

Sr No.	PhD Bioinformatics
1	Find the missing term in the series: 3, 20, 63, 144, 275,?
Alt1	354
Alt2	468
Alt3	548
Alt4	554

2	Choose word from the given options which bears the same relationship to the third word, as the first two bears: Anaemia: Blood :: Anarchy:?
Alt1	Lawlessness
Alt2	Government
Alt3	Monarchy
Alt4	Disorder

3	Teeth is related to Grit in the same way as Fist is related to.....?.....
Alt1	Blow
Alt2	Hand
Alt3	Open
Alt4	Clench

4	Select the lettered pair that has the same relationship as the original pair of words: Reproof: Scold
Alt1	Respite: Spite
Alt2	Romantic: Strong
Alt3	Salient: Prominent
Alt4	Chastise: Erring

5	Choose the alternative, which is similar to the given words: Bleat : Bray : Grunt
Alt1	Bark
Alt2	Croak
Alt3	Cry
Alt4	Scream

6	Spot the defective segment from the following:
Alt1	I wish
Alt2	I have a car
Alt3	to go shopping
Alt4	in the rain

7	Choose the meaning of the idiom/phrase from among the options given: Out of sorts
Alt1	unwell
Alt2	irrelevant
Alt3	in disorder
Alt4	out of love

8	The rowdy was at last done -----.
Alt1	over
Alt2	off
Alt3	away
Alt4	away with

9	Choose the option closest in meaning to the given word: BUCOLIC
Alt1	rustic
Alt2	utopian
Alt3	peaceful
Alt4	noisy

10	Choose the antonymous option you consider the best: CALLOW
Alt1	immature
Alt2	green
Alt3	clumsy
Alt4	veteran

11	If the seventh day of a month is three days earlier than Friday, what day will it be on the nineteenth day of the month ?
Alt1	Sunday
Alt2	Monday
Alt3	Wednesday
Alt4	Friday

12	Water is related to Ocean in the same way as Snow is related to
Alt1	Peaks
Alt2	Hail
Alt3	Glacier
Alt4	Mountain

13	A's father's brother's father is D. how is D related to A ?
Alt1	Father
Alt2	Grandfather
Alt3	Uncle
Alt4	Son

14	Find the odd man out:
Alt1	Squash
Alt2	football
Alt3	hockey
Alt4	Cricket

15	In a certain code language, if CRICKET is coded as 3923564, ROCKET is coded as 913564 and KETTLE is coded as 564406, then how is LITTLE coded in that language ?
Alt1	024406
Alt2	240406
Alt3	20446
Alt4	200446

16	At what angles are the hands of a clock inclined at 20 minutes past 7 ?
Alt1	80 degrees
Alt2	90 degrees
Alt3	100 degrees
Alt4	120 degrees

17	Odd one out: 2,4,6,8
Alt1	2
Alt2	4
Alt3	6
Alt4	8

18	Which is smallest:
Alt1	Quarter of 140
Alt2	Double of 4×4
Alt3	7×5
Alt4	Half of 72

19	What is the next alphabet in the following series Z D X H V L T ?
Alt1	Q
Alt2	N
Alt3	P
Alt4	O

20	How many times is the abbreviation FB shorter than the word FACEBOOK?
Alt1	4times
Alt2	3times
Alt3	5times
Alt4	Many

21	Margaret Dayhoff developed the first protein sequence database called
Alt1	SWISS PROT
Alt2	PDB
Alt3	Atlas of protein sequence and structure
Alt4	Protein sequence databank

22	Which of the following is a sequence alignment tool
Alt1	BLAST
Alt2	PRINT

Alt3	PROSITE
Alt4	PIR

23	The term cell was coined by
Alt1	Schwann
Alt2	Robert Hooke
Alt3	de Bary
Alt4	Tatum

24	Molecular weight of a drug to satisfy Lipinski rule should be
Alt1	Below 500Mol
Alt2	Below 500 Dalton
Alt3	Above 500Mol
Alt4	Above 500 Dalton

25	The Neighbour-Joining method is
Alt1	Closely related method
Alt2	Distance clustering method
Alt3	Single sequence method
Alt4	Maximum likelihood method

26	It is connecting fluid of the cell between the nucleus and cell membrane
Alt1	Ribosome
Alt2	Mitochondria
Alt3	Cytoplasm
Alt4	Golgi apparatus

27	Which one is commonly known as Kornberg enzyme?
Alt1	DNA polymerase
Alt2	RNA polymerase
Alt3	RNA dependent DNA polymerase
Alt4	Restriction enzyme

