glycine

50-: All of the following are used in a PCR reaction, EXCEPT

1: Buffer

2: ddNTPs

3: Oligonucleotide Primer pair

4: Template DNA

51-: Western Blot detects

1: DNA

2: RNA

3: Protein

4: mRNA

52-: Modified nucleotide is seen in

1: tRNA

2: rRNA

3: hnRNA

4: mRNA

53-: Action of topoisomerase III -

1: Remove positive supercoil

2: Remove negative supercoil

3: Form negative supercoid

4: Single strand break

54-: Leucine zipper complex is

1: B cell epitomes

2: Receptor ligand protein

3: DNA binding protein

4: Membrane attack complex

55-: Splicing activity is a function of

1: mRNA

2: snRNA

3: rRNA

4: tRNA

56-: Which of the following is not an enzyme of Urea biosynthesis?

1: Carbomoyl phosphate synthetase II

2: Ornithine transcarbamylase

3: Argininosuccinase

4: Arginase

57-: DNA foot printing is used to detect

1: Single nucleotide polymorphisms

2: Variable number of tandem repeats

3: Parent of origin of the child

4: DNA-protein interaction

58-: Stop codons are

1: UAA

2: UAG

3: UGA

4: UAC

59-: False about Turner's syndrome are all except:

1: Long stature

2: Normal gonads

3: Normal intelligence

4: Normal breast

60-: Type of mutation seen in sickle cell anaemia:

1: Insertion

2: Deletion

3: Point mutation

4: Frameshift mutations

61-: Formation of Okazaki fragments occur in

1: Transcription

2: Translation

3: Transduction

4: Replication

62-: Complementary RNA sequence of 5&; AGTCTGACT3&;

1: 5' UCAGACUGA 3'

2: 5' UCAGACUGA 3'

3: 5' UCAGACUGA 3'

4: 5' UCAGACUGA 3'

63-: Patients with mutations leading to defective beta-oxidation of fatty acid usually have hypoglycemia because of

1: Less ATP for gluconeogenesis

2: Less acetyl CoA for glucose formation

3: Increased fatty acids decrease glucose utilization

4: Fatty acids inhibit transpo of glucose for metabolism

64-: All are examples of point mutation, except -

1: Silent mutation

2: Frame-shift mutation

3: Missense mutation

4: Nonsense mutation

65-: Which of the following trinucleotide repeat disorder and the repeat is wrongly paired?

1: Kennedy disease - CAG

2: Friedreich's Ataxia - CGG

3: Myotonic dystrophy - CTG

4: Huntington's chorea - CAG

66-: Which of the following gene is constitutively expressed in E.coli?

1: Lac A

2: Lac I

3: Lac Y

4: Lac Z

67-: All of the following are features of Genetic Code except

1: Degenerate

2: Unambiguous

3: Overlapping

4: Universal

68-: Telomerases are:

1: DNA dependent DNA polymerase

2: RNA dependent DNA polymerase

3: DNA dependent RNA polymerase

4: RNA dependent RNA polymerase

69-: Human Mitochondrial Genome encodes:

1: 37 genes

2: 47 genes

3: 57 genes

4: 67 genes

70-: The following are "stop codons" EXCEPT

1: UGA

2: UAU

3: UAA

4: UAG

71-: Which base is not found in DNA:

1: Adenine

2: Guanine

3: Cytosine

4: Uracil

72-: Nucleosome core protein is made up of -

1: DNA

2: RNA

3: Histones

4: None

73-: Primase activity is present in

1: DNA polymerase II

2: DNA polymerase a

3: DNA polymerase b

4: DNA polymerase d

74-: New DNA synthesis occurs in

1: Prophase

2: Anaphase

3: Telophase

4: Interphase

75-: Nitrogen atoms in purines are derived from all except

1: Aspaate

2: Glutamine

3: THF

4: Glycine

76-: Function of mitochondrial DNA -

1: Encodes proteins of cell membrane

2: Encodes proteins of respiratory chain

3: Helps in cell replication

4: Formation of rRNA

77-: Rate limiting step in urea cycle is

1: Arginase

2: Arginosuccinase

3: Carbomyl-phosphate synthase

4: Ornithine transcarbamylase

78-: In which of the following phase, DNA doubling occurs ?

1: G1 phase

2: S phase

3: G2 phase

4: M phase

79-: Adenine in DNA binds with -

1: Thymine

2: Guanine

3: Cytosine

4: Uracil

80-: Number of structural genes in Lac operon is

1: 3

2: 4

3: 5

4: 6

81-: Which of the following is not an epigenetic change?

1: Acetylation of histone

2: Methylation of DNA

3: Methylation of histone

4: Point mutation

82-: What is the approximate size of miRNA molecules produced by Dicer nuclease?

1: 11 bp

2: 22 bp

3: 56 bp

4: 75 bp

83-: The first human protein produced by rDNA technology:

1: Insulin

2: Growth hormone

3: Albumin

4: Casein

84-: Unfolded proteins are handled by?

1: Chaperones

2: Histones

3: Proteases

4: Proteosomes

85-: The proteins presents in Deoxyribonucleic acid is

1: Protamines

2: Histone

3: Albumins

4: Globulins

86-: Restriction endonuclease cleaves

1: Double stranded DNA

2: Single stranded DNA

3: Single stranded RNA

4: Polypeptide

87-: Which statements are true about E.coli chromosomal DNA in relation with eukaryotic chromosomal DNA?

1: Circular

2: Packed into nucleolus

3: Positively supercoiled

4: Negatively sepercoiled

88-: The relationship between sulphonamide and PABA is

1: Metabolic antagonism

2: Synergism

3: Intermediate compound formation

4: Chelation

89-: Nitrogen atoms in purines are derived from all except-

1: Aspaate

2: Glutamine

3: Glutamate

4: Glycine

90-: tRNA molecules vary in length from

1: 10-24 nucleotides

2: 24-46 nucleotides

3: 74-95 nucleotides

4: 96-120 nucleotides

91-: Genes with purely or predominantly matrilineal inheritance without recombination are present in:

1: X chromosome

2: Y chromosome

3: Mitochondrial chromosome

4: All of the above

92-: If a 4 nucleotides sequence code for an amino acid instead of 3, then theoretically how many unique amino acids could be coded by such a system?

1: 16

2: 64

3: 128

4: 256

93-: All of the following abbretions are true except

1: AMP - Adenosine monophosphate

2: CMP - Cutidine monophosphate

3: GMP - Guanosine monophosphate

4: TMP - Thymine monophosphate

94-: Unwinding of DNA is done by

1: DNA polymerase

2: DNA primase

3: Helicase

4: DNA ligase

95-: Test for RNA:-

1: Nohern blot

2: Southern blot

3: Immuno blot

4: South-Western blot

96-: By which method foreign DNA is introduced into a cell by a virus or viral vector?

1: Transduction

2: Transcription

3: Lysogenic conversion

4: Transformation

97-: Sta codon is:

1: UAA

2: UAG

3: UGA

4: AUG

98-: Gout is a metabolic disorder of

1: Purine

2: Pyramidine

3: Glycogen

4: Fatty acid oxidation

99-: Nohern blotting is used for analysis of

1: DNA

2: RNA

3: Proteins

4: Polysaccharides

100-: Real-time PCR is used for:

1: DNA detection only

2: RNA detection only

3: Protein detection only

4: For monitoring the amplification of target DNA

101-: A mutation in the codon which causes a change in the coded amino acid, is known as:

1: Mitogenesis

2: Somatic mutation

3: Mis-sense mutation

4: Recombination

102-: Enzyme replacement therapy is available for -

1: Gauchers disease

2: Galactosemia

3: Fructosuria

4: None

103-: mRNA codes for which tail?

1: Poly A

2: Poly U

3: Poly C

4: Poly G

104-: A three and half-year-old male child, who presented with characteristic self-mutilating behavior. He had history of developmental delay, difficulty in social interaction, attention deficit and features of autism. His serum blood biochemistry was normal except for low hemoglobin levels and raised serum uric acid levels. Which of the following enzyme is deficient?

1: Adenosine kinase

2: AP

3: HGP

4: Adenosine deaminase

105-: What is involved in the formation of d-TMP from d-UMP?

1: N5, N10-methylene tetrahydrofolate

2: Form imino folate

3: N5 formyl folate

4: Dihydro folate

106-: Which of the following mechanism is associated with a covalent modification

1: Reversible phosphorylation

2: Acetylation

3: ADP-ribosylation

4: All the above

107-: Southern blot is used for

1: Sequencing DNA

2: Sequencing RNA

3: Detection of antigen

4: Detection of antibody

108-: Barr body is not present in female having- (PGMEE 2012-13)

1: 46 XX genome

2: 45 XO genome

3: 47 XXX

4: All of the above

109-: All of the following cell types contain the enzyme telemerase which protects the length of telomeres at the end of chromosomes, except

1: Germinal

2: Somatic

3: Hemopoietic

4: Tumor

110-: Which of the following is not a point mutation-

1: Silent mutation

2: Nonsense mutation

3: Frame shift mutation

4: Mis-sense mutation

111-: DNase hypersensitive regions are

1: Methylated DNA

2: Heterochromatin region

3: Transcriptionally active chromatin

4: RNA bound DNA region

112-: RELP, True are

1: Endonuclease cuts DNA at nucleotide level

2: It acts at specific site

3: Only cohesive ends are produced

4: Only blunt ends are produced

113-: THEME AND FOCUS: METABOLISM OF NUCLEOTIDES Case Study: A 17- month- old girl suffered from recurring respiratory infections. Injection of Diphtheria-Peussis-Tetanus (DPT) and Typhoid vaccine produced only a minimal response. The lysate of girl's erythrocytes were found to lack detectable adenosine deaminase activity. Her mother and father both showed approximately 50% of the normal red cell adenosine deaminase activity. Lead Question: Diagnose the disease.

1: SCID

2: Crushing Muscular Trauma

3: Lesch -Nyhan Syndrome

4: Hypokalemia

114-: A nucleoside consists of:

1: Nitrogenous base

2: Purine or pyrimidine base + sugar

3: Purine or pyrimidine base + phosphorous

4: Purine + pyrimidine base + sugar + phosphorous

115-: Molecular interaction, found in the structure of DNA-

1: Hydrogen bond

2: Glycosidic bond

3: Covalent interactions

4: All of the above

116-: 43S preinitiation complex include all except:

1: IF3

2: IF1A

3: IF2

4: IF-4F

117-: Effect of ultraviolet radiation on DNA is formation of

1: Purine dimers

2: Pyrimidine dimers

3: DNA-DNA cros linking

4: All of the above

118-: Peptidyl transfer is a/an

1: Termination factor

2: Elongation factor

3: Ribozyme

4: None

119-: DNA Polymerase requires which biomolecule for its activity?

1: Thioredoxin

2: DNA Template

3: dUTP

4: Glutathione

120-: What strategy in transcription factor research allows for the simultaneous identification of all of the genomic sites bound by a given transcription factor under a given set of physiological conditions?

1: Fluorescence Energy Transfer (FRET)

2: DNAse I sensitivity

3: Chromatin immuno precipitation-sequencing (ChIP-seq)

4: FISH

121-: Which is non-sense codon -

1: UGG

2: AUG

3: UGA

4: CCA

122-: The enzyme used in polymerase chain reaction (PCR) is:

1: Taq polymerase

2: RNA polymerase

3: Ribonuclease

4: Endonuclease

123-: The following is an example for unusual base

1: Di hydro uracil

2: Adenine

3: Cytosine

4: Uracil

124-: Which of the following is not true about eukaryotic DNA ligase?

1: Catalyses the formation of phosphodiester bond

2: NAD+ is energy source

3: ATP is the energy source

4: Can act only on dsDNA

125-: Uronic acid level in urine is elevated in

1: Nieman Pick's disease

2: Mucopolysacchridosis

3: Tyrosinosis

4: Maple syrup urine disease

126-: True about sickle cell disease are all, except

1: Single nucleotide change results in change of Glutamine to Valine

2: Sticky patch is generated as a result of replacement of a non polar residue with a polar residue

3: Hbs confers resistance against malaria in heterozygotes

4: RFLP results from a single base change

127-: Which one of the following observations would rule out a sex- linked trait in an extended family pedigree?

1: Males expressing the disease

2: Females expressing the disease

3: Female-to-male transmission

4: Male-to-male transmission

128-: SYBR Green Dye is used for:

1: HPLC

2: Immuno-fluorescence

3: PCR

4: ELISA

129-: Molecular scissors refers to:

1: DNA Polymerase

2: Restriction Endonuclease

3: Primase

4: Helicase

130-: The proteins present in Deoxyribonucleic acid is

1: Protamines

2: Histone

3: Albumins

4: Globulins

131-: All of the following are require in protein synthesis except

1: el F-1

2: mRNA

3: Mg +2

4: Ca +2

132-: A segment of a eukaryotic gene that is not represented in the mature mRNA, known as

1: Intron

2: Exon

3: Plasmid

4: TATA box

133-: Nucleotide includes

1: Base + sugar

2: Base + phosphate group

3: Base + sugar + phosphate group

4: None

134-: Histone in nucleosome core are all except

1: H2A

2: H2B

3: H3

4: H1

135-: Inheritance of Beckers muscular dystrophy is?

1: X linked recessive

2: X linked dominant

3: Autosomal dominant

4: Autosomal recessive

136-: In karyotyping chromosomes are visualized through light microscope with resolution of

1: 5 Kb

2: 500 Kb

3: 5 Mb

4: 50 Mb

137-: UV light damage to the DNA leads to:

1: Formation of pyrimidine dimers

2: No damage to DNA

3: DNA hydrolysis

4: Double stranded breaks

138-: Most common genentic enzyme defect in urea cycle is

1: Arginase

2: Arginosuccunate lyase

3: Ornithine transcarbomylase

4: Carbomoyl phosphate synthase I

139-: DNA replication occurs in how many phases

1: Two

2: Three

3: Four

4: Five

140-: Codon does not contain which nucleic acid?

1: Adenine

2: Guanine

3: Uridine

4: Thymdine

141-: Which of the following is the disorder of purine?

1: Hyperammonemia

2: Gout

3: Orotic acduria

4: Hanop disease

142-: Salvage pathway of purine nucleotide synthesis are used by all EXCEPT:

1: Leukocytes

2: Liver

3: RBC

4: Brain

143-: Complimentary sequence of 5' GCACC 3'

1: 5' CCACG3'

2: 5' CGTGG 3'

3: 3' GGTGC 5'

4: 5'GGTGC 3'

144-: Deamination of 'methylated cytosine' will produce:

1: Thymine

2: Adenine

3: Xanthine

4: Guanine

145-: An 8-year-old boy has failure to thrive, alopecia totalis, localized scleroderma, a small face and jaw, a "beak" nose, wrinkled skin, and stiff joints. He is determined to have a single-point mutation in a nuclear protein, which is a silent mutation in terms of the primary structure of the protein. How could such a mutation lead to a disease?

1: Through altering the tertiary structure of the protein

2: Inhibiting DNA replication

3: By introducing a premature stop codon into the protein

4: By creating an alternative splice site in the gene

146-: A 20-year-old female presents for an infertility workup. She has never had a menstrual period. She is short with a broad chest, webbed neck, and low-set ears. It is demonstrated that she has an abnormal karyotype.The cause of the woman's abnormal karyotype is which one of the following?

1: Maternal nondisjunction

2: Paternal nondisjunction

3: Both maternal and paternal nondisjunction

4: Either maternal or paternal nondisjunction

147-: The enzyme responsible for unwinding of DNA is

1: DNA Ligase

2: Helicase

3: DNA primase

4: Topoisomerases

148-: Which of the following enzymes in DNA dependent RNA polymerase?

1: DNA ligase

2: Primase

3: DNA polymerase III

4: RNA transcriptase

149-: Which of the following can be used as vector for Gene therapy

1: Viruses

2: Liposomes

3: Plasmids

4: All of these

150-: Okazaki fragments are formed during the synthesis of

1: ds DNA

2: ss DNA

3: m RNA

4: t RNA

151-: Oncogenes can be best studied by

1: Transfection

2: Transduction

3: Transformation

4: Conjugation

152-: Okazaki fragments are joined to form continuous strands of DNA by which of the following enzyme?

