

MCQS FILE OF BIF 101

1) All organisms are composed of

Cells

2) Cells are the.....unit of life.

Basic

3) And comes from the cells

Pre-existing

4) The tendency of an atom to attract electrons towards itself.

Electronegativity

5) Living tissues are.....water

70

6)..... kinds of macromolecules are present.

Four

7) Macromolecules areof smaller monomers.

Polymers

8) Cells areto maintain area to volume ratio.

Small

9) Plasma membrane Traffic.

Regulate

10) Nucleoid region contain....

DNA

11) An octagon protein complex surround....

Nuclear pore

12)Protein fibril made....

Cage like structure

13)Molecular biology grew from the biochemistry and

Disciplines of genetics

14)In the present age it is in the midst of scientific revolution.

Two

15)Synthesis of urea by..... in....

Friedrich Wohler, 1828

16)First enzymes was....

Diastase

17)Diastase was discovered by.....in....

Anselme payen, 1833

18)Mendel experiment on garden pea by....in...

Gregormendel,1865

19)Chromosome theory of inheritance by.....in....

Thomas and Hunt morgan,1910

20)Discovery of DNA by....in....

Friedrich meisner,1869

21)Cell free fermentation by...in....

Eduard Buchner,1897

22)Crystallized enzyme urease by....in....

James B summer, 1926

23)Physical evidence of Recombination by.....in.....

Barbara mac clintock and harriet crieghton,1931

24)One gene one enzyme was by....in....

Gergor beadle and Edward tatum,1941

25)James Watson and francis crick discover....in....

Double helix structure of DNA,1953

**26)DNA is a hereditary material demonstrate
by...in...**

Oswald avery and his colleagues, 1944

27)Confirmed by.... In.....

Alfred harshey and Martha chase, 1952

28)InFrancis laid out....

1957,Central dogma of molecular biology

29)which foretold relationship between....

RNA, DNA and proteins

**30)In....Mathew meslson and franklin stahl proved
that replication of....**

Semi-conservative

**31)Marshell nerinberg and Gobind Khorana
cracked thein...**

Code,1960

32)Codon stands for...

One amino acid

33)They found that three bases constitute a code word called....

Codon

34)In 1970....was discovered.

Gene cloning

35)Human genome project was launched in....

1990

36)And completed in.....

2003

37)Nuclei acid are important groups of...

Bi molecules

38)Responsible for transmission and

Storage

39)Nucleic acid are..... compounds.

Polymeric

40)Repeating unit of nucleic acid is...

Nucleotides

41)Nucleic acid consist....

RNN,DNA

42)DNA is a polymer of.....

Deoxyribonucleotides

43)Deoxyribonucleotides composed of

.....components.

Three

44) Three components are.....

Phosphoric acid, nitrogenous base, deoxyribose

45) A molecule containing all these three molecules is called.....

Nucleotide

46) While a molecule without the phosphate group is called.....

Nucleoside

47) Nucleotide =

Nucleoside + Phosphoric acid

48) Nucleoside =

Nucleotide - phosphoric acid

49) There are Types of deoxyribonucleotides.

Four

50) Four types are.....

Deoxythymidine, Deoxycytidine, Deoxyguanosine, Deoxyadenosine

51) These four structures make up the structural unit of....

DNA

52) Successive nucleotides are joined together by.....

Phosphodiester bond

53)base composition of DNA varies form one.....to another.

Specie

54)Study of genes, heriditery and chromosomes is called.....

Genetics

55)Genetic makeup of organism is called.....

Genotype

56)Physical appearance of organism is called....

Phenotype

57)First proteins sequenced in.....by.....method.

1951, Sanger and tupy

58)Atlas of protein in.....by...

1960, Margret dayhoff and his coll

59)Genome informatics is the fisd in which....and....techniques are applied.

Computational, statistical

60)E-coli is

Bacteria

62)S-cerevisiaeis

Yeast

63)C-elegans is....

Worm

64)D.Melanogaster is....

Fly

65)Danio rerio is

Zebra fish

66)Mus Musculus is...

Mouse

67)Homo sapiens is...

You and me

68)Arabidopsis is...

Plants

69)Prokaryotes are the organism whose genetic material is enclosed in a nuclear membrane.

Not

70)First prokaryotic genome.....

Hemophilus influenza

71)Prokaryotes have.... Genomes.

Simple

72)Euakaryotes have.....genomes.

Larger

73)Euakaryotes have.... In their protein coding.

Introns

74)Densely packed region....

Heterochromatin

75)Lightly packed region....