28	Bragg's equation is
Alt1	$2l = nd \sin q$
Alt2	$nl = 2d \sin q$
Alt3	$nd = 2l \cos q$
Alt4	$2l = 2d \sin q$

29	Cell or tissue death within a living body is called as :
Alt1	Neutrophillia
Alt2	Nephrosis
Alt3	Necrosis
Alt4	Nepolasis

30	Hydrogen bond is best represented as the electrostatic attraction between:
Alt1	A hydrogen covalently bounded to an electronegative atom and another hydrogen atom

Alt2	A hydrogen covalently bounded to an electronegative atom and another electronegative atom
Alt3	Two electronegative atoms and a hydrogen atom
Alt4	Two hydrogen atoms

31	When there are two electrons in the same orbital, they have:
Alt1	same spin
Alt2	opposite spin
Alt3	Same or Opposite spin
Alt4	No spin

32	Which of the following chemical materials is responsible for the depletion of ozone layer
Alt1	Nitrous oxide
Alt2	Sulphur dioxide
Alt3	Carbon dioxide
Alt4	Chlorofluorocarbon

33	Hydrogen gas is not found in atmosphere due to
Alt1	It is highly inflammable
Alt2	It is the lightest gas
Alt3	It is absorbed by plants
Alt4	It immediately combines with oxygen to form water

34	Semiautonomous organelle in the cell is
Alt1	Peroxisomes
Alt2	Endoplasmic reticulum
Alt3	Golgi bodies
Alt4	Chloroplast

35	Which device is used to measure the wavelength of X-rays?
Alt1	Framing square
Alt2	Spectrometer
Alt3	Manometer
Alt4	SWR meter

36	All are genome sequencing strategies except:
Alt1	Edman degradation method
Alt2	Short gun library
Alt3	Whole genome short gun sequencing
Alt4	Directed gene sequencing

37	The newton's first law is also referred to as:
Alt1	Law of inertia
Alt2	Law of friction
Alt3	Law of moments
Alt4	Law of motion

38	Assembly of two subunits 40 S and 60 S of the ribosome is
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Alt1	100 S unit
Alt2	80 S unit
Alt3	70 S unit
Alt4	90 S unit

39	Cause of rainbow formation is:
Alt1	Refraction, reflection and dispersion
Alt2	Refraction and dispersion
Alt3	Refraction and scattering
Alt4	Diffraction and reflection

40	The first completed genome sequencing project is of
Alt1	E.coli
Alt2	Haemophilus influenzae
Alt3	ΦX174
Alt4	Drosophila melanogaster

41	Tesla is a standard unit of which of the following?
Alt1	Magnetic flux density
Alt2	Magnetic induction
Alt3	Magnetic field
Alt4	Magnetic moment

42	The amino acid commonly used as an ingredient in the buffers of SDS PAGE.
Alt1	Aspartic acid
Alt2	Glutamic acid
Alt3	Glycine
Alt4	Aspartic acid and lysine together

43	Which of the following is an example for homopolysaccharide?
Alt1	Cellulose
Alt2	Starch
Alt3	Glycogen
Alt4	All of these

44	Firewall is used in PC for
Alt1	security
Alt2	authentication
Alt3	data transfer
Alt4	all of the above

45	The reduction of virulence of a microorganism is known as:
Alt1	Attenuation
Alt2	Exaltation
Alt3	Inactivation
Alt4	Hibernation

46	Which of the following cannot be a wireless network
Alt1	LAN
Alt2	WAN
Alt3	MAN
Alt4	none of the above

47	To be evolutionary successful mutation must takes place in
Alt1	Somatic cell
Alt2	Gametic cells
Alt3	Plasma protein
Alt4	Endoplasmic reticulum

48	Which of the following layers of an ISO-OSI reference model is for networking support?
Alt1	network layer
Alt2	application layer
Alt3	session layer
Alt4	physical layer

49	Which form of DNA has a left handed helix?
Alt1	A form of DNA
Alt2	B form of DNA
Alt3	C form of DNA
Alt4	Z form of DNA

50	Which one of the following can be used for internet protocol?
Alt1	http
Alt2	html
Alt3	visual basic
Alt4	ftp

51	Cache memory acts between
Alt1	CPU and RAM
Alt2	RAM and ROM
Alt3	CPU and Hard Disk
Alt4	None of these

52	Amount of DNA is measured by
Alt1	Chromatography
Alt2	Using radioactive atoms
Alt3	Autoradiography
Alt4	Quantitative Cytophotometer

53	A group of ribosomes bound together by the help of mRNA is called
Alt1	Polysomes
Alt2	Poly-deoxiribonucleotide
Alt3	Poly- ribonucleotide
Alt4	Protein