1: Helicase

2: Topoisomerase

3: DNA Ligase

4: DNA primase

153-: Northern blot is for:

1: DNA

2: RNA

3: Protein

4: DNA protein interaction

154-: The primary role of chaperones is to help in:

1: Protein synthesis.

2: Protein degradation

3: Protein denaturation

4: Protein folding.

155-: Which of the following method of protein separation is not dependent on molecular size?

1: Gel filtration chromatography

2: Ultracentrifugation

3: Ion-exchange chromatography

4: SDS-PAGE

156-: A pa from proteins which of the following exhibits the cataytic activity?

1: Phospholipids

2: DNA

3: RNA

4: Heteropolysacharides

157-: Proteins in nucleosome are made up of -

1: Histidine

2: Asparagine

3: Aspartate

4: Glutamate

158-: A 38-year-old homeless man who has not received any medical care in the last 20 years presents with 2 days of shortness of breath, chills, fever, drooling, painful swallowing, and a "croupy" cough. A physical examination reveals a bluish discoloration of his skin and a tough, gray membrane adhered to his pharynx. The underlying mechanism through which this disease affects normal cells is which one of the following?

1: DNA synthesis is inhibited in the target cells.

2: RNA synthesis is inhibited in the target cells.

3: The process of protein synthesis is inhibited in the target cells.

4: The plasma membrane becomes leaky in the target cells.

159-: "Transition mutation" occurs in

1: A - G

2: A - C

3: A - T

4: D - G

160-: CAP in Lac operon is an example of

1: Positive regulator

2: Negative regulator

3: Constitutive expression

4: Attenuation

161-: Same amino acid is coded by multiple codons due to:(AIIMS May 2012, Nov 2011)

1: Degeneracy

2: Frame-shift mutation

3: Transcription

4: Mutation

162-: Which of the following is a Nonsense codon :

1: UAG

2: AUG

3: AGG

4: UUA

163-: Degeneracy of codon is related to

1: Transcription

2: Translation

3: Post-translation modification

4: None

164-: An 8 year-old girl in a developing country with significant corneal scarring and multiple cutaneous skin lesions in sun-exposed areas. Neuro-developmental delay had been present since 3 months of age.What is the probable diagnosis which is due to defective nucleotide excision repair?

1: Werner syndrome (WS)

2: Xeroderma pigmentosum (XP)

3: Rothmund-Thomson syndrome

4: Bloom syndrome (BS)

165-: Rapid method of chromosome identification in intersex is

1: FISH

2: PCR

3: SSCP

4: Karyotyping

166-: Reverse transcriptase is:

1: DNA dependent RNA polymerase

2: RNA dependent DNA polymerase

3: DNA dependent DNA polymerase

4: RNA dependent RNA polymerase

167-: RNA with Enzymatic activity is

1: Peptidase

2: Peptidyl transferase

3: Cytidine deaminase

4: Aminoacyl tRNASynthetase

168-: Which of the following statement is wrong?

1: Mutations within the exon can be detrimental and mutation in introns will not change the protein

2: Mutation of the TATA box markedly reduces the transcription

3: Change of purine by a pyrimidine is known as transition

4: Silent mutation does not lead to change in amino acid

169-: Nitric acid in synthesized from

1: L-arginine

2: L-citrulline

3: Lysine

4: Trptophan

170-: Presence of which of the following in the expression of vector ensures increase in the yield of recombinant protein produced?

1: Inducible promoter

2: Gene coding for protease inhibitor

3: Translation initiation signals

4: Transcription and Translation termination signals

171-: What is the bond between the strands in the given diagram?

1: Hydrogen bond

2: Phosphodiester bond

3: Covalent bond

4: Glycosidic bond

172-: The type mutation that leads to replacement of valine for glutamate in sickle cell disease is?

1: Point mutation

2: Silent mutation

3: Nonsense mutation

4: None

173-: Orotic aciduria is due to deficiency of

1: Decarboxylase

2: Tyrosinase

3: Isomerase

4: Homogentisate oxidase

174-: Which of the following blotting technique does not exist:

1: Western

2: Southern

3: Eastern

4: Northern

175-: Lesch Nyhan syndrome is caused by:

1: HPRT complete deficiency

2: HPRT Partial deficiency

3: Purine nucleoside phosphorylase deficiency

4: PRP synthetase deficiency

176-: Termination of the synthesis of the RNA molecule is signaled by a sequence in the template strand of the DNA molecule, a signal that is recognized by a termination protein, the

1: s factor

2: d factor

3: e factor

4: Rho (r) factor

177-: Which one of the following statements about chromatin is not true?

1: DNA winds approximately 1.75 times around the nucleosomes

2: H2A-H2B bind to both the entry and exit ends of DNA in nucleosomes

3: Covalent modification of histones influence chromatin compaction

4: Non-histone proteins are pa of mitotic chromosomes

178-: PCR is used in:

1: Medicolegal cases

2: Amplification of gene

3: Identification of organism

4: All of the above

179-: End product of purine metabolism in non-primate mammals is

1: Uric acid

2: Ammonia

3: Urea

4: Allantoin

180-: Lac operon is:

1: Repressor

2: Inducer

3: Operator

4: Activator

181-: DNA synthesis occurs during which phase of cell cycle

1: G 1phase

2: M phase

3: S phase

4: G2 phase

182-: What is the percentage of coding DNA in genome?

1: 0.50%

2: 1%

3: 1.50%

4: 2%

183-: DNA from RNA is synthesized by-

1: Topoisomerase

2: Helicase

3: Reverse transcriptase

4: DNA dependent DNA polymeraze

184-: Microsatellite sequence is

1: Small satellite

2: Extra chromosomal DNA

3: Sho sequence (2-5) repeat DNA

4: Looped-DNA

185-: True about gene library

1: Also known as chromosome

2: Library that contains books on gene

3: Computer base with all gene knowledge

4: DNA nucleotide or fragment

186-: Which of the following is true about DNA Polymerase III?

1: It forms Okazaki fragments and it needs RNA primer

2: It is needed for translation

3: Bacteria can function without it

4: Has DNA repair function

187-: True about mitochondrial DNA

1: UGA codes for arginine

2: Codes for 13 protein

3: High content of untranslated sequence

4: Circular double stranded DNA

188-: In conversion of DNA to RNA, enzyme required

1: DNA - Polymerase

2: DNA Ligase

3: DNA - Polymerase

4: RNA polymerase

189-: DNA supercoiling is done by

1: DNA polymerase I

2: DNA polymerase II

3: DNA polymerase III

4: DNA topoisomerase

190-: Which of the following is a ribozyme?

1: Peptidyl transferase

2: Elongation factor 2

3: Primase

4: RNA polymerase

191-: Which of the following base is usually not present in DNA?

1: Adenine

2: Guanine

3: Cytosine

4: Uracil

192-: A codon consists of:

1: One molecule of aminoacyl-tRNA

2: Two complementary base pairs

3: Three consecutive nucleotide units

4: Four individual nucleotides

193-: All the following are mitochondrial disorders EXCEPT :

1: MELAS

2: Kearns Sayre syndrome

3: NARP syndrome

4: Incontinentia pigmenti

194-: Anticodon region is an important part of the structure of:

1: r-RNA

2: t-RNA

3: m-RNA

4: z-DNA

195-: Total numbers of codons are

1: 60

2: 61

3: 62

4: 64

196-: Mitochondrial DNA is

1: Closed circular

2: Nicked circular

3: Linear

4: Open circular

197-: Assume 4 nucleotides code for an amino acid. What is the number of amino acids coded possible?

1: 4

2: 16

3: 24

4: 256

198-: Sickle cell anemia is the clinical manifestation of homozygous genes for an abnormal hemoglobin molecule. The event responsible for the mutation in the B chain is:

1: Insertion

2: Deletion

3: Nondisjunction

4: Point mutation

199-: The protein responsible for packing of DNA in chromosomes is -

1: Histone

2: Histamine

3: Histidine

4: Cyclin

200-: Operon model was elucidated by

1: Jacob & Monad

2: Waston & Crick

3: Leiderburg & Tautum

4: Two D Herell

201-: A thin, emaciated 25-year-old male presents with purple plaques and nodules on his face and arms, coughing, and shortness of breath. In order to diagnose the cause of his problems most efficiently, you would order which one of the following types of tests?

1: Southern blot

2: Northern blot

3: Western blot

4: Sanger technique

202-: The purines salvage pathway is for:

1: Hypoxanthine & Xanthine

2: Hypoxanthine & Thymine

3: Adenine & Guanine

4: Xanthine & Guanine

203-: The process used to prevent the recircularization of the stick ends of DNA is:

1: Homopolymer tailing

2: Ligation by restriction endonucleases

3: Transfection

4: All of the above

204-: Which form of DNA is predominantly seen in our body?

1: A

2: C

3: B

4: Z

205-: Housekeeping genes are:

1: Inducible

2: Required only when inducer is present

3: Mutant

4: Not regulated

206-: Pyrimidine dimers are formed due to

1: X-rays

2: TS-rays

3: UV rays

4: Infra-red rays

207-: DNA Amplification is done in

1: PCR

2: NASBA (Nucleic acid sequential based amplification)

3: Ligase chain reactions

4: DNA sequencing

208-: ATP (Energy currency) has :

1: Ribose

2: Deoxyribose

3: Both

4: Dideoxyribose

209-: C4, C5, N7 in purine ring are derived from -

1: Asparate

2: Glutamine

3: Glycine

4: CO2

210-: Intracellular receptors are present for -

1: Estrogen

2: Vitamin D

3: Thyroxine

4: All of the above

211-: Mutations that completely disrupt the function of the gene used in which of the following technique:

1: Non-sense mutation

2: Restriction fragment length polymorphism

3: Targeted gene disruption

4: Knock-in

212-: Which of the following bond is preserved during denaturation of proteins?

1: Hydrogen bond

2: Peptide bond

3: Ionic bond

4: All of the above

213-: RNA polymerase does not require

1: Divalent metal ions

2: Primer

3: Template

4: Activated precursors

214-: Following are required for PCR except:

1: Deoxyribonucleotides

2: Taq polymerase

3: Dideoxy ribonucleotides

4: Template DNA

215-: Sickle cell anemia is the clinical manifestation of homozygous gene to an abnormal haemoglobin molecule. The event responsible for the mutation in the b chain is:

1: Insertion

2: Deletion

3: Nondisjunction

4: Point mutation

216-: tRNA combines with

1: DNA

2: mRNA

3: miRNA

4: siRNA

217-: Catabolite Activator protein in Lac operon is a -

1: Positive regulator

2: Promoter

3: Repressor

4: Negative regulator

218-: Transposons are

1: Jumping genes

2: Cosmid

3: Episome

4: None

219-: Codons are present in

1: t-RNA

2: r-RNA

3: m-RNA

4: si-RNA

220-: DNA synthesis occurs in phase

1: G1

2: G2

3: S

4: M

221-: A college professor, celebrating his 60th birthday, had too much foie gras and wine at his celebratory dinner. The next morning, he awakened with both a hangover and a severe pain in his right great toe, a condition he had experienced a number of times previously. Being somewhat absentminded, the professor then remembered that he had forgotten to take his maintenance medication for this condition for over 2 weeks. His maintenance medication most likely blocks which one of the following reactions?

1: IMP to GMP

2: Adenosine to inosine

3: Hypoxanthine to xanthine

4: dUMP to dTMP

222-: Codons are present on:

1: mRNA

2: DNA

3: tRNA

4: Ribosomal RNA

223-: Poly 'A' tail attached at 31 end of mRNA helps in-

1: Unwinding of mRNA

2: Stabilization of mRNA

3: Polymerization of mRNA

4: Transcription of mRNA

224-: Urea is produced by the enzyme

1: Uricase

2: Urease

3: Glutaminase

4: Arginase

225-: Maximum number of unusual base pairs are seen in

1: rRNA

2: tRNA

3: mRNA

4: snRNA

226-: Where does Chaperones assist in?

1: Protein Cleavage

2: Protein Folding

3: Protein Degradation

4: Protein Modification

227-: Histone proteins are rich in which of the following amino acids?

1: Histidine and lysine

2: Lysine and Arginine

3: Arginine and Histidine

4: Histidine and Valine

228-: True about polymerase chain reaction

1: Carried out by thermostable DNA polymerase

2: Exponential

3: Additive

4: Specific

229-: Which of the following functionally competent of largest unit of the ribosomes?

1: tRNA

2: mRNA

3: Catalyze formation of the peptides

4: Formation of the polyribosomes

230-: Enzyme which prevents aging/senscence is -

1: Telomerase

2: DNA polymerase

3: Catalase

4: Peroxidase

231-: Frame shift mutation causes -

1: Transversion

2: Transition

3: Termination of protein synthesis

4: Alteration of whole reading sequence

232-: Which of the following groups of proteins assist in the folding of other proteins?

1: Proteases

2: Proteosomes

3: Templates

4: Chaperones

233-: True about genetic code

1: AUA codes for methionine in mitochondria

2: UGA codes for selenocysteine

3: AUG codes for initiator codon in mammalian cell

4: AGA & AGG act as chain terminator in mammalian

234-: Which of the following is used for sequencing a long DNA fragment :

1: Sanger's technique

2: Chain termination method

3: Chromosome Walking

4: RFLP

235-: In DNA, Cytosine is passed with

1: Thymine

2: Guanine

3: Ademine

4: Uracil

236-: Ribosomes have following enzymatic activity

1: Peptidyl transferase

2: Peptidase

3: Carboxylase

4: Dehydratase

237-: Purine and pyramidine both get N from:

1: Aspartate

2: Glutamate

3: c)Carbamoyl phosphate

4: CO2

238-: Frameshift mutation doesn&;t occur in multiples of

1: 2

2: 3

3: 4

4: 5

239-: At the physiological pH the DNA molecules are

1: Positively charged

2: Negatively charged

3: Neutral

4: Amphipathic

240-: RNA is present in

1: Cytoplasm

2: Nucleus

3: Ribosome

4: All of the above

241-: In a sample of dsDNA, the molar ratio of Adenosine is 20%. From this information, tell the content of Cytosine?

1: 10

2: 20

3: 30

4: 40

242-: Retinoblastoma can result from a mutation in:

1: Ras proto-oncogene

2: ErbB proto-oncogene

3: p 53 gene

4: RB 1 gene

243-: True about RIBOZYME: (AIIMS November 2013, November 20/3)

1: Peptidyl transferase activity

2: Cut DNA at specific site

3: Participate in DNA synthesis

4: GTPase activity

244-: RNA makes DNA by the use of which enzyme?

1: Reverse Transcriptase

2: DNA Polymerase Synthase

3: RNA Polymerase synthase

4: DNA Topoisomerase

245-: All of the following are true about the structure of bases found in nucleotides, EXCEPT

1: Purine ring is nine-membered

2: Pyrimidine ring is six-membered

3: Purine and pyrimidine rings are heterocyclic in nature

4: Imino and lactim form of purine bases are more stable

246-: In humans, the genetic code is represented by code of three nucleotides. If one amino acid is coded by more than one triplet, then this is known as:(AIIMS May 2012, Nov 2011)

1: Degeneracy

2: Frame-shift mutation

3: Ambiguity

4: Mutation

247-: FISH is used for which of the following?

1: Gene mapping

2: Study of 3D chromosome organization in interphase nuclei

3: Monitoring the success of bone marrow transplantation

4: All the above

248-: Gene amplification is by

1: Polymerase Chain Reaction

2: Ligase chain reaction

3: DNA hybridization

4: In situ hybridization

249-: Not a nucleic acid test

1: Western blot

2: Southern blot

3: Nohern blot

4: Microarray

250-: Enzyme which prevents aging/senescence is:

1: DNA Polymerase

2: Catalase

3: Telomerase

4: Peroxidase

251-: Which of the following method is used for the analysis of the C-terminal end of a polypeptide?