Euchromatin

76)Densely heterochromatin

Take more color

77)Lightly euchromatin....

Take less color

**78)Most common in children whose parents are
were first cousin....**

12.5%

79)Humans have over..... genes.

25000

**80)These genes may produce.....different
proteins.**

>250000

81)We need help of..... to store and recall data.

Computers

82)Computers can process this information.

Quickly

**83)If you carefully search this online data with a
bit of biology it is.....**

Gold mine

84)Biology easily has.....exciting years problems.

500

85)Life, disease and..... Are better understood.

Evolution

86) can be better developed after understanding molecular basis of life.

Drugs

87) and systems biology are other research areas in bioinformatics.

Protein structure, protein-protein interaction

88) Bioinformatics has enabled us to generate....data and its utilization.

Omic

89) Bioinformatics is relatively scientific area.

Young

90) Identification of hitherto unknown types as well as

Roles of RNA

91) Bioinformatics is full of.....and.....

Challenges, opportunities

92) Accurate solution of protein structure is one of the..... Problem.

Toughest

93) Some medicines have.....on patients.

Side effects

94)..... is the century of bioinformatics.

21

95)An era of personalized medicines and of several common diseases.

Eradication

96)Genetic information flow fromto.....

DNA, RNA

97)All living cells their DNA when they divide.

Replicate

98)During cell division each daughter cell.... A copy of genome from the aren't cell.

Receive

99)..... is the process by which two identical copies of DNA are made from an original molecule.

Replication

100)Replication occurs in the cells to cell division.

Prior

101)Important is that information does not From protein to DNA or RNA.

Flow

102)Flow of information from RNA DNA.

Backwards

103)By the end of Hypothesis was adopted chromosomal DNA function as a template.

1953

104)RNA molecules are move in

Cytoplasm

105)In referred the information of central dogma.

1953

106)Central dogma referred by

Francis Crick

107)RNA chains are acts as a template for the synthesis of

DNA

108)Central dogma are original proclaimed Ears. 50

109)Transformation of information in DNA in those molecules is termed....

Central dogma

110)Central dogma is...

DNA>RNA>Proteins

111)Proteins are used in constructing on Cells

112)DNA and RNA molecules are built up from

Types of molecules.

Four

113)These four types of molecules are called

Nucleotides

114)Nucleotides are....

Adenine, Cytosine, uracil and guanine

115)DNA has

A, T ,C, G

116) RNA has ...

A, U, G, C

117)DNA is stranded.

Double

118)RNA is Stranded.

Single

119)RNA helps to produce....

Proteins

120)..... mRNA nucleotides forms a codon.

Three

121)tRNA has Nucleotides.

75-80

122)Conformation of tRNA allows it to bind ...

Ribosomes

123).... Are built up of proteins and carbohydrate.

Cells

124)Molecules are produced after Of DNA into proteins.

Transformation

125)Adenosine pairs with ...

Thymine

126)Cytidine pairs with ...

Guanosine

127)Process of decodes these bases in DNA.

Transcription

128)In RNA Uracil only pairs with

Adenosine

129)DNA gives rise to

RNA

130)There are Types of ribonucleotides.

Four

131)Ribonucleotides are depending on the types of bases.

Nitrogenous

132)There are Types of ribonucleic acid.

Three

133)Three ribonucleic acids are....

mRNA, tRNA, rRNA

134)mRNA is the types of RNA that carries information from.... To...

DNA to proteins

135)Process of forming mRNA is called....

Transcription

136)mRNA maybe

Monocistronic

137)Length of mRNA is depend on

Length of gene

138) serve as adapter molecules in the process of protein synthesis.

tRNA

139)They are Linked to an amino acid at one end.

Covalently

140).... Are components of ribosomes.

rRNA

141)rRNA is the material.

Predominant

142)rRNA constitutes about Of ribosomes.

60%

143)rRNA has number of

Functions

144)mRNA is ... stranded when it is formed from DNA.

Single

145)Conformation is mainly achieved by interactions.

Base stacking

146)Protein coding region of mRNA is composed of non-overlapping string of codon called....

ORF

147)Translation starts at 5' and ends at 3'

148)First and last codon of an ORF are called.... Start and stop codon

149)In bacteria start codon is usually Are also used.

5'- AUG-3', but 5'-GUG3' and sometimes even 5'-UUG-3'

150)Eukaryotic cells always use ... as start codon. 5'-AUG-3'

151)Start codon has ... functions. Two

152)Eukaryotic mRNA almost always contain a ORF.

Single

153) Prokaryotic cells have mRNA always contain aORF.

Two or more

154) mRNAs containing multiple ORFs are known asRNAs.