54	Which of the following architecture is essential for a super computer
Alt1	Single user
Alt2	bus architecture
Alt3	multiple channel
Alt4	vector processing

55	Matrices describe the property that one base or amino acid has changed during course of evolution
Alt1	Position specific scoring matrix
Alt2	block substitution matrix
Alt3	Point accepted mutation matrix
Alt4	mutation data matrix

56	Threading is:
Alt1	genome annotation
Alt2	sequence alignment
Alt3	protein structure prediction
Alt4	sequence analysis

57	For the construction of Ramachandran's plot values of Psi and Phi are plotted. The value of Phi is the rotation angle around:
Alt1	N – C α bond
Alt2	C α – C bond
Alt3	C – N bond
Alt4	N – H bond

58	Databases such as CATH and SCOP are used to identify_____.
Alt1	the structural family to which a protein belongs.
Alt2	the generic family to which a protein belongs.
Alt3	homologous proteins
Alt4	analogous proteins.

59	The first mRNA codon to specify an amino acid is always
Alt1	TAC.
Alt2	UAA
Alt3	AUG.
Alt4	UAG.

60	Pluripotent cells are those that:
Alt1	are terminally differentiated.
Alt2	can differentiate into a limited range of cell types.
Alt3	can differentiate into any cell type.
Alt4	constitute all the cells of the body except the germ cells.

61	A DNA strand with the sequence AACGTAACG is transcribed. What is the sequence of the mRNA molecule synthesized?
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Alt1	AACGTAACG
Alt2	UUGCAUUGC
Alt3	AACGUAACG
Alt4	TTGCATTGC

62	Dietary fats are transported as
Alt1	Chylomicrons
Alt2	Liposomes
Alt3	Lipid globules
Alt4	Oil droplets

63	Which of the following techniques is used for the detection of genes of interest
Alt1	Southern Blotting
Alt2	Polymerase chain reaction
Alt3	Northern Blotting
Alt4	DNA foot printing

64	What is the function of ribosomes
Alt1	Energy production
Alt2	Protein synthesis
Alt3	Genetic reproduction
Alt4	Locomotory functions

65	The microbiological term describing the spherical shape of bacteria is
Alt1	Coccus
Alt2	Bacillus
Alt3	Spirillum
Alt4	Pleomorphic

66	Which of the following is a Biomarker
Alt1	A protein that is uniquely produced in a particular condition such as diseased state
Alt2	Any molecule in the genome or proteome
Alt3	A marker that is genetically inherited by the offsprings
Alt4	The colour coding of different genes in the genome

67	Substances that dissociate and conduct electricity in aqueous solutions are
Alt1	Electrolytes
Alt2	Colloids
Alt3	Emulsoids
Alt4	Conductors

68	Colour of thin film results from
Alt1	Dispersion of light
Alt2	Interference of light
Alt3	Absorption of light
Alt4	Scattering of light

69	Crystallography studies the analysis of
Alt1	X-ray spectra of elements only
Alt2	X-ray spectra of elements and the study of crystal structure
Alt3	UV spectra of elements and the study of crystal structure
Alt4	Visible spectra of elements and the study of crystal structure

70	The general formula of monosaccharides is
Alt1	$C_nH_{2n}O_n$
Alt2	$C_{2n}H_{2O_n}$
Alt3	$C_nH_{2O_{2n}}$
Alt4	$C_nH_{2n}O_{2n}$

71	At a pH below the isoelectric point, an amino acid exists as
Alt1	Cation
Alt2	Anion
Alt3	Zwitterion
Alt4	Undissociated molecule

72	The cholesterol molecule is
Alt1	Benzene derivative
Alt2	Quinoline derivative
Alt3	Steroid
Alt4	Straight chain acid

73	A peptide bond is
Alt1	Rigid with partial double bond character
Alt2	Planar, covalent
Alt3	covalent
Alt4	All of the above

74	The mineral present in the human body in larger amounts than any other cation is
Alt1	Sodium
Alt2	Calcium
Alt3	Potassium
Alt4	Iron

75	Newton-Raphson method is applicable to the solution of
Alt1	Both algebraic and transcendental Equations
Alt2	Both algebraic and transcendental and also used when the roots are complex
Alt3	Algebraic equations only
Alt4	Transcendental equations only

76	A numerical description of the outcome of an experiment is called a
Alt1	descriptive statistic
Alt2	probability function
Alt3	variance
Alt4	random variable