1: Sanger's method

2: Edman's degradation method

3: Akabori method

4: None of the above

252-: Which of the following usually require a RNA intermediate for cloning/replication?

1: Transposons

2: Plasmids

3: Phages

4: Cosmids

253-: About DNA, true is:

1: Two strands are held together by peptide bonds

2: Non-covalent bonds in sugar-phosphate backbone

3: Most common DNA is Z- DNA

4: Melting point of DNA is closely related to cytosine guanine content of DNA

254-: Defect Xeroderma pigmentosum includes

1: Mismatch repair

2: Base excision repair

3: Nucleotide excision repair

4: All of the above

255-: A 35-year-old nonsmoking male has been diagnosed with emphysema. His father died of emphysema at age 30, but he smoked. His father also had cirrhosis and recurrent pancreatitis but did not drink alcohol. Which one of the following inheritance patterns typifies this disease process?

1: Autosomal dominant

2: Incomplete dominance

3: Codominant

4: Autosomal recessive

256-: Codon does not have

1: Thymine

2: Adenine

3: Gunanine

4: Uracil

257-: Apa from occurring in nucleic acids, pyrimidines are also found in

1: Theophylline

2: Theobromine

3: Flavin mononucleotide

4: Thiamine

258-: Modified nucleotide is seen in-

1: rRNA

2: mRNA

3: tRNA

4: snRNA

259-: Which is the only prokaryotic DNA polymerase with 5'-3' exonuclease activity?

1: DNA Polymerase I

2: DNA Polymerase II

3: DNA Polymerase III

4: DNA Polymerase IV

260-: For RNA, which blotting technique is used

1: Western blot

2: Nohern blot

3: Southern blot

4: None

261-: Following is an example of unusual base:

1: Dihydrouracil

2: Adenine

3: Guanine

4: Uracil

262-: About peptidyl transferase true is:

1: Used in elongation and cause attachment of peptide chain to A-site of tRNA

2: Used in elongation and cause attachment peptide chain to P site

3: Used in initiation and cause 43S complex formation

4: Used in initiation and cause 48S complex formation

263-: For karyotyping, the dividing cells are arrested by the addition of colchicines in the following mitotic phase:

1: Telophase

2: Metaphase

3: Anaphase

4: Prophase

264-: Type of bond seen between the phosphate group and 5' carbon of ribose sugar within a nucleotide is:

1: Phosphodiester bond

2: Ester bond

3: Beta N- glycosidic bond

4: Acid anhydride bond

265-: Best radiolabelled marker for DNA replication is

1: Ribose

2: Thymidine

3: Phosphate

4: Uracil

266-: Which is the most processsive DNA polymerase?

1: DNA Polymerase I

2: DNA Polymerase II

3: DNA Polymerase III

4: None

267-: If both parents have sickle cell anemia, then the likelihood of children (offsprings) having the disease is-

1: 10%

2: 25%

3: 50%

4: 100%

268-: Telomerase is

1: DNA dependent RNA polymerase

2: RNA dependent DNA polymerase

3: RNA dependent RNA polymerase

4: DNA dependent DNA polymerase

269-: Cation used in PCR is

1: Calcium

2: Lithium

3: Magnesium

4: Sodium

270-: Which of the following enzymes is used in Recombinant DNA research for Homopolymer tailing?

1: Reverse transcriptase

2: S1 Transferase

3: Polynucleotide kinase

4: Terminal transferase.

271-: DNA synthesis occurs in phase-

1: G1

2: G2

3: S

4: M

272-: Introns are exised by:

1: RNA splicing

2: RNA editing

3: Restriction endonuclease

4: DNAase

273-: Purine nucleotide synthesis is done from

1: Serine

2: Glycine

3: Alanine

4: Asparagine

274-: All the following are salient features of genetic code, EXCEPT

1: Degeneracy

2: Unambiguous

3: Punctuated

4: Non overlapping

275-: A mutation in the codon which causes a change in the coded amino acid, is known as:-

1: Mitogenesis

2: Somatic mutation

3: Missense mutation

4: Recombination

276-: All of the following are true regarding acute gouty ahritis, EXCEPT:

1: Allopurinol is effective to treat the acute attack

2: MSU crystals are needle shaped and negatively birefringent

3: Serum uric acid levels can be normal or low at the time of an acute attack

4: Tophi are made up of monosodium urate crystals (MSU)

277-: PCR is primarily a

1: DNA degradation technique

2: DNA amplification technique

3: DNA sequencing technique

4: All of these

278-: Disorder shown in the Illustration is related to:

1: Mismatch repair

2: Base excision repair

3: Nucleotide excision repair

4: SOS repair

279-: Nonsense or genetic codons are what in number?

1: 2

2: 3

3: 4

4: 5

280-: Carbamoyl phosphate synthase I is used in

1: Purine synthesis

2: Pyrimidine synthesis

3: Urea cycle

4: Uronic acid pathway

281-: Senescent cells are deficient in

1: RNA polymerase

2: DNA polymerase

3: Telomerase

4: Helicase

282-: True about DNA polymeare in eukaryotes

1: Components are a, b, TS, D, E

2: b associated with repair

3: TS associated with repair

4: D associated with synthesis of mitochondrial DNA

283-: True about coding strand of DNA

1: Minus stand

2: Template strand

3: Runs at 3'-5' direction

4: Runs at 5'-3' direction

284-: After digestion by restriction endonucleases, DNA strands can be joined again by

1: DNA polymerase

2: DNA ligase

3: DNA topoisomerase

4: DNA gyrase

285-: Poly (A) tail translates into

1: Polyproline

2: Polylysine

3: Polyalanine

4: Polyglycine

286-: All of the following require 5' capping except?

1: mRNA for Histone

2: siRNA

3: tRNA of Alanine

4: U6 snRNA

287-: Coenzyme for methylmalonyl-CoA isomerase

1: Biotin

2: Cobalamine

3: Thiamine

4: Niacine

288-: The current therapeutic strategy for patients who have been infected with HIV is a multidrug regimen known as highly active antiretroviral therapy (HAA). One type of drug used in this therapy is a nucleoside/ nucleotide analog, such as didanosine. Which of the following best describes the mechanism of action of these drugs

1: They prematurely terminate the DNA synthesized by reverse transcriptase.

2: They prevent the hydrolysis of the viral polyprotein.

3: They directly bind to and inhibit reverse transcriptase.

4: They inhibit the synthesis of viral proteins.

289-: Chromosomal instability syndrome is -

1: Fanconi syndrome

2: Ataxia Telangectasia

3: Bloom syndrome

4: All of the above

290-: Which of the following is an example for facultative heterochromatin?

1: Centromere

2: Telomere

3: Barr body

4: All of the above

291-: Triplex DNA is due to

1: Hoogsteen pairing

2: Palindromic sequences

3: Large no. of guanosine repeats

4: Polypyramidine tracts

292-: In E.coli structural gene of lac operon is stimulated in

1: Presence of glucose only

2: Presence of lactose only

3: Presence of glucose and absence of lactose

4: Presence of lactose and absence of glucose

293-: Termination nucleotide sequence among following is

1: AUG

2: UAA

3: AUA

4: AGG

294-: Functions of UGA codon

1: Initiates transcription

2: Translates

3: Terminates protein synthesis

4: None

295-: The Pentose sugar in nucleic acid is:

1: Ribulose

2: Ribose

3: Xylulose

4: Xylase

296-: Hereditary orotic aciduria Type-I is due to deficiency of

1: Orotate phosphoribosyl transferase

2: Ribonucleotide reductase

3: Dihydroorotase

4: Dihydroorotate dehydrogenase

297-: Using written convention, which one of the following sequences is complementary to TGGCAGCCT?

1: ACCGTCGGA

2: ACCGUCGGA

3: AGGCTGCCA

4: TGGCTCGGA

298-: Synthesis of rRNA place in

1: Cytosol

2: Nucleus

3: Nucleolos

4: Mitochondria

299-: Restriction endonuclease has the following characteristics except;

1: Cut DNA in a sequence specific manner

2: Named according to the bacteria from which they are isolated.

3: Most of the DNA sequences recognized are palindromic

4: Cut DNA randomly

300-: Not present in DNA -

1: Uracil

2: Thymine

3: Cytosine

4: Adenine

301-: The commonest form of DNA variation is:

1: Single nucleotide polymorphism

2: Copy Number Variations (CNVs)

3: Transposons

4: Mutations

302-: R-RNA is mainly produced in

1: Nucleus

2: Nucleolus

3: Ribosome

4: Endoplasmic reticulum

303-: A molecule used to direct the presence of specific fragment of DNA or RNA is known as

1: Primosome

2: Probe

3: Pseudogene

4: Signal

304-: Chian initiation in protein synthesis is by

1: AUG

2: GLA

3: UGA

4: UAG

305-: Polymerase chain reaction is used for -

1: Cloning of DNA in vitro

2: Amplification of DNA in vitro

3: DNQA sequencing

4: Visualization of nucleic acid

306-: Which of the following would form the basis for karyotyping studies in female?

1: Phenotype abnormality

2: Testoterone quantity

3: Barr body

4: Not recalled

307-: The aim of ENCODE project is

1: Sequencing of human genome

2: Metagenome (genome of intestinal flor) analysis

3: To identify the functional elements of human genome

4: Analysis of mitochondrial genome

308-: Which of the following is involved in cleavage of recombinant DNA

1: Helicases

2: Restriction enzyme

3: Ligases

4: All of the above

309-: Transcription is the process of

1: Protein synthesis

2: DNA replication

3: Synthesis of RNA

4: None

310-: TATA box is seen in -

1: Promoter region

2: Palindromic region

3: Enhancerregion

4: Silencer region

311-: Which of the following is used to study protein-protein interaction?

1: Western blot

2: Affinity electrophoresis

3: Thin-layer chromatography

4: None

312-: All are true regarding satellite DNA except :

1: Repeated DNA sequence in tandem

2: Clustered around centromere

3: Clustered around telomeres

4: Transcriptionally active

313-: DNA replication follows which of the following model(s)?

1: Conservative

2: Semiconservative

3: Dispersive

4: All of the above

314-: Defect in Snurps causes -

1: Defect in 5' - capping

2: Defect in addition of poly-A tail

3: Defect in Splicing

4: Defect in terminal addition of nucleotide

315-: Epigenetics is-

1: Alteration in nucleotide sequence

2: Alteration in chromosome number

3: Alteration in gene expression

4: Alteration in chromosome size

316-: Which of the following is necessarily to be present in expression vector but not in cloning vector?

1: Origin of replication

2: Restriction site

3: Selectable marker

4: Ribosomal entry site

317-: In Lac operon, Catabolite gene activator protein (CAP) is responsible for:

1: Positive regulation

2: Negative regulation

3: Constrictive expression

4: Alteration

318-: Which of the following protein is synthesized in free ribosome?

1: Cytosolic proteins

2: Secretery proteins

3: Membrane proteins

4: None

319-: A mutation that results in premature termination of incorporation of amino acid into a peptide chain is a

1: Nonsense mutation

2: Transversion

3: Silent mutation

4: Frameshift mutation

320-: All of the following diseases are due to excessive number of glutamine residues in proteins, EXCEPT

1: Huntington's chorea

2: Spinocerebellar ataxia

3: Myotonic dystrophy

4: Spinobulbar muscular atrophy

321-: Ultraviolet light can damage a DNA strand causing:

1: Two adjacent purine residue to form a covalently bounded dimer

2: Two adjacent pyrimidine residues to form covalently bonded dimer

3: Disruption of phosphodiesterase linkage

4: Disruption of non-covalent linkage

322-: On which of the following tRNA acts specifically?

1: ATP

2: Golgi body

3: Specific amino acid

4: Ribosome

323-: 5&;TTACGTAC-3&; after transcription what will be the RNA

1: 5'-TTACGTAC-3'

2: 3'-TTACGTAC-5'

3: 5'-CATGCATT-3'

4: 5'-GUACGUAA-3'

324-: Excessive ultraviolet (UV) radiation is harmful to life. The damage caused to the biological systems by ultraviolet radiation is by

1: Inhibition of DNA synthesis

2: Formation of thymidine dimers

3: Ionization

4: DNA fragmentation

325-: The common end product of catabolism of all pyrimidines is:

1: Beta alanine

2: Uric acid

3: Urea

4: Xanthine

326-: Which is a reverse transcriptase?

1: Topoisomerase 2

2: Telomerase

3: RNA polymerase 2

4: DNA polymerase alpha

327-: Human genome contains -- base pairs

1: 3xl09

2: 3xl08

3: 3xl07

4: 3xl06

328-: Unwinding of DNA during replication is done by

1: Ligase

2: Helicase

3: Polymerase

4: Prinase

329-: Mutation that completely disrupts the function of the gene used in which of the following techniques?

1: Knock out

2: Non sense mutation

3: Restriction fragment length polymorphism

4: Targetted gene disruption

330-: In urea cycle which defect is an X linked disease

1: Ornithine transcarbamylase

2: Aspaate transcarbamylase

3: Arginase

4: Argininosuccinate synthase

331-: Which of the following is not true regarding nucleic acids

1: mRNA is synthesised from template strand of DNA

2: mRNA is synthesised from non-coding strand of DNA

3: tRNA does not contain thymine as one of the pyrimidine bases

4: Two strands of DNA are anti-parallel in nature

332-: False about eukaryotic protein synthesis is

1: N formyl Met is the first t-RNA to come into action

2: mRNA read from 5' to 3'

3: Ef2 shifts between GDP to GTP

4: Capping helps in attachment of mRNA to 40 S ribosome

333-: Not present in DNA

1: Uracil

2: Thymine

3: Cystosine

4: Adenine

334-: What do restriction endonucleases do?

1: Cut ds DNA at specific sites

2: Cut RNA at specific sites

3: Cut ss DNA at specific sites

4: Break peptide chains

335-: All of the following are true about genomic library, EXCEPT

1: Collection of cloned DNA fragments

2: Screening is done by oligonucleotide probes

3: Only exons are present

4: Vectors are used to carry and replicate the fragments

336-: Proteins seen in chromosomes are called:

1: Nucleotides

2: Histones

3: Apoproteins

4: Glycoproteins

337-: TATA box is seen in

1: Promoter region

2: Palindromic region

3: Enhancer region

4: Silencer region

338-: Defect in SNURPs causes

1: Defect in 5'capping

2: Defect in addition of poly A tail

3: Defect in splicing

4: Defect in terminal addition of nucleotide

339-: Hemoproteins are

1: Cytochrome C

2: Cytochrome 450

3: Myoglobin

4: Hemoglobin

340-: Abnormal base in tRNA is

1: Dihydrouracil

2: Orotic acid

3: Methyl Xanthine

4: Cystine

341-: About DNA which of the following is true:

1: The nucleotide of one strand form bonds with nucleotide of opposite strand.

2: Cytosine and Uracil differ by one ribose sugar

3: The information from DNA is copied in the form of tRNA

4: Each nucleotide pair includes two purines.

342-: The enzyme deficient in Lesch-Nyhan syndrome is

1: Transcarboxylase

2: HGP

3: GT

4: Glutaminase

343-: Which purine base contains an amino group at carbon 6?

1: Guanine

2: Uracil

3: Adenine

4: Cytosine

344-: Lesch-Nyhan syndrome is caused by the deficiency of

1: Folic acid

2: Carbamoyl phosphate synthetase II

3: UMP synthase

4: HGP

345-: Lesch-Nyhan syndrome, the sex linked recessive disorder is due to the lack of the enzyme:

1: Hypoxanthine-guanine phosphoribosyl transferase

2: Xanthine oxidase

3: Adenine phosphoribosyl transferase

4: Adenosine deaminase

346-: Which type of RNA has the highest percentage of modified base?