Polycistronic

155) Those encoding a single ORF are known asRNAs.

Monocistronic

156) To facilitate binding by a ribosome, many prokaryotic ORFs contain a short sequence upstream (on the 5' side) of the start codon called

RBS

157) The RBS typically located Bp.

3-9

158) This phenomenon of linked translation between overlapping ORFs is known as

Coupling translation

159) Heart of protein synthesis is...

Translation

**160)tRNA molecules are between ... and ...
nucleotides.**

75,95

161)Dihydrouridine derived from ...

Uridine

162)Hypoxanthine plays a role in the process of

Codon

**163) tRNA molecules to which an amino acid is
attached are said to be**

Charged

164) tRNAs that lack an amino acid are said to be

.....

Un-charged

165)Acyl linkage is bond.

High energy

**166)Hydrolysis results in a change in free
energy.**

Large

167)Hydrolysis results in a large ... in free energy.

Change

**168)All aminoacyl-tRNA synthetases attach an
amino acid to a tRNA in steps.**

Two

169)Two enzymatic steps are

Adenylation , tRNA charging

170)Each of the ... amino acids is attached to the appropriate tRNA.

20

171)Most amino acid are specified by Codon.

More than one

172).... Is the macromolecular machine that directs the synthesis of proteins.

Ribosomes

173)Ribosome is larger and more Than the minimal machinery.

Complex

174)Polymerizing amino acid is composed of at-least

Three

175)And more than different proteins.

50

176)Translation takes place at a rate of amino acid per second.

Only two to 20

177)In prokaryotes transcription and translational machinery are located in

Compartment.

Same

178) Ribosomes catalyze a ... Chemical reaction.

Single

179) Ribosomes are composed of ... Subassemblies.

Two

180) Subassemblies of RNA are known as

Large and small units

181) Large subunit contains

Peptide transferase center

182) Peptidyl transferase is responsible for the ... Of peptide bonds.

Formation

183) Small units contain ...

Decoding center

184) Both small and large units are buried within the intact

Ribosomes

185) A-site is the binding site for

Aminoacyl-tRNA

186) P-site is the binding site for

peptidyl tRNA

187) Stop codons are recognized by proteins called..

Release factors

189)..... involves coding of proteins by RNA at ribosomes.

Translation

190)Sequence of amino acid are linked by ...

Peptide bond

191)Proteins are polymers of....

Amino- acids

192)Proteins are range in size from small to

Large

193)Twenty different proteins are called

proteins.

Standard

194)Each type of protein has a ... amino acid sequence.

Unique

195) Linus Pauling and Robert Corey carefully analyzed the....

Peptide bond

196)Six atoms of peptide group are

Planar

197) In principle, ϕ and ψ can have any value between....

+180, -180

198)Secondary structure of protein refers to

Local conformation

199)Backbone of polypeptide chain extend into

Structure.

Zig- zag

200)Three dimensional arrangements of atoms of proteins are

Tertiary structures

201) A multi-subunit protein is also referred to as

a....

Multimer

202) A multimer with just a few subunits is called.....

Oligomer

203)A single subunit is called...

Protomer

204)Oligomers can have either symmetry.

Rotational, Helical

205) The process of inexact matching while keeping in view the conserved

residues is called sequence.....

Alignment

206)Pairwise sequence alignment helps to compare Sequence.

Two

207) Gaps are ... counted.

Not

208) Multiple sequence alignment involves comparison of ... or more sequences.

Three

209) Pairwise alignment either local or ...

Global

210) MSA can help align Sequences.

Multiple

211) Progressive alignment can help perform ...

MSA

212) CLUSTAL is an ...

Online tool

213) Pairwise alignment is the alignment of Sequences.

Two

214) CLUSTAL is an online tool to perform ...

MSA

215) BLAST can be developed in ...

1990

216) BLAST is a basic

Local alignment tool

217) Main types of BLAST .

Two

218)Two main types of BLAST are

Proteins, nucleotides

219)Smith waterman can perform ...

Local

220)Needleman waterman calculates...

Global

221)FASTA developed in

1998

221)First Genebank in

1982

222)Genebank is now under

NCBI

223)EMBL developed in ...

1980

224)DDBJ established in

1984

225)First protein sequenced was collected in...

1951

226) Protein sequence collected by....

Sanger and Tuppy method

227)Atlas of protein sequenced by In....

Margrett and DAYhoff in 1960

228)Swiss prot is collaboration betweenand ...

EBI, SIB

229)GEO is a

Public repository

230)Informatics in health care is called ...

Health informatics