77	Way of getting information from measuring observation whose outcomes occurrence is on chance is called
Alt1	beta experiment
Alt2	random experiment
Alt3	gamma experiment
Alt4	alpha experiment

78	A process by which we estimate the value of dependent variable on the basis of one or more independent variables is called
Alt1	Correlation
Alt2	Regression
Alt3	Residual
Alt4	Slope

79	What researcher proposed "shotgun sequencing"
Alt1	Todd Golub
Alt2	Frederick Sanger
Alt3	Craig Venter
Alt4	Stephen Fodor

80	Labeling a stretch of DNA according to its function is called
Alt1	recombinant DNA technology
Alt2	functional analysis
Alt3	annotation
Alt4	screening

81	The conservation of blocks of genes that have moved to different chromosomes is called
Alt1	hitchhiking DNA.
Alt2	lateral gene transfer.
Alt3	conserved synteny.
Alt4	gene expression.

82	The term attribute refers to a _____ of a table
Alt1	Record
Alt2	Column
Alt3	Tuple
Alt4	Key

83	Tables in second normal form (2NF):
Alt1	Eliminate all hidden dependencies
Alt2	Eliminate the insertion anomalies
Alt3	Have a composite Key
Alt4	Have all non-key fields depend on the whole primary key

84	The term 'applet' is associated with
Alt1	C

Alt2	C++
Alt3	Java
Alt4	Javascript

85	A single mRNA that encodes several proteins and is the characteristic of many bacterial and chloroplast/mitochondrial mRNAs is called
Alt1	Monocistronic mRNA
Alt2	Heterogenous nuclear RNA
Alt3	Heteronuclear Ribonuclear protein
Alt4	Polycystronic mRNA

86	While doing BLAST, good homology is indicated by
Alt1	High Coverage, low bitscore and high E-value
Alt2	Low coverage, high number of gaps, low E-value and low identity
Alt3	High identity, high coverage, high bitscore and high E-value
Alt4	High identity, high coverage, high bitscore and low E-value

87	What step of DNA sequencing is skipped during shotgun sequencing?
Alt1	computer analysis
Alt2	cloning of DNA fragment
Alt3	primer reactions
Alt4	mapping step

88	The most effective way to analyze variation at the whole genome level is to use
Alt1	frequency of tandem clusters
Alt2	number of transposons
Alt3	single nucleotide polymorphisms (SNPs).
Alt4	segmental duplications.

89	Fatty acids can be transported into and out of cell membrane by
Alt1	Active transport
Alt2	Facilitated transport
Alt3	Diffusion
Alt4	Osmosis

90	In the Gauss elimination method for solving a system of linear algebraic equations, triangularzation leads to
Alt1	Diagonal matrix
Alt2	Lower triangular matrix
Alt3	Upper triangular matrix
Alt4	Singular matrix

91	Flat surface in which two points are joined by using straight line is classified as
Alt1	line
Alt2	ray
Alt3	intersecting line
Alt4	plane

92	Two events, A and B, are mutually exclusive and each have a nonzero probability. If event A is known to occur, the probability of the occurrence of event B is
Alt1	one
Alt2	any positive value
Alt3	zero
Alt4	any value between 0 to 1

93	Architecture of the database can be viewed to have
Alt1	Two levels
Alt2	Four levels
Alt3	Three levels
Alt4	One level

94	Which of the following pieces of information would not be required for a computer program to determine exon/intron structure of a gene?
Alt1	Genetic codon table correlating codons to amino acids.
Alt2	The nucleotide sequence of the mRNA
Alt3	Splice site signals for the species under study.
Alt4	All of these pieces of information would be required.

95	PSI blast is
Alt1	Protein specific implementation
Alt2	Protein specific iterative
Alt3	Paired specific iterative
Alt4	Paired specific implementation

96	_____ function by breaking down a large problem into a series of smaller problems.
Alt1	Dynamic programming
Alt2	MSA
Alt3	Heuristic method
Alt4	Pair wise alignment

97	Which one of these is Bragg's equation
Alt1	$2d \sin\theta = n\lambda$
Alt2	$2d = n\lambda$
Alt3	$2d \tan\theta = n\lambda$
Alt4	$\sin\theta = \lambda$

98	_____ refers loosely to the process of semi-automatically analysing large databases to find useful patterns.
Alt1	Data Mining
Alt2	Data Warehousing
Alt3	DBMS
Alt4	Data mirroring

99	Which operator is used to define a member of a class from outside the class definition
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Alt1	::
Alt2	->
Alt3	:
Alt4	>>

100	In E-R Model the ellipses represents
Alt1	entity
Alt2	attributes
Alt3	links
Alt4	relationships