1: mRNA

2: tRNA

3: rRNA

4: snRNA

347-: Nuclosomes are -

1: DNA-RNA

2: DNA-Histones

3: RNA+Histones

4: DNA+RNA+Histones

348-: In PCR

1: Thermostable enzyme is needed

2: 211 copies formed after 'n' members of multiple

3: Non specific

4: Thermolabile enzyme

349-: Nucleoside is made up of

1: Pyrimidine

2: Histone

3: Sugar

4: Purine

350-: Major site of protein glycosylation is

1: ER and golgi body

2: Ribosome and golgi body

3: ER and ribosome

4: Ribosome and cytoplasm

351-: An 18-year-old college freshman shares a dorm room with three roommates. One of his roommates has been diagnosed with meningococcal meningitis, caused by the bacteria Neisseria meningitidis. The other three roommates are isolated and treated twice a day with an antibiotic as prophylaxis against this organism, because none of them had received the meningococcal vaccine prior to enrollment. They are told that this antibiotic can give a reddish discoloration of their urine or tears. The reason this drug is effective in killing the bacteria is which one of the following?

1: DNA synthesis is inhibited.

2: RNA synthesis is inhibited.

3: The process of protein synthesis is inhibited.

4: The bacterial membrane becomes leaky.

352-: Function of Helicase is -

1: Reanneal ling of DNA

2: Unwinding of DNA

3: Synthesis of RNA primer

4: DNA polymerization

353-: Human genome contains --- base pairs

1: (3 x 10)9

2: (3 x 10)8

3: (3 x 10)7

4: (3 x 10)6

354-: In DNA, Cytosine is paired with -

1: Thymine

2: Guanine

3: Ademine

4: Uracil

355-: Proteins are soed by

1: Golgi bodies

2: Mitochondria

3: Ribosomes

4: Nuclear membrane

356-: CG region is involved in:

1: Acetylation

2: Methylation

3: Phosphorylation

4: DNA Replication

357-: Two transgenic plants were genetically engineered using Recombinant DNA technology. One plant was transformed using a plasmid vector with GFP (Green Fluorescent Protein) gene and another plant was transformed with Luciferase gene. Which of these two plants will glow spontaneously in the dark?

1: Plant with GFP Gene

2: Plant with Luciferase Gene

3: Both plants

4: None of the above

358-: Which type of mutations usually involves mutation of a gene coding for the following molecule?

1: Silent mutation

2: Nonsence mutation

3: Missense mutation

4: Nonsense suppressor mutation

359-: Genetic material possessing the dual capacity to exist chromosomal and extrachromosomal entity

1: Autosome

2: Episome

3: Endosome

4: Mesosome

360-: Enzyme involved in peptide chain synthesis is

1: Topoisomerase

2: Transformylase

3: RNA polymerase

4: Peptidyl transferase

361-: Pseudouridine is seen in

1: DNA

2: tRNA

3: rRNA

4: mRNA

362-: Which of the following is not a cause of point mutation?

1: Paracentric inversion

2: Deletion

3: Substitution

4: Insertion

363-: DNA repair defects are seen in

1: Xeroderma pigmentosa

2: Bloom's syndrome

3: Ataxia telangiectasia

4: Li-Fraumani syndrome

364-: During replication of DNA, which one of the following enzymes polymerizes the Okazaki fragments?

1: DNA polymerase I

2: DNA Polymerase II

3: DNA Polymerase III

4: RNA Polymerase I

365-: Which of the following statements describing restriction endonucleases is true?

1: They always yield overhanging single-stranded ends

2: They recognize methylated DNA sequences

3: They recognize triplet repeats

4: They cleave both strands in duplex DNA

366-: DNA proof reading and repair is done by

1: DNA polymerase

2: DNA ligase

3: DNA gyrase

4: DNA primase

367-: DNA synthesis takes place in which phase of cell cycle -

1: G1

2: S

3: G2

4: M

368-: Anticodon is present in

1: mRNA

2: tRNA

3: rRNA

4: hn RNA

369-: DNA model described by Watson and crick was?

1: Right handed parallel

2: Left handed anti parallel

3: Right handed anti parallel

4: Left handed parallel

370-: Okazaki fragments are formed during -

1: Transcription

2: Translation

3: DNA replication

4: None

371-: Supercoiling occurs in :

1: Only Eukaryotes

2: Only Prokaryotes

3: Both

4: Only viruses

372-: Common substrate for purine and pyrimidine synthesis are all except -

1: Glutamine

2: Glycine

3: Aspartate

4: Carbon dioxide

373-: What is the contribution of this scientist to molecular genetics?

1: Chemical synthesis of ribonucleotide

2: Sequencing of amino acid

3: Base pairing rule

4: Structure of DNA

374-: Watson and Crick model is for

1: DNA

2: mRNA

3: rRNA

4: tRNA

375-: Mitochondrial DNA is:

1: Circular double stranded

2: Circular single stranded

3: Linear double helix

4: None of these

376-: Southern blot is used to detect -

1: DNA

2: RNA

3: Protein

4: Ribosome

377-: Radio labelled DNA was allowed to replicate twice in a non-radioactive environment. Which of the following is true?

1: All the strands will have radioactivity

2: Half of the DNA will have no radioactivity

3: No strands will have radioactivity

4: Three-fourth of the DNA replicated will have radioactivity

378-: Which of the following is not true about buffering action of haemoglobin (Hb)?

1: Hb is technically intracellular buffer

2: Hb is functionally a plasma buffer

3: Hb's buffering action is due to its histidine content

4: Oxygenated Hb is a strong base

379-: Folding of nascent polypeptide chains is the function of

1: Chaperones

2: Proteosome

3: Heat shock proteins

4: Ribosomes

380-: Genetic material is transferred from one bacteria to another by all EXCEPT:

1: Conjugation

2: Transduction

3: Transformation

4: Transfection

381-: Enzyme that produces single strand nicks in DNA:

1: DNA polymerase I

2: DNAase I

3: Polynucleotide kinase

4: l - exonuclease

382-: The following methods can be used to detect the point mutation in the beta (b)-globin gene that causes sickle cell anemia, except

1: Polymerase chain reaction with allele-specific oligonucleotide hybridization

2: Southern blot analysis

3: DNA sequencing

4: Nohern blot analysis

383-: Stage of meiosis during which homologous pairs of chromosomes are arranged in equatorial plane?

1: Metaphase

2: Interphase

3: Prophase

4: Anaphase

384-: Protein glycosylation occurs in

1: ER

2: Golgi bodies

3: Mitochondria

4: Peroxisomes

385-: Which one of the following enzymes is obtained from Thermophillus aquaticus bacterium which is heat stable and used in PCR at high temperature:

1: DNA polymerase III

2: Endonuclease

3: Taq polymerase

4: DNA gyrase

386-: What is involved in formation of d-TMP from d-UMP: (PGI June 2007)

1: N5, N10- methylene tetra hydrofolate

2: Form imino folate

3: N5 formyl folate

4: Dihydro folate

387-: The discontinuous DNA replication that occurs during replication is catalyzed the production of small DNA segments termed

1: Okazaki fragments

2: Crick strands

3: Watson fragments

4: Tsuneko strands

388-: Termination is caused by all except

1: Peptidyl transferase

2: 48s complex

3: RF-1

4: UAA

389-: Nothern blot is used for the separation of

1: mRNA

2: DNA

3: Protein

4: Protein DNA interaction

390-: High energy phosphate compounds are

1: ATP

2: ADP

3: Creatinine phosphate

4: Acetyl CoA

391-: Differential expression of same gene depending on parent of origin is referred to as:

1: Genomic imprinting

2: Mosaicism

3: Anticipation

4: Non penetrance

392-: Which of the following is not a pyrimidine?

1: Ubracil

2: Thymine

3: Adenine

4: Cytosine

393-: Mitochondiral DNA is -

1: Closed circular

2: Nicked circular

3: Linear

4: Open circular

394-: Y-chromosomes is

1: Metacentric

2: Sub-metacentric

3: Acrocentric

4: Longer than the X-chromosome

395-: Sanger's reagent is

1: Dinitrobenzene

2: Dichlorobenzene

3: Tetra-nitrobenzene

4: Tetrachlorbenzene

396-: Linker DNA is bound to which of the following histone?

1: H1

2: H2A

3: H2B

4: H3

397-: ChIP is used for :

1: Protein DNA interactions and histone modifications

2: Study of aneuploidy

3: Amplify DNA

4: Movement of proteins

398-: Micro RNA transcribed by

1: RNA polymerase I

2: RNA polymerase II

3: RNA polymerase III

4: DNA polymerase

399-: True statements about DNA structure

1: All nucleotides are involved in linkage

2: Antiparallel

3: Parallel

4: Bases are perpendicular to DNA

400-: Polyamine Ike putrescine is derived from

1: Arginine

2: Ornithine

3: Yohimibine

4: Arginosuccine

401-: The sigma (s) subunit of prokaryotic RNA polymerase

1: Binds the antibiotic rifampicin

2: Is inhibited by a-amanitin

3: Specifically recognizes the promoter site

4: Is pa of the core enzyme

402-: First pyrimidine nucleotide to be synthesized is :

1: TMP

2: OMP

3: IMP

4: UMP

403-: All of the following are true about Sickle cell disease, except

1: Single nucleotide change results in change of Glutamine to valine

2: RFLP results from a single base change

3: 'Sticky patch' is generated as a result of replacement of a non polar residue with a polar residue

4: HbS confers resistance against malaria in hetrozygotes

404-: Which enzyme polymerizes Okazaki fragments?

1: DNA polymerase I

2: DNA polymerase II

3: DNA polymerase III

4: RNA polymerase

405-: Shine-Dalgarno sequence in bacterial mRNA is near:

1: AUG codon

2: UAA codon

3: UAG codon

4: UGA codon

406-: What will happen to DNA if salt is added to it?

1: Increase melting point (Tm)

2: Decrease Tm

3: Not affect Tm

4: Melting lead to denaturation of DNA

407-: Formation of DNA using RNA template is done by

1: DNA dependent RNA polymerase

2: Reverse transcriptase

3: DNA polymerase

4: RNA polymerase

408-: Anticodon is present in -

1: mRNA

2: tRNA

3: rRNA

4: hnRNA

409-: True about DNA methylation

1: Alters gene expression

2: Genetic code remains intact

3: Role in Carcinogenesis

4: Protective mechanism against cleavage by restriction endonuclease

410-: DNA model described by Watson and Crick was

1: Right handed parallel

2: Left handed anti parallel

3: Right handed anti parallel

4: Right handed parallel

411-: Deoxy ribonucleic acid is formed from:

1: Ribonuclease

2: Ribonucleotide monophosphate

3: Ribonucleotide diphosphate

4: Ribonucleotide triphosphate

412-: Increase in xanthine and hyposanthine occurs in which deficiency?

1: Xanthine oxidase

2: HGP synthase

3: Urate oxidase

4: Adenosine deaminase

413-: Most lethal karyotype is?

1: 45, YO

2: 45, XO

3: 47, XXY

4: 48, XYYY

414-: Random inactivation of X chromosome is:

1: Lyonisation

2: Allelic exclusion

3: Randomisation

4: Genomic imprinting

415-: Restriction endonucleases are the enzymes

1: Used for joining DNA to vector

2: They cleave the DNA at specific sequence

3: They cleave the DNA randomly

4: Diagnoses DNA molecule from diseases

416-: Which of the following is an example of Trinucleotide repeat mutation?

1: Huntington's chorea

2: Fragile-X-syndrome

3: Friedreich ataxia

4: All of the above

417-: Not a component of PCR

1: Primer

2: Taq polymerase

3: DNA polymerase

4: Restriction enzyme

418-: The usual sequence of cell cycle -

1: G0-G1-S-G2-M

2: G0-G1-G2-S-M

3: G0-M-G2-S-G1

4: G0-G1-S-M-G2

419-: Translocation is necessary for

1: Initiation of codon

2: Binding of mRNA to ribisomes

3: Finding of proteins

4: Elongation of proteins

420-: All of the following are examples of uniparental disomy except

1: Russel silver syndrome

2: Prader willi syndrome

3: Angelman syndrome

4: Bloom syndrome

421-: Most common physiological form of DNA -

1: A-form

2: B-form

3: Z-form

4: C-form

422-: Adenine in DNA binds with

1: Thymine

2: Guanine

3: Cytosine

4: Uracil

423-: The pKa values of primary and secondary phosphoryl groups of nucleotides are

1: 6.2 and 1.0

2: 1.0 and 6.2

3: 6.0 and 1.0

4: 1.2 and 6.0

424-: Steps of PCR in sequence are ?

1: Extend DNA, Anneal Primers, Denature DNA

2: Anneal Primers, Extend DNA, Denature DNA

3: Denature DNA, Anneal Primers, Extend DNA

4: Denature DNA, Extend DNA, Anneal Primers

425-: Selective suppression of a functional gene by a functional allele is called

1: Trans gene

2: Pseudogene

3: Ins eion

4: Knockout

426-: A 40-year-old male is well controlled on warfarin for a factor V Leiden deficiency and recurrent deep vein thrombosis. He presents today with a community-acquired pneumonia and is placed on erythromycin. Three days later, he develops bleeding and his INR is 8.0 (indicating an increased time for blood clotting to occur, where INR is international normalized ratio). Which of the following best explains why this bleeding occurred?

1: The erythromycin inhibited cytochrome P450

2: The erythromycin stimulated cytochrome P450

3: The causative agent of the pneumonia inhibited vitamin K utilization

4: The causative agent of the pneumonia stimulated vitamin K utilization

427-: Which is not true regarding tRNA?

1: TpsC arm is for ribosomal attachment

2: D arm is for ribosomal attachment

3: CCA trinucleotide is attached to acceptor arm

4: The first nucleotide of anticodon of tRNA is not specific

428-: tRNA met would recognize

1: AUG

2: UGC

3: GUG

4: GCU

429-: Dihydrouridine is found in

1: DNA

2: mRNA

3: tRNA

4: rRNA

430-: Radiosensitive stage of cell cycle

1: G2

2: M

3: S

4: G1

431-: Which of the following is not an example of epigenetic change?

1: Histone acetylation

2: Poly A tailing

3: Si RNA interference

4: Splicing DNA methylation

432-: Gene transfer in bacterial system by

1: Transformation

2: Transduction

3: Conjugation

4: Location

433-: What supplies ammonia to liver?

1: Arginine

2: Alanine

3: Lactate

4: Pyruvate

434-: A 20-year-old female presents for an infertility workup. She has never had a menstrual period. She is short with a broad chest, webbed neck, and low-set ears. It is demonstrated that she has an abnormal karyotype.Which one of the following best describes the cause of this genetic abnormality?

1: Trisomy

2: Monosomy

3: Trinucleotide repeat

4: Translocation

435-: Which of the following base is not found in nucleic acids?

1: Adenine

2: Guanidine

3: Uracil

4: Cytosine

436-: Function of mitochondrial DNA

1: Encodes protein of cell membranes

2: Encodes proteins of respiratory chain

3: Helps in cell replication

4: Formation of rRNA

437-: To synthesize insulin on a large scale basis, the most suitable staing material obtained from the beta cells of the pancreas is

1: Genomic DNA

2: Total cellular RNA

3: cDNA of insulin

4: mRNA of insulin

438-: Which of the following test is not used for detection of specific aneuploidy?

1: FISH

2: #NAME?

3: QF - PCR

4: Microarray

439-: Best sample for DNA karyotyping -

1: Blood

2: Bone marrow

3: Amniotic fluid

4: Chorionic villi

440-: Ribosome has following enzymatic activity

1: Peptidyl transferase

2: Peptidase

3: Aminoacyl tRNA synthetase

4: GTPase

441-: During DNA replication, Okazaki fragments are seen in relation to:

1: Leading strand

2: Lagging strand

3: Both "

4: Helicase

442-: True about Ig gene rearrangement & Ig diversity

1: Somatic mutations theory

2: One loop and two loop joining theory

3: DNA rearrangement

4: Appropriate class switching

443-: Enzyme used for cDNA synthesis is

1: DNA dependent RNA polymerase

2: DNA dependent DNA polymerase

3: RNA dependent RNA polymerase

4: RNA dependent DNA polymerase

444-: A dideoxynucleotide does not contain

1: 2' & 3' OH group

2: 3' & 4' OH group

3: 4' & 5' OH group

4: 2' & 5' OH group

445-: In human genome project, scientist notices that one strand of the DNA molecule contains 20 thymine (T), 25 cytosine (C), 30 guanine (C) and 22 adenine (A) residues. How many of each of the bases are found in the complete double-stranded molecule?

1: T-44, C=60, G=50, A=40

2: T-22, C=30, G=25, A=20

3: T-40, C=50, G=60, A=44

4: T-42, C=55, G=55, A=42

446-: Regarding cytosolic Eukaryotic gene expression false is

1: Capping helps in attachment of mRNA to 40 S Ribosome

2: N formyl methionine tRNA will be the first t-RNA to come into action

3: EF2 shifts between GDP & GTP

4: Releasing factor releases the polypeptide chain from the P site

447-: In DNA, the coding region reads 5'-CGT-3'. This would code in the RNA as:-

1: 5'-CGU-3'

2: 5'-GCA-3'

3: 5'-ACG-3'

4: 5-UGC-3'

448-: Okazaki fragment

1: DNA fragment

2: RNA fragment

3: DNA fragment with RNA head

4: RNA fragment with DNA head

449-: Immediate precursor of creatine

1: Carbamoyl phosphate

2: Arginosuccinate

3: Guanidoacetate

4: Citrulline

450-: Defect in which of the following protein leads to Rett syndrome?

1: Histone acetyl transferase

2: Methyl cytosine binding protein

3: Ten eleven translocase

4: DNA methylase

451-: Inosine is biological precursor of:

1: Orotic acid and Uridylic acid

2: Uracil and Thymine

3: Adenylic acid, Guanylic acid

4: Purines and Thymine

452-: Uric acid is formed by

1: Catabolism of proteins

2: Catabolism of ketones

3: Catabolism of purines

4: Catabolism of pyrimidines

453-: A protein to be secreted from the cell is most likely to have

1: A hydrophilic signal sequence at its carboxyl terminus

2: Mannose-6-phosphate

3: A hydrophobic signal sequence at its amino terminus

4: A binding site for the mitochondrial membrane

454-: Salvage pathway of purine nucleotide synthesis is used by all except

1: Brain

2: Liver

3: RBC

4: Leukocytes

455-: What does the term nick translation refer to?

1: Translation of RNA into polypeptide

2: Regulation of gene expression

3: Technique to label DNA

4: Technique to digest DNA

456-: Salvage purine synthesis refers to

1: Synthesis of purine from ribose-5-phosphate

2: Synthesis of purine from pyrimidine

3: Synthesis of purine nucleotides from purine bases

4: None of the above

457-: PRPP paicipates in purine biosynthesis in _____

1: Serves as a scaffold for assembly of purine ring

2: Post assembly of purine ring

3: Both

4: None

458-: An enzyme that makes a double-stranded DNA copy from a single-stranded RNA template molecule is known as

1: DNA polymerase

2: RNA polymerase

3: Reverse transcriptase

4: Phosphokinase

459-: Which step in translation is inhibited by Tetracycline in prokaryotes?

1: Initiation

2: Binding of aminoacyl-tRNA to the "A" site on the ribosome

3: Peptide-bond formation

4: Translocation

460-: True about G-protein receptor complex

1: It interacts transmembrane domain

2: GTP to GDP

3: Adenyl cyclase activation leads to increased cAMP

4: GPCR has no phosphorylation propey

461-: Enzyme deficient in Lesch-Nyhan syndrome?

1: Phosphoribosyl-pyrophosphate synthetase

2: Xanthine oxidase

3: Adenine phosphoribosyl Transferase

4: Hypoxanthine Guanine Phosphoribosyl Transferase

462-: Primary Hyperoxaluria occurs in defect in metabolism of

1: Cystein

2: Tryptophan

3: Tyrosine

4: Glycine

463-: DNA and RNA both contain which pyrimidine base?

1: Uracil

2: Thymine

3: Cytosine

4: Guanine

464-: Orotic aciduria is due to deficiency of-

1: Decarboxylase

2: Isomerase

3: Tyrosinase

4: Homogentisate oxidase

465-: Xeroderma pigmentation is caused due to a group of closely related abnormalities in -

1: Mismatch repair

2: Base excision repair

3: Nucleotide excision repair

4: SOS repair

466-: Termination process of protein synthesis is performed by all except

1: Releasing factor

2: Stop codon

3: Peptidyl transferase

4: UAA codon

467-: Amber codon is

1: UAA

2: UAG

3: UGA

4: UGG

468-: Haemoglobin synthesis starts with?

1: Glycine

2: Histidine

3: Iron

4: Folic acid

469-: Methotrexate blocks the synthesis of thymidine monophosphate by inhibiting the activity of the enzyme:

1: Dihydrofolate reductase

2: Orotate phosphoribosyl transferase

3: Ribonucleotide reductase

4: Dihydroorotase

470-: Which of the following process in a vector is used to increased the yield of protein produced in recombinant protein synthesis?

1: Promoter induction

2: Origin of Replication

3: Translation Initiation

4: Translation of Transcription inhibition

471-: Meera is a 43-year-old woman with a body mass index (BMI) of 32. She presented with abnormal uterine bleeding to her gynecologist, who performed an endometrial biopsy that indicated endometrial cancer, specifically endometrial adenocarcinoma of endometrioid histology.Meera's family history is significant for colon cancer. Her mother was diagnosed with colon cancer at age 66. Her paternal aunt was diagnosed with endometrial cancer at age 67. Suspecting hereditary disease which of the following DNA repair mechanism is defective in Meera?

1: Nucleotide excision repair

2: Homologous recombination

3: Mismatch repair

4: Base excision repair

472-: Inhibition of which of the following enzyme is responsible for the anticancer action of 5-Fluorouracil ?

1: Dihydrofolate reductase

2: Thymidylate kinase

3: Thymidylate reductase

4: Thymidylate synthase

473-: All of the following statements about Lambda phase are true, except

1: In lysogenic phase it fuses with host chromosome and remains dormant

2: In Lytic phase it fuses with host chromosome and replicates

3: Both lytic and lysogenic phases occurs together

4: In lytic phase it causes cell lysis and releases virus paicles

474-: All are true for genetic code except:

1: Degenerate

2: Universal

3: Punctuation

4: Non overlapping

475-: DNA Gyrase is:

1: Eukaryotic DNA Topoisomerase I

2: Prokaryotic DNA Topoisomerase III

3: Prokaryotic DNA Topoisomerase I

4: Prokaryotic DNA Topoisomerase II

476-: Uric acid is conveed to allantoin in:

1: Catabolism of pyrimidines

2: Catabolism of purines

3: Synthesis of pyrimidines

4: Synthesis of purines

477-: Patient present with skin bullae on the sun exposure. The defect is of

1: Sugar changes

2: DNA methylation

3: Thymidine dimers

4: Trinucleotide repeats

478-: A ten-year-old child with aggressive behavior and poor concentration is brought with presenting complaints of joint pain and reduced urinary output. Mother gives history of self-mutilative behavior stating that he tends to mutilate his fingers. Which of the following enzymes is likely to be deficient in this child?

1: HGPase

2: Adenosine deaminase

3: APase

4: Acid maltase

479-: DNA replication occurs in which phase of cell cycle?

1: G1 phase

2: S phase

3: G2 phase

4: M phase

480-: Hershey chase experiment was done on:

1: Lactobacillus

2: Tuberculous bacteria

3: Bacteriophages

4: Mycoplasma

481-: Which of the following groups of protein assist in the folding of other proteins?

1: Proteases

2: Proteosomes

3: Templates

4: Chaperones

482-: At physiological pH DNA is

1: Acidic

2: Negatively charged

3: Amphipathic

4: All of the above

483-: True about ribosomes

1: Conserved in nature

2: Role is to bring t-RNA and m-RNA together

3: DNA forms RNA and protein are formed from RNA

4: They are always free

484-: Klinefelter syndrome is diagnosed by:

1: USG abdomen

2: Echocardiography

3: Triple test

4: Karyotyping

485-: Okazaki fragments are formed during

1: Transcription

2: Translation

3: DNA replication

4: None

486-: Sencent cells are deficient in -

1: RNA polymerase

2: DNA polymerase

3: Telomerase

4: Helicase

487-: DNA synthesis takes place in which phase of cell cycle?

1: G1

2: S

3: G2

4: M

488-: True about PCR is

1: Amplification of a target sequence of DNA

2: Uses thermolablie enzyme

3: Less sensitive techinique

4: Uses one primer

489-: Which one of the following bonds links two nucleotides in a nucleic acid?

1: 3'-3' phosphodiester bond

2: 3'-5' phosphodiester bond

3: 5'-5' phosphodiester bond

4: 5'-5' phosphotriester bond

490-: Euchromatin is the region of DNA that is relatively

1: Uncondensed

2: Condensed

3: Overcondensed

4: Paially condensed

491-: Rate limiting step in pyrimidine synthesis

1: Dihydro-orotase

2: Ornithine transcarbomoylase

3: Aspaate transcarbomoylase

4: Carbamoyl phosphate synthase-I

492-: Two strands of the DNA are joined by:

1: Glycosidic bond

2: Hydrogen bond

3: Covalent bond

4: Ionic bond

493-: UAC to UAG-

1: Nonsense mutation

2: Frameshift mutation

3: Deletion

4: Missense mutation

494-: PRPP (Phospho Ribosyl Pyro Phosphate) is used in :

1: Purine synthesis & Pyrimidine synthesis

2: Histidine synthesis

3: Niacin synthesis

4: All

495-: DNA replication takes place in which phase of cell?

1: M

2: G1

3: G2

4: S

496-: Lesch-Nyhan syndrome is caused by deficiency of which enzyme?

1: Orotate Phosphoribosyl transferase

2: Uracil Phosphoribosyl transferase

3: Quinolinate Phosphoribosyl transferase

4: Hypoxanthine-guanine Phosphoribosyl transferase (HGPRT)

497-: Stop codon

1: UAG

2: UCA

3: UAC

4: AUG

498-: Oncogenes can be best studied by-

1: Transfection

2: Transduction

3: Transformation

4: Conjugation

499-: Which of the following is the smallest autosome?

1: Chromosome 1

2: Y chromosome

3: Chromosome 21

4: Chromosome 22

500-: b-hydroxybutyric aciduria is associated with deficiency of

1: Orotidylic acid decarboxylase

2: Orotate phosphoribosyl transferase

3: PRPP Synthase

4: Dihydropyrimidine dehydrogenase

501-: The enzyme used to "flush" the sticky ends of DNA is

1: Klenow fragment

2: Polynucleotide kinase

3: Alkaline phosphatase

4: Primase

502-: The base sequence of the strand of DNA used as a template has the sequence 5'GATCTAC 3'. What would be the base sequence of RNA product?

1: 5'CTAGATG 3'

2: 5'GAUCUAC3'

3: 5'GTAGATC3'

4: 5'GUAGAUC3'

503-: A phenotypically normal woman underwent a karyotype analysis for difficulties in conceiving. She was found to contain three Barr bodies, but no translocations or large deletions. Her karyotype would be best represented by which one of the following?

1: 48 XXXXY

2: 46 XX

3: 48 XXXX

4: 48 XXXY

504-: In a person suffering from phenyl ketonuria, which of the following should be restricted in diet?

1: Fat

2: Protein

3: Glycine

4: Glutamate

505-: A family, while on a picnic, picked some wild mushrooms to add to their picnic salad. Shortly thereafter, all the members of the family became ill, with the youngest child showing the most severe symptoms. The family is suffering these effects owing to a primary inability to accomplish which one of the following in their cells and tissues?

1: Synthesize proteins

2: Synthesize lipids

3: Synthesize DNA

4: Synthesize carbohydrates

506-: True about genes

1: Smallest functional unit of genome

2: Not capable of independent expression

3: Promoter & enhancer genes are typical example

4: Cistron is single functional unit

507-: Which of the following process is involved in conversion of DNA to RNA:

1: Conjugation

2: Transduction

3: Translocation

4: Transcription

508-: RFLP is used for

1: Analysis of chromosomal structures

2: DNA estimation

3: Synthesis of nucleic acid

4: Detecting proteins in a cell

509-: What do restriction endonucleases do -

1: Cut ds DNA at specific sites

2: Cut RNA at specific sites

3: Cut ss DNA at specific sites

4: Break peptide chains

510-: The term restriction map primarily refers to the mapping of sites of

1: Action of bacteriophages

2: Cleavage of restriction enzymes

3: Mutational hotspot

4: DNA fingerprinting

511-: Chromosomes are formed during which phase of cell cycle

1: G1

2: S

3: G2

4: M

512-: Which of the following DOES NOT contribute to the ring of thymine ?

1: Aspaate

2: Glutamine

3: THF

4: Bicarbonate

513-: In which of the following oligonucleotide primer is used?

1: RFLP

2: PCR

3: FISH

4: Chromosomal walking

514-: Function of DNA ligase -

1: Cutting of DNA at specific site

2: Preventing negative supercoil

3: To seal and nick okazaki fragments

4: DNA polymerization

515-: Methylation of cytosine is associated with

1: Mutation

2: Increased expression of gene

3: Decreased expression of gene

4: No effect

516-: Pulsed gel electrophoresis is used for-

1: DNA

2: RNA

3: Ribosome

4: Protein

517-: Which of the following test is not used in epigenetics:

1: HPLC

2: Chip on chip

3: Bi-sulfate sequencing

4: Methylation sensitive Restriction Enzymes digestion

518-: A 19-year-old male, at a routine physical examination for sports activities (long-distance running) at his college, is noticed to have elevated fasting blood glucose levels (about 7.5 mM). Measurements of C-peptide and insulin levels were close to normal under fasting conditions. After eating, blood glucose levels are only slightly elevated above the normal fasting levels before stabilizing at the fasting levels. The student indicates that he is not drinking or urinating excessively, but that he remembers that his mother had gestational diabetes when pregnant with him. This alteration in glucose homeostasis is best typified by which one of the following types of inheritance?

1: Autosomal dominant

2: Autosomal recessive

3: Sex linked

4: Mitochondrial

519-: Total number of molecules of ATP required for denovo purine synthesis?

1: 2

2: 5

3: 6

4: 4

520-: Deficiency of which of the following enzyme leads to toxicity of 5-fluorouracil?

1: Purine nucleoside phosphorylase

2: Dihydropyrimidine dehydrogenase

3: PRPP synthase

4: Adenosine deaminase

521-: Gene therapy is successful for the treatment of -

1: Adenosine deaminase deficiency

2: Krabbe's disease

3: Hodgkin's lymphoma

4: b thalassemia

522-: DNA or RNA fragment which is radioactive or chemically labile to detect a specific fragment?

1: Probe

2: Okazaki fragment

3: Antibody

4: Epitope

523-: A population in Hardy-Weinberg equilibrium has certain individuals expressing a rare autosomal recessive disease. The frequency of affected individuals in the population is 1 in 90,000. What is the frequency of carriers in this population?

1: 1 in 100

2: 1 in 150

3: 1 in 200

4: 1 in 250

524-: Ribosome has following enzymatic activity?

1: Peptidyl transferase

2: Peptidase

3: Aminoacyl tRNA synthetase

4: GTPase

525-: All are true about human mitochondrial DNA except

1: Circular

2: AGA is stop codon

3: Low mutation rate

4: Very few untranslated sequences

526-: Total number of base pairs in human chromosome:

1: 3 million

2: 3 billion

3: 3.3 billion

4: 5 million

527-: Apo B48 & Apo B100 is synthesized from the same mRNA; the difference between them is due to

1: RNA splicing

2: Allelic exclusion

3: Deamination of cytidine to uridine

4: Upstream repression

528-: A 7-year-old boy with compulsive self mutilation, intellectual disability. He is always strapped to bed Serum uric acid level is elevated. What is the enzyme deficiency in this disorder?

1: PRPP Synthetase

2: Xanthine oxidase

3: Hypoxanthine Guanine Phosphoribosyl transferase

4: Glucose 6 Phosphatase

529-: Nucleolus contains

1: DNA

2: RNA

3: Chromatin material

4: Protein molecules

530-: The Z DNA helix

1: Has fewer base pairs per turn than B DNA

2: Is ored by an alternating GC sequences

3: Tends to be found at 3 end to genes

4: Is inhibited by methylation of the bases

531-: Mitochondrial codons are an exception for the propey of 'universality' of codons. For eg: Initiation codon in mammals is AUG, which codes for methionine. But in mitochondria, methionine is coded by some other codon. Which among the following is that initiation codon:

1: AGA

2: AAG

3: AUA

4: AUG

532-: Molecular interaction, found in the structure of DNA

1: Hydrogen bond

2: Glycosidic bond

3: Covalent interactions

4: All of the above

533-: Which is not a method of gene therapy:

1: FISH

2: Transfection

3: Electroporation

4: Bacteriophage

534-: In which of the following phase (s) of Cell cycle, both, the RNA synthesis and Protein synthesis occurs:

1: G1

2: G2

3: S

4: All of the above

535-: Antigen-antibody reaction is detected by

1: ELISA

2: Southern blot

3: Nohern blot

4: Western blot

536-: Which enzyme prevents aging?

1: DNA ligase

2: DNA polymerase a

3: Telomerase

4: RNA polymerase II

537-: In humans, telomeres have the following sequence

1: 5'-GGCTTG-3'

2: 5'-TTAGGG-3'

3: 5'-TAACGT-3'

4: 5'-GTAGGC-3'

538-: Percentage of mitochondrial DNA out of total cellular DNA is?

1: 1%

2: 1.30%

3: 3%

4: 5%

539-: Double stranded RNA exists in:

1: A-DNA like conformation

2: B-DNA like conformation

3: Z-DNA like conformation

4: None of these

540-: All are characteristics of genetic code except

1: Overlapping

2: Nonambiguous

3: Universal

4: Degeneracy

541-: Which of the following is the cofactor for Prokaryotic DNA ligase?

1: Tetrahydrobiopterin

2: ATP

3: NAD

4: FAD

542-: All of the following are ways of regulation of gene expression in eukaryotes, except :

1: Attenuation by operon

2: Gene amplification

3: Gene rearrangement

4: Regulation of mRNA stability

543-: Beta-alanine is end product of metabolism of

1: Uracil

2: Thymine

3: Guanine

4: Adenine

544-: SYBR Green Dye is used for

1: HPLC

2: Immunofluorescence

3: PCR

4: ELISA

545-: Which of the following factors is responsible for deciding whether an antibody/immunoglobulin will remain membrane-bound or get secreted?

1: RNA Splicing

2: Class Switching

3: Differential RNA Processing

4: Allelic Exclusion

546-: Glycine provides all in purine synthesis except

1: Carbon-4

2: Carbon-5

3: Nitrogen-4

4: Nitrogen-7

547-: Silent mutations occurs because codon is :

1: Non overlapping

2: Commaless

3: Universal

4: Degenerate

548-: The position of DNA in which RNA polymerase binds and start transcription is called:

1: Terminator

2: Anti-terminator

3: Operator

4: Promoter region

549-: In DNA, adenine always pairs with -

1: Guanine

2: Cytosine

3: Thymine

4: Uracil

550-: Which one of the following is the major site for Purine nucleotide biosynthesis?

1: Liver

2: Erythrocytes

3: Polymorphonuclear leukocytes

4: Brain

551-: Topoisomers are DNA form that differ in

1: GC content

2: Melting temperature

3: Coding region

4: Linking number

552-: Which of the following technique is used to find out the impoant amino acid residue involved in the enzyme catalysis?

1: Electrophoresis

2: Chromatography

3: Mass spectrometry

4: Site directed mutagenesis

553-: Which of the follow ing protein is synthesized in free ribosome -

1: Cytosolic proteins

2: Secretery proteins

3: Membrane proteins

4: None

554-: Nonsense codon are all EXCEPT

1: UAA

2: UAG

3: UGA

4: UCA

555-: Cat eye syndrome is:

1: Trisomy 13

2: Trisomy 18

3: Trisomy 21

4: Trisomy 22

556-: RNA polymerase differs from DNA polymerase:

1: It edits and synthesis

2: Synthesise RNA primers

3: Synthesis only in 5' to 3' direction

4: Uses RNA templates

557-: Apo B48 & Apo B100 is synthesized from the same mRNA; the difference between them is due to:

1: RNA splicing '

2: Allelic exclusion

3: Deamination of cytidine to uridine

4: Upstream repression

558-: CAP in LAC operon is

1: Positive regulator

2: Negative regulator

3: Attenuation

4: Constitutive expression

559-: Sickle cell anemia is the clinical manifestation of homozygous genes for an abnormal haemoglobin molecule. The event responsible for the mutation in the Beta chain is

1: Inseion

2: Deletion

3: Non-disjunction

4: Point mutation

560-: Most abundant free nucleotide in a mammalian cell ?

1: ATP

2: dATP

3: GTP

4: AMP

561-: Jumping genes are known as:

1: Intron

2: Transposons

3: Plasmids

4: Exon

562-: DNA restriction fragments are separated by

1: Paper chromatography

2: Agarose gel electrophoresis

3: Thin-layer chromatography

4: Ultracentrifugation

563-: Xeroderma pigmentosa is due to:

1: Base excision defect

2: Nucleotide excision defect

3: Sos repair defect

4: Cross linking defect

564-: N1 of purine ring is derived from -

1: Glycine

2: Aspartate

3: Glutamine

4: Asparagine

565-: In cell with damaged DNA and potential for malignant transformation, the tumor suppressor p53 gene involves

1: Triggering of the production of p21

2: Inducing apoptosis

3: Getting complexed with other transforming proteins

4: All of the above

566-: Chimeric DNA used for:

1: Paternity test

2: Maternity test

3: Personal identification

4: Organ transplantation

567-: What is the role of H2 histone?

1: Stabilize the 30-nm chromatin fiber

2: Central role in the formation of the nucleosome

3: Stabilizes the primary paicle

4: Firmly binds two additional half-turns of DNA

568-: The gaps between segments of DNA on the lagging strand produced by restriction enzymes are rejoined/sealed by

1: DNA ligases

2: DNA helicase

3: DNA topoisomerase

4: DNA phosphorylase

569-: Synthesis of an immunoglobulin in membrane-bound or secretory form is determined by

1: One turn to two turn joining rule

2: Class switching

3: Differential RNA processing

4: Allelic exclusion

570-: Biotechnology is/are used for

1: Viral vaccine production

2: To cure genetic disorder

3: Genetic crop

4: Gene production

571-: In 1990, for the first time, Michaele Blease and W. French Andresco of National Institute of Health, Bethesda, U.S.A. attempted gene therapy on a human patient. Which of the following disease was attempted to be cured?

1: Cystic fibrosis

2: Haemophilia

3: Thalassemia

4: Severe Combined Immunodeficiency Disease

572-: DNA fingerprinting is based on possessing in DNA of

1: Constant tandem repeat

2: Variable number tandem repeats

3: Non-repetative sequence

4: Exon

573-: True about Restriction enzyme

1: Palindromic

2: Produce DNA sticky end

3: Restict replication of DNA

4: Restriction sites are not specific

574-: True about genetic code except

1: Degenerate

2: Overlapping

3: Ambiguous

4: Universal

575-: Which one of the following is the complementary sequence of 5&;TTAAGCTAC3&;?

1: 5'GTACGCTTAA3'

2: 5'AATTCGCATG3'

3: 5'CATGCGAATT3'

4: 5'TTAAGCGTAC3'

576-: DNA replication takes place in which phase of cell cycle -

1: M

2: G1

3: G2

4: S

577-: Most important enzyme in DNA replication for chain elongation -

1: Helicase

2: DNA polymerase I

3: DNA polymerase III

4: Topoisomerase III

578-: Nucleotides are

1: Heterocyclic Compounds

2: N-Glycosides

3: Phosphorylated Nucleosides

4: O-Glycosides

579-: Inhibition of protein synthesis in translocation steps occurs by

1: Tetracycline

2: Erythromycin

3: Aminoglycosides

4: Penicillin

580-: Paternal disomy is found in?

1: Prader-Willi syndrome

2: Angelman syndrome

3: Fragile X syndrome

4: Hydatiform mole

581-: Which of the following amino acid is used in biosynthesis of purines?

1: Alanine

2: Glycine

3: Threonine

4: Ornithine

582-: RNA dependent DNA polymerase is -

1: DNA polymerase

2: RNA polymerase

3: Reverse transcriptase

4: Phosphokinase

583-: What is the approximate number of base pairs associated with a single nucleosome?

1: 146

2: 292

3: 73

4: 1460

584-: Which form of DNA is seen predominantly.

1: A

2: C

3: B

4: Z

585-: Which of the following is the most common gene delivery system for 'In-vivo' gene therapy?

1: Micro injection

2: Lipofection

3: Adeno viral vectors

4: Electroporation

586-: The most abundant nucleotide in body is

1: ATP

2: GTP

3: UTP

4: DTP

587-: Enzyme that is responsible for unwinding of DNA is?

1: Ligase

2: DNA primase

3: Helicase

4: DNA polymerase

588-: True about silent mutation in gene

1: No change in mRNA

2: No change in Amino acid sequence in protein

3: No expression of protein

4: No change in expression of protein

589-: In the following partial sequence of mRNA, a mutation of the template DNA results in a change in codon 91 to UAA. The type of mutation is:888990GUCGACCAG 9192UAGGGC9394UAACCG

1: Missene

2: Silent

3: Nonsense

4: Frame shit

590-: 8 year old boy is brought with c/o progressive weakness & difficulty getting up the shows the following finding what is the MC type of mutation leading to this condition?

1: Inversion

2: Transrversion

3: Frame shift mutation

4: Splicing mutation

591-: In E.coli, Ahur Kornberg found which enzyme?

1: Fatty acid synthase

2: DNA polymerase

3: Topoisomerase

4: Glucose 6 phosphate dehydrogenase

592-: Xeroderma pigmentation is caused due to a group of closely related abnormalities in

1: Mismatch repair

2: Base excision repair

3: Nucleotide excision rapair

4: SOS repair

593-: The gene frequency for an X-linked recessive disease is 1 in 1,000 in the general population. What is the frequency of affected males in this population?

1: 1 in 10

2: 1 in 100

3: 1 in 500

4: 1 in 1,000

594-: Frameshift mutation does not effect complete amino acid sequence if it occurs in multiple of

1: 1

2: 2

3: 3

4: None

595-: ApoB 48 & ApoB 100 is synthesized from them RNA; the difference between them is due to:

1: RNA splicing

2: Allelic exclusion

3: Deamination of cytidine to uridine

4: Upstream repression

596-: Eukaryotic DNA polymerase involved in proofreading and DNA repair during replication is

1: a

2: b

3: E

4: d

597-: Which enzymatic mutation is responsible for immortality of cancer cells:

1: DNA reverse transcriptase

2: RNA polymerase

3: Telomerase

4: DNA polymerase

598-: Which of the following techniques is used for detection of variation in DNA sequence and Gene expression?

1: Nohern blot

2: Southern blot

3: Western blot

4: Microarray

599-: Genes are:

1: Ribonucleic acid

2: Deoxy ribonucleic acid

3: Lipo proteins

4: Chromo proteins

600-: Supercoiled DNA is separated by relaxed DNA by

1: ELISA

2: Gel electrophoresis

3: DNA footprinting

4: DNA fingerprinting

601-: Microsatellite sequence is:

1: Small satellite

2: Extra chromosomal DNA

3: Short sequence (2-5) repeat DNA

4: Looped-DNA

602-: Unwinding of DNA during replication is done by-

1: Ligase

2: Helicase

3: Polymerase

4: Prinase

603-: Enzyme generating urea is

1: Aspaate transcarbamoylase

2: Urease

3: Arginase

4: Ornithine decarboxylase

604-: DNA replication occurs in which phase of cell cycle -

1: S phase

2: Gl

3: G2

4: M

605-: All of the following molecules are a pa of the synthesis of a purine ring except?

1: Lysine

2: Glycine

3: Glutamine

4: Aspaate

606-: During replication of DNA, which one of the following enzyme polymerizes the Okazaki fragments?

1: DNA polymerase I

2: DNA polymerase II

3: DNA polymerase III

4: RNA polymerase I

607-: Which DNA polymerase is/are involved in repair of mammalian DNA?

1: a

2: b

3: TS

4: E

608-: Codon consist of

1: 3 base pair

2: 2 base pair

3: Two nucleotide

4: 5 base pair

609-: Gene is

1: Codon

2: Anticodon

3: Cistron

4: Okazaki fragment

610-: If Codon no 302 UAG is replaced by UAA, then this mutation is:

1: Missense

2: Silent

3: Nonsense

4: Given information is not sufficient to identify

611-: Proteins destined for secretion from eukaryotic cells have which of the following in common?

1: An N-Terminal Methionine in the Mature Protein Is - Very likely; A Signal Peptide Located at - Carboxy terminus; Synthesized on Which Type of Ribosome? - Rough; Embedded Within the ER Membrane? - Yes

2: An N-Terminal Methionine in the Mature Protein Is - Very likely; A Signal Peptide Located at - Amino terminus; Synthesized on Which Type of Ribosome? - Cytoplasmic; Embedded Within the ER Membrane? - No

3: An N-Terminal Methionine in the Mature Protein Is - Very likely; A Signal Peptide Located at - Carboxy terminus; Synthesized on Which Type of Ribosome? - Rough; Embedded Within the ER Membrane? - Yes

4: An N-Terminal Methionine in the Mature Protein Is - Unlikely; A Signal Peptide Located at - Amino terminus; Synthesized on Which Type of Ribosome? - Rough; Embedded Within the ER Membrane? - No

612-: DNA repair proofreading in prokaryotes are caused by

1: DNA Polymerase I

2: DNA Polymerase II

3: DNA Polymerase III

4: Gyrase

613-: True about Hybridoma

1: Immoalise myeloma cell

2: Hybridoma cell produced by fusion of T-cell & myeloma

3: Cell is human origin

4: Prior immunisation is done

614-: Serotonin is derived from -

1: Tyrosine

2: Phenylalanine

3: Alanine

4: Tryptophan

615-: Which is non-sense codon?

1: UGG

2: AUG

3: UGA

4: CCA

616-: The ZYA region of the lac operon will be maximally expressed if:

1: Cyclic AMP levels are low

2: Glucose and lactose are both available

3: The attenuation stem-loop is able to form

4: The CAP site is occupied and the operator site is free

617-: Transgenic animals are:

1: Genetically modified organisms with a new heritable character

2: Serve as models for understanding the human diseases

3: Proteins produced by them are used as therapeutic agents

4: All the above

618-: Arrange the enzymes involved in purine catabolism in sequence: A. Uricase B. Xanthine Oxidase C. ADA D. Purine nucleoside phosphorylase

1: A -C-B- D

2: B -A-D- C

3: D -B-A- C

4: C -D-B- A

619-: The number of base pairs in human diploid genome are:

1: 2 billion base pairs (bp)

2: 3 billion base pairs (bp)

3: 5 billion base pairs (bp)

4: 6 billion base pairs (bp)

620-: The initiation of DNA synthesis requires

1: Five carbon sugar

2: Deoxyribose alone

3: A sho RNA molecule

4: Proteins with free hydroxyl groups

621-: At physiologic pH, DNA is

1: Positively charged

2: Negatively charged

3: Amphoteric

4: Uncharged

622-: Hypophosphatemic Vitamin D Resistant Rickets is?

1: AR

2: AD

3: XD

4: XR

623-: If one strand of DNA contains the sequence "ATCGCGTAACATGGATTCGG", what will be the sequence of the complementary strand using the standard convention?

1: TAGCGCATTGTACCTAAGCC

2: CCGAATCCATGTTACGCGAT

3: ATCGCGTAACATGGATTCGG

4: None of the above

624-: False statement is:

1: Repressor binds operator gene

2: Regulator genes produce repressor subunits

3: IPTG is inducer but not substrate

4: Regulator gene is inducible

625-: Uric acid is formed in humans in

1: Liver

2: GIT mucosa

3: Kidney

4: Joints

626-: During unwinding of DNA, relief of supercoil is made possible by

1: Topoisomerase

2: Gyrase

3: Helicase

4: Polymerase

627-: The gaps between segments of DNA on the lagging strand produced by restricting enzymes are rejoined/sealed by:

1: DNA Ligases

2: DNA Helicase

3: DNA Topoisomerase

4: DNA phosphorylase

628-: Southern blot is used to visualize

1: RNA

2: DNA

3: Protein

4: Antibody

629-: At Tm or melting temperature, what percentage of dsDNA is denatured?

1: 25%

2: 50%

3: 75%

4: 100%

630-: Glucose is linked to hemoglobin through

1: N linkage

2: O linkage

3: C-C linkage

4: O-H linkage

631-: Which is not a step of PCR?

1: Annealing

2: Extension

3: Transformation

4: Denaturation

632-: Enzyme replacement therapy is available for

1: Gauchers disease

2: Galactosemia

3: Fructosuria

4: None

633-: CRISPR/Cas9 mediated gene editing involves which of the following DNA repair mechanisms?

1: Base Excision Repair

2: Nucleotide Excision Repair

3: Non-Homologous End Joining

4: Mismatch Repair

634-: In urea cycle, hydrolysis of arginine forms

1: Citrulline

2: Ornithine

3: Carbomoyl phosphated

4: Arginosuccinase

635-: Which is true about Watson and Crick base base pairing rule?

1: A-T, C-G

2: A-G, T-C

3: A-C, T-G

4: A-G, T-U

636-: Which of the following types of mutations generally leads to a truncated protein?

1: Deletion

2: Frameshift mutation

3: Insertion

4: Missense mutation

637-: Primers are removed by all except:

1: Delta Polymerase

2: RNase H1

3: FEN1

4: None

638-: BAse substitution mutations can have been following molecular consequence except

1: Changes one codon for an amino acid into another codon for that same amino acid

2: Codon for one amino acid is change into a codon of another amino acid

3: Reading frame changes downstream to the mutant site

4: Codon for one amino acid is changed into a translation termination codon

639-: In molecular cloning, Blue-white screening is used for

1: To screen for recombinant vectors

2: To detect gene mutations

3: To identify desired chromosal DNA inse in plasmid vectors

4: To detect host DNA in situ

640-: Fatty acids used by all except

1: Liver

2: Muscle

3: Brain

4: Kidney

641-: All are examples of point mutation, except

1: Silent mutation

2: Frame-shift mutation

3: Missense mutation

4: Nonsense mutation

642-: PCR requires

1: Primer

2: DNA Polymerase

3: De-oxyribonucleotide phosphate

4: Di-oxyribonucleotide phosphate

643-: Xeroderma pigmentosum is caused due to abnormalities in:

1: A SOS repair

2: Nucleotide excision repair

3: Base excision repair

4: Mismatch repair

644-: Pyrimidine metabolism end product

1: Urea

2: Uric acid

3: Beta alanine

4: Allantoin

645-: X- linked recessive disease in male with clotting defect is-

1: Hemophilia A

2: Von - Willebrand disease

3: ITP

4: None

646-: Cytoplasmic translation system has the following number of t-RNAs

1: 20

2: 26

3: 28

4: 31

647-: Urea is formed from which substrate?

1: Arginine

2: Orginine

3: Citruline

4: Aspaate

648-: In humans, end product of purine metabolism

1: Allantoin

2: Uric acid

3: CO2

4: None

649-: Intron is not found in which DNA?

1: Nuclear DNA

2: Mitochondrial DNA

3: B DNA

4: Z DNA

650-: The following activity increases in DNA in a permissive chromatin:

1: Methylation of CpG islands

2: Phosphorylation

3: Acetylation of histones

4: Sumoylation

651-: In DNA, adenine always pairs with

1: Guanine

2: Cytosine

3: Thymine

4: Uracil

652-: True about Polymerase Chain Reaction are all except-

1: Thermostable enzyme

2: DNA denaturation, followed by annealing

3: Specific primers are required

4: Thermolabile enzymes

653-: A hypothetical gene contains coding strand of 5&;-TGGAATTGTATG-3. What would be the sequence of the resultant mRNA following transcription?

1: 3'-ACCTTAACATAC-5'

2: 5'-ACCUUTTAACAUAC-3'

3: 5'-UGGAAUUGUAUG-3'

4: 3'-UCCTTUUCAUAC-5'

654-: Nucleotide includes -

1: Base + sugar

2: Base + phosphate group

3: Base + sugar + phosphate group

4: None

655-: Enzyme used in PCR is

1: Reverse transcriptase

2: Taq polymerase

3: RNA polymerase

4: None

656-: All of the following disease show Mitochondrial diseases except

1: Leigh syndrome

2: Leber's hereditary optic neuropathy

3: Myoclonic epilepsy

4: Huntington's disease

657-: Lesch - Nyhan Syndrome - associated with

1: Purine necleoside phosphorylase deficiency

2: Adenosine deaminase deficiency

3: Hypoxanthine - guanine phosphoribosyl transferase defect

4: Xanthine oxidase deficiency

658-: Srand of DNA from which mRNA is formed by transcription is called:

1: Template

2: Anti template

3: Coding

4: Transcript

659-: Heritable changes in gene expression not caused by alterations in DNA sequence refers to:

1: Genetics

2: Epigenetics

3: Mutations

4: Transposons

660-: Micro RNA is -

1: Splicing RNA

2: Snurps

3: Gene Silencing RNA

4: Ribonuclease

661-: Ribonuclease-P is

1: Ligase

2: Lyase

3: Ribozyme

4: Hydrolase

662-: In a human genome project, scientist notices that one strand of the DNA molecule contains 20 thymine (T), 25 cytosines (C), 30 guanines (G) and 22 adenine (A) residues. How many of each of the bases are found in the complete double-stranded molecule?

1: T=44, C=60, G=50, A=40

2: T=22, C=30, G=25, A=20

3: T=40, C=50, G=60, A=44

4: T=42, C=55, G=55, A=42

663-: Which is not a method of gene therapy?

1: FISH

2: Transfection

3: Electroporation

4: Bacteriophage

664-: All are diseases of defective DNA repair except

1: Severe combined immunodeficiency disease

2: Adenosis polyposis coli

3: Bloom syndrome

4: Breast cancer susceptibility 1 (BRCA 1)

665-: CAP in LAC operon is an example of:(AIIMS Nov 2011, May 2011)

1: Positive regulator

2: Negative regulator

3: Attenuation

4: Constitutive expression

666-: Karyotyping under light microscopy is done by

1: R banding

2: Q banding

3: G banding

4: C banding

667-: Protein that initiates synthesis of RNA primers

1: SSBs

2: DNA Ligase

3: DNA Primase

4: Topoisomerases

668-: Methods of introducing gene in target cells are all except

1: Electroporation

2: Transfection

3: Site directed recombination

4: FISH

669-: Lesh Nyhan syndrome is associated with deficiency of

1: HGP (paial)

2: HGP (total)

3: PRPP (paial)

4: PRPP (total)

670-: Which of the following compounds is an analogue of hypoxanthine?

1: Arabinoside C

2: Allopurinol

3: Ribose phosphate

4: 5-phosphoribosylpyrophosphate (PRPP)

671-: Stop codons are all except -

1: UAG

2: UAA

3: UGA

4: UGG

672-: A cell is placed in a medium containing radioactively labelled thymidine. After the cells undergo replication 3 times, what percentage of the cells will have both strands of DNA labelled?

1: 25%

2: 50%

3: 75%

4: 100%

673-: True about Ribozyme:

1: Peptidyl Transferase activity

2: Cuts DNA at specific site

3: Participate in DNA Synthesis

4: GTPase activity

674-: Met-tRNA would recognize:

1: AUG

2: GCA

3: GUA

4: UAC

675-: Following FISH technique depicts?

1: Deletion

2: Duplication

3: Translocation

4: Ligation

676-: In humans, rate limiting step of de novo pyrimidine synthesis is:

1: Aspaate tanscarbamoylase

2: Carbamoyl phosphate synthetase-II

3: Dihydro orotate dehydrogenase

4: Ornithine tanscarbamoylase

677-: True statement about transgenic mice is

1: Developed from DNA inseion into feilized egg

2: Have same genome as parents except one or more genes

3: Identical genome to parent mice

4: Produced by breeding over several generations

678-: DNA replication and transcription occurs in which direction -

1: 51-31

2: 5l-51

3: 31 -51

4: 31 -31

679-: Okazaki fragments are found during

1: Replication

2: Translation

3: Translocation

4: Transcription

680-: Which of the following functionally componetent of largest unit of the ribosomes

1: tRNA

2: mRNA

3: Catalyze formation of the peptides

4: Formation of the polyribosomes

681-: Sumoylation of histones proteins is associated with

1: Activation of gene transcription

2: Condensation of chromosome

3: Transcription repression

4: Inactivation of gene transcription

682-: Pseudouridine found in

1: DNA

2: rRNA

3: mRNA

4: tRNA

683-: PCR detects

1: Antigen

2: Antibody

3: Nucleic acid

4: All of the above

684-: Nucleotides serve all of the following roles, EXCEPT:

1: Monomeric units of nucleic acids

2: Mediators in cellular signalling

3: Source of energy

4: Structural component of membrane

685-: Which of the following enzymes unwind DNA?

1: Ligase

2: DNA primase

3: Helicase

4: DNA polymerase

686-: A potent inhibitor of protein synthesis that acts as an analogue of aminoacyl t-RNA is

1: Mitomycin C

2: Streptomycin

3: Nalidixic acid

4: Puromycin

687-: Molecular mimicry is an explanation for -

1: Immune tolerance

2: Autoimmune disorders

3: Hypersensitivity

4: Immunosuppression

688-: A child develop skin tumor with blisters on exposure to sunlight. Irregular dark spots on the skin were also found. He is very likely has defect in which of the following mechanism?

1: Thymidine dimmers repair

2: Base excision repair

3: Mismatch repair

4: Double strand break repair

689-: Transcription is inhibited by

1: Actinomycin D

2: Amanitin

3: Chloramphenicol

4: Streptomycin

690-: What is the function of DNA ligase?

1: Unwinding (denaturation) of dsDNA to provide as ssDNA template

2: Seals the single strand nick between the nascent chain and Okazaki fragments on lagging strand

3: Initiation of DNA synthesis and elongation

4: Initiates synthesis of RNA primers

Answers

Question No	Answer Option	Answer
1	1	260nm
2	1	Degeneracy
3	2	DNA+Histones
4	3	AUG & AUA
5	3	Guanine
6	4	Initiation of dystrophin transcription will be deficient
7	1	Helicase
8	3	Regular repeating structure of DNA & histone proteins
9	3	Spermine synthesis
10	2	Cellular immunodeficiency
11	3	Several Okazaki fragments must be sequentially synthesized for each replication fork
12	1	Histone
13	2	Removal of introns
14	2	Thalassemia
15	3	DNA Multiplication
16	1	siRNA
17	1	Urease
18	3	mRNA
19	2	3
20	3	Deoxyribose - phosphate backbone with bases stacked inside
21	1	G banding

22	1	M-RNA
23	2	Increase Euchromatin formation
24	2	Seals the single strand nick between the nascent chain and Okazaki fragments on lagging strand
25	1	Hyperuricemia
26	2	Are lipid in nature
27	3	DNase I
28	1	23
29	3	Real-Time Reverse Transcriptase PCR
30	2	Degeneracy
31	1	Gene Regulation
32	4	Stercobilin
33	2	Proteosome
34	1	5.8 S
35	4	Fusion Mediated by altering membrane viscocity
36	1	Proteomics
37	2	Phenotype
38	4	Bacterial Aificial Chromosomes
39	3	Brain
40	4	It codes for less than 20% of the proteins involved in respiratory chain
41	1	Restriction endonucleases are involved
42	1	RNA dependent DNA synthesis
43	4	All
44	1	Cut DNA at specific DNA sequences
45	3	Terminates protein synthesis

46	1	mRNA
47	4	Glycosylation
48	1	It is stable
49	4	Glycine
50	2	ddNTPs
51	3	Protein
52	1	tRNA
53	4	Single strand break
54	3	DNA binding protein
55	2	snRNA
56	1	Carbomoyl phosphate synthetase II
57	4	DNA-protein interaction
58	1	UAA
59	3	Normal intelligence
60	3	Point mutation
61	4	Replication
62	1	5' UCAGACUGA 3'
63	2	Less acetyl CoA for glucose formation
64	2	Frame-shift mutation
65	2	Friedreich's Ataxia - CGG
66	2	Lac I
67	3	Overlapping
68	2	RNA dependent DNA polymerase
69	1	37 genes
70	2	UAU

71	4	Uracil
72	3	Histones
73	2	DNA polymerase a
74	4	Interphase
75	3	THF
76	2	Encodes proteins of respiratory chain
77	3	Carbomyl-phosphate synthase
78	2	S phase
79	1	Thymine
80	1	3
81	4	Point mutation
82	2	22 bp
83	1	Insulin
84	1	Chaperones
85	2	Histone
86	1	Double stranded DNA
87	1	Circular
88	1	Metabolic antagonism
89	3	Glutamate
90	3	74-95 nucleotides
91	3	Mitochondrial chromosome
92	4	256
93	4	TMP - Thymine monophosphate
94	3	Helicase
95	1	Nohern blot

96	1	Transduction
97	4	AUG
98	1	Purine
99	2	RNA
100	4	For monitoring the amplification of target DNA
101	3	Mis-sense mutation
102	1	Gauchers disease
103	1	Poly A
104	3	HGP
105	1	N5, N10-methylene tetrahydrofolate
106	4	All the above
107	1	Sequencing DNA
108	2	45 XO genome
109	2	Somatic
110	3	Frame shift mutation
111	3	Transcriptionally active chromatin
112	2	It acts at specific site
113	1	SCID
114	2	Purine or pyrimidine base + sugar
115	4	All of the above
116	4	IF-4F
117	2	Pyrimidine dimers
118	3	Ribozyme
119	2	DNA Template
120	3	Chromatin immuno precipitation-sequencing (ChIP-seq)

121	3	UGA
122	1	Taq polymerase
123	1	Di hydro uracil
124	2	NAD+ is energy source
125	2	Mucopolysacchridosis
126	2	Sticky patch is generated as a result of replacement of a non polar residue with a polar residue
127	4	Male-to-male transmission
128	3	PCR
129	2	Restriction Endonuclease
130	2	Histone
131	4	Ca +2
132	1	Intron
133	3	Base + sugar + phosphate group
134	4	H1
135	1	X linked recessive
136	3	5 Mb
137	1	Formation of pyrimidine dimers
138	1	Arginase
139	2	Three
140	4	Thymdine
141	2	Gout
142	2	Liver
143	4	5'GGTGC 3'
144	1	Thymine

145	4	By creating an alternative splice site in the gene
146	4	Either maternal or paternal nondisjunction
147	2	Helicase
148	2	Primase
149	4	All of these
150	1	ds DNA
151	1	Transfection
152	3	DNA Ligase
153	2	RNA
154	4	Protein folding.
155	3	Ion-exchange chromatography
156	3	RNA
157	1	Histidine
158	3	The process of protein synthesis is inhibited in the target cells.
159	1	A - G
160	1	Positive regulator
161	1	Degeneracy
162	1	UAG
163	2	Translation
164	2	Xeroderma pigmentosum (XP)
165	1	FISH
166	2	RNA dependent DNA polymerase
167	2	Peptidyl transferase
168	3	Change of purine by a pyrimidine is known as transition

169	1	L-arginine
170	1	Inducible promoter
171	1	Hydrogen bond
172	1	Point mutation
173	1	Decarboxylase
174	3	Eastern
175	1	HPRT complete deficiency
176	4	Rho (r) factor
177	2	H2A-H2B bind to both the entry and exit ends of DNA in nucleosomes
178	4	All of the above
179	4	Allantoin
180	2	Inducer
181	3	S phase
182	3	1.50%
183	3	Reverse transcriptase
184	3	Sho sequence (2-5) repeat DNA
185	4	DNA nucleotide or fragment
186	1	It forms Okazaki fragments and it needs RNA primer
187	1	UGA codes for arginine
188	4	RNA polymerase
189	4	DNA topoisomerase
190	1	Peptidyl transferase
191	4	Uracil
192	3	Three consecutive nucleotide units

193	4	Incontinentia pigmenti
194	2	t-RNA
195	4	64
196	1	Closed circular
197	4	256
198	4	Point mutation
199	1	Histone
200	1	Jacob & Monad
201	3	Western blot
202	3	Adenine & Guanine
203	1	Homopolymer tailing
204	3	B
205	4	Not regulated
206	3	UV rays
207	1	PCR
208	1	Ribose
209	3	Glycine
210	4	All of the above
211	3	Targeted gene disruption
212	2	Peptide bond
213	2	Primer
214	3	Dideoxy ribonucleotides
215	4	Point mutation
216	2	mRNA
217	1	Positive regulator

218	1	Jumping genes
219	3	m-RNA
220	3	S
221	3	Hypoxanthine to xanthine
222	1	mRNA
223	2	Stabilization of mRNA
224	4	Arginase
225	2	tRNA
226	2	Protein Folding
227	2	Lysine and Arginine
228	1	Carried out by thermostable DNA polymerase
229	3	Catalyze formation of the peptides
230	1	Telomerase
231	4	Alteration of whole reading sequence
232	4	Chaperones
233	1	AUA codes for methionine in mitochondria
234	3	Chromosome Walking
235	2	Guanine
236	1	Peptidyl transferase
237	1	Aspartate
238	2	3
239	2	Negatively charged
240	4	All of the above
241	3	30
242	4	RB 1 gene

243	1	Peptidyl transferase activity
244	1	Reverse Transcriptase
245	4	Imino and lactim form of purine bases are more stable
246	1	Degeneracy
247	4	All the above
248	1	Polymerase Chain Reaction
249	1	Western blot
250	3	Telomerase
251	3	Akabori method
252	1	Transposons
253	4	Melting point of DNA is closely related to cytosine guanine content of DNA
254	3	Nucleotide excision repair
255	3	Codominant
256	1	Thymine
257	4	Thiamine
258	3	tRNA
259	1	DNA Polymerase I
260	2	Nohern blot
261	1	Dihydrouracil
262	1	Used in elongation and cause attachment of peptide chain to A-site of tRNA
263	2	Metaphase
264	2	Ester bond
265	2	Thymidine
266	3	DNA Polymerase III

267	4	100%
268	2	RNA dependent DNA polymerase
269	3	Magnesium
270	4	Terminal transferase.
271	3	S
272	1	RNA splicing
273	2	Glycine
274	3	Punctuated
275	3	Missense mutation
276	1	Allopurinol is effective to treat the acute attack
277	2	DNA amplification technique
278	3	Nucleotide excision repair
279	2	3
280	3	Urea cycle
281	3	Telomerase
282	1	Components are a, b, TS, D, E
283	4	Runs at 5'-3' direction
284	2	DNA ligase
285	2	Polylysine
286	3	tRNA of Alanine
287	2	Cobalamine
288	1	They prematurely terminate the DNA synthesized by reverse transcriptase.
289	4	All of the above
290	3	Barr body

291	1	Hoogsteen pairing
292	4	Presence of lactose and absence of glucose
293	2	UAA
294	3	Terminates protein synthesis
295	2	Ribose
296	1	Orotate phosphoribosyl transferase
297	1	ACCGTCGGA
298	3	Nucleolos
299	4	Cut DNA randomly
300	1	Uracil
301	1	Single nucleotide polymorphism
302	2	Nucleolus
303	2	Probe
304	1	AUG
305	2	Amplification of DNA in vitro
306	3	Barr body
307	3	To identify the functional elements of human genome
308	2	Restriction enzyme
309	3	Synthesis of RNA
310	1	Promoter region
311	2	Affinity electrophoresis
312	4	Transcriptionally active
313	2	Semiconservative
314	3	Defect in Splicing
315	3	Alteration in gene expression

316	4	Ribosomal entry site
317	1	Positive regulation
318	1	Cytosolic proteins
319	1	Nonsense mutation
320	3	Myotonic dystrophy
321	2	Two adjacent pyrimidine residues to form covalently bonded dimer
322	3	Specific amino acid
323	4	5'-GUACGUAA-3'
324	2	Formation of thymidine dimers
325	3	Urea
326	2	Telomerase
327	1	3xl09
328	2	Helicase
329	1	Knock out
330	1	Ornithine transcarbamylase
331	3	tRNA does not contain thymine as one of the pyrimidine bases
332	1	N formyl Met is the first t-RNA to come into action
333	1	Uracil
334	1	Cut ds DNA at specific sites
335	3	Only exons are present
336	2	Histones
337	1	Promoter region
338	3	Defect in splicing
339	1	Cytochrome C

340	1	Dihydrouracil
341	1	The nucleotide of one strand form bonds with nucleotide of opposite strand.
342	2	HGP
343	3	Adenine
344	4	HGP
345	1	Hypoxanthine-guanine phosphoribosyl transferase
346	2	tRNA
347	2	DNA-Histones
348	1	Thermostable enzyme is needed
349	1	Pyrimidine
350	1	ER and golgi body
351	2	RNA synthesis is inhibited.
352	2	Unwinding of DNA
353	1	(3 x 10)9
354	2	Guanine
355	1	Golgi bodies
356	2	Methylation
357	2	Plant with Luciferase Gene
358	4	Nonsense suppressor mutation
359	2	Episome
360	4	Peptidyl transferase
361	2	tRNA
362	1	Paracentric inversion
363	1	Xeroderma pigmentosa

364	3	DNA Polymerase III
365	4	They cleave both strands in duplex DNA
366	1	DNA polymerase
367	2	S
368	2	tRNA
369	3	Right handed anti parallel
370	3	DNA replication
371	3	Both
372	2	Glycine
373	1	Chemical synthesis of ribonucleotide
374	1	DNA
375	1	Circular double stranded
376	1	DNA
377	2	Half of the DNA will have no radioactivity
378	2	Hb is functionally a plasma buffer
379	1	Chaperones
380	4	Transfection
381	2	DNAase I
382	4	Nohern blot analysis
383	1	Metaphase
384	2	Golgi bodies
385	3	Taq polymerase
386	1	N5, N10- methylene tetra hydrofolate
387	1	Okazaki fragments
388	1	Peptidyl transferase

389	1	mRNA
390	1	ATP
391	1	Genomic imprinting
392	3	Adenine
393	1	Closed circular
394	3	Acrocentric
395	1	Dinitrobenzene
396	1	H1
397	1	Protein DNA interactions and histone modifications
398	2	RNA polymerase II
399	1	All nucleotides are involved in linkage
400	2	Ornithine
401	3	Specifically recognizes the promoter site
402	2	OMP
403	3	'Sticky patch' is generated as a result of replacement of a non polar residue with a polar residue
404	3	DNA polymerase III
405	1	AUG codon
406	1	Increase melting point (Tm)
407	2	Reverse transcriptase
408	2	tRNA
409	1	Alters gene expression
410	3	Right handed anti parallel
411	3	Ribonucleotide diphosphate
412	1	Xanthine oxidase

413	1	45, YO
414	1	Lyonisation
415	2	They cleave the DNA at specific sequence
416	4	All of the above
417	4	Restriction enzyme
418	1	G0-G1-S-G2-M
419	4	Elongation of proteins
420	4	Bloom syndrome
421	2	B-form
422	1	Thymine
423	2	1.0 and 6.2
424	3	Denature DNA, Anneal Primers, Extend DNA
425	4	Knockout
426	1	The erythromycin inhibited cytochrome P450
427	2	D arm is for ribosomal attachment
428	1	AUG
429	3	tRNA
430	1	G2
431	3	Si RNA interference
432	1	Transformation
433	2	Alanine
434	2	Monosomy
435	2	Guanidine
436	2	Encodes proteins of respiratory chain
437	4	mRNA of insulin

438	4	Microarray
439	1	Blood
440	1	Peptidyl transferase
441	2	Lagging strand
442	1	Somatic mutations theory
443	4	RNA dependent DNA polymerase
444	1	2' & 3' OH group
445	4	T-42, C=55, G=55, A=42
446	2	N formyl methionine tRNA will be the first t-RNA to come into action
447	1	5'-CGU-3'
448	3	DNA fragment with RNA head
449	3	Guanidoacetate
450	2	Methyl cytosine binding protein
451	3	Adenylic acid, Guanylic acid
452	3	Catabolism of purines
453	3	A hydrophobic signal sequence at its amino terminus
454	2	Liver
455	3	Technique to label DNA
456	3	Synthesis of purine nucleotides from purine bases
457	1	Serves as a scaffold for assembly of purine ring
458	3	Reverse transcriptase
459	2	Binding of aminoacyl-tRNA to the "A" site on the ribosome
460	1	It interacts transmembrane domain
461	4	Hypoxanthine Guanine Phosphoribosyl Transferase

462	4	Glycine
463	3	Cytosine
464	1	Decarboxylase
465	3	Nucleotide excision repair
466	3	Peptidyl transferase
467	2	UAG
468	1	Glycine
469	1	Dihydrofolate reductase
470	1	Promoter induction
471	3	Mismatch repair
472	4	Thymidylate synthase
473	3	Both lytic and lysogenic phases occurs together
474	3	Punctuation
475	4	Prokaryotic DNA Topoisomerase II
476	2	Catabolism of purines
477	3	Thymidine dimers
478	1	HGPase
479	2	S phase
480	3	Bacteriophages
481	4	Chaperones
482	4	All of the above
483	1	Conserved in nature
484	4	Karyotyping
485	3	DNA replication
486	3	Telomerase

487	2	S
488	1	Amplification of a target sequence of DNA
489	2	3'-5' phosphodiester bond
490	1	Uncondensed
491	3	Aspaate transcarbomoylase
492	2	Hydrogen bond
493	1	Nonsense mutation
494	4	All
495	4	S
496	4	Hypoxanthine-guanine Phosphoribosyl transferase (HGPRT)
497	1	UAG
498	1	Transfection
499	3	Chromosome 21
500	4	Dihydropyrimidine dehydrogenase
501	1	Klenow fragment
502	4	5'GUAGAUC3'
503	3	48 XXXX
504	2	Protein
505	1	Synthesize proteins
506	1	Smallest functional unit of genome
507	4	Transcription
508	1	Analysis of chromosomal structures
509	1	Cut ds DNA at specific sites
510	2	Cleavage of restriction enzymes

511	4	M
512	3	THF
513	2	PCR
514	3	To seal and nick okazaki fragments
515	3	Decreased expression of gene
516	1	DNA
517	1	HPLC
518	1	Autosomal dominant
519	2	5
520	2	Dihydropyrimidine dehydrogenase
521	1	Adenosine deaminase deficiency
522	1	Probe
523	2	1 in 150
524	1	Peptidyl transferase
525	3	Low mutation rate
526	2	3 billion
527	3	Deamination of cytidine to uridine
528	3	Hypoxanthine Guanine Phosphoribosyl transferase
529	2	RNA
530	2	Is ored by an alternating GC sequences
531	3	AUA
532	4	All of the above
533	1	FISH
534	1	G1
535	1	ELISA

536	3	Telomerase
537	2	5'-TTAGGG-3'
538	1	1%
539	1	A-DNA like conformation
540	1	Overlapping
541	3	NAD
542	1	Attenuation by operon
543	1	Uracil
544	3	PCR
545	3	Differential RNA Processing
546	3	Nitrogen-4
547	4	Degenerate
548	4	Promoter region
549	3	Thymine
550	1	Liver
551	4	Linking number
552	4	Site directed mutagenesis
553	1	Cytosolic proteins
554	4	UCA
555	4	Trisomy 22
556	2	Synthesise RNA primers
557	3	Deamination of cytidine to uridine
558	1	Positive regulator
559	4	Point mutation
560	1	ATP

561	2	Transposons
562	2	Agarose gel electrophoresis
563	2	Nucleotide excision defect
564	2	Aspartate
565	4	All of the above
566	4	Organ transplantation
567	4	Firmly binds two additional half-turns of DNA
568	1	DNA ligases
569	3	Differential RNA processing
570	1	Viral vaccine production
571	4	Severe Combined Immunodeficiency Disease
572	2	Variable number tandem repeats
573	1	Palindromic
574	2	Overlapping
575	2	5'AATTCGCATG3'
576	4	S
577	3	DNA polymerase III
578	3	Phosphorylated Nucleosides
579	2	Erythromycin
580	2	Angelman syndrome
581	2	Glycine
582	3	Reverse transcriptase
583	1	146
584	3	B
585	3	Adeno viral vectors

586	1	ATP
587	3	Helicase
588	2	No change in Amino acid sequence in protein
589	2	Silent
590	3	Frame shift mutation
591	2	DNA polymerase
592	3	Nucleotide excision rapair
593	4	1 in 1,000
594	3	3
595	3	Deamination of cytidine to uridine
596	3	E
597	3	Telomerase
598	4	Microarray
599	2	Deoxy ribonucleic acid
600	2	Gel electrophoresis
601	3	Short sequence (2-5) repeat DNA
602	2	Helicase
603	3	Arginase
604	1	S phase
605	1	Lysine
606	3	DNA polymerase III
607	2	b
608	1	3 base pair
609	3	Cistron
610	2	Silent

611	4	An N-Terminal Methionine in the Mature Protein Is - Unlikely; A Signal Peptide Located at - Amino terminus; Synthesized on Which Type of Ribosome? - Rough; Embedded Within the ER Membrane? - No
612	2	DNA Polymerase II
613	1	Immoalise myeloma cell
614	4	Tryptophan
615	3	UGA
616	4	The CAP site is occupied and the operator site is free
617	4	All the above
618	4	C -D-B- A
619	4	6 billion base pairs (bp)
620	3	A sho RNA molecule
621	2	Negatively charged
622	3	XD
623	2	CCGAATCCATGTTACGCGAT
624	4	Regulator gene is inducible
625	2	GIT mucosa
626	1	Topoisomerase
627	1	DNA Ligases
628	2	DNA
629	2	50%
630	1	N linkage
631	3	Transformation
632	1	Gauchers disease
633	3	Non-Homologous End Joining

634	2	Ornithine
635	1	A-T, C-G
636	2	Frameshift mutation
637	4	None
638	3	Reading frame changes downstream to the mutant site
639	3	To identify desired chromosal DNA inse in plasmid vectors
640	3	Brain
641	2	Frame-shift mutation
642	1	Primer
643	2	Nucleotide excision repair
644	3	Beta alanine
645	1	Hemophilia A
646	1	20
647	4	Aspaate
648	2	Uric acid
649	2	Mitochondrial DNA
650	3	Acetylation of histones
651	1	Guanine
652	4	Thermolabile enzymes
653	3	5'-UGGAAUUGUAUG-3'
654	3	Base + sugar + phosphate group
655	2	Taq polymerase
656	4	Huntington's disease
657	3	Hypoxanthine - guanine phosphoribosyl transferase defect

658	1	Template
659	2	Epigenetics
660	3	Gene Silencing RNA
661	3	Ribozyme
662	3	T=40, C=50, G=60, A=44
663	1	FISH
664	2	Adenosis polyposis coli
665	1	Positive regulator
666	3	G banding
667	3	DNA Primase
668	4	FISH
669	2	HGP (total)
670	2	Allopurinol
671	4	UGG
672	3	75%
673	1	Peptidyl Transferase activity
674	1	AUG
675	3	Translocation
676	2	Carbamoyl phosphate synthetase-II
677	1	Developed from DNA inseion into feilized egg
678	1	51-31
679	1	Replication
680	3	Catalyze formation of the peptides
681	3	Transcription repression
682	4	tRNA

683	3	Nucleic acid
684	4	Structural component of membrane
685	3	Helicase
686	4	Puromycin
687	2	Autoimmune disorders
688	1	Thymidine dimmers repair
689	1	Actinomycin D
690	2	Seals the single strand nick between the nascent chain and Okazaki fragments on lagging strand

