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बडा लालपुर, चांदमारी, सिंधोरा रोड, वाराणसी

1. Thanatology deals with:
 - (a) Metallic poison
 - (b) Drug abuse
 - (c) Bones
 - (d) Death
2. We use which element to galvanize materials to prevent them from rusting?
 - (a) Zinc
 - (b) Titanium
 - (c) Boron
 - (d) Manganese
3. Which of the following halogen is a liquid at room temperature?
 - (a) Bromine
 - (b) Chlorine
 - (c) Iodine
 - (d) Fluorine
4. Common TV remote controls send signals using:
 - (a) LASER
 - (b) Infrared rays
 - (c) Radio waves
 - (d) Gamma rays
5. Glass is a:
 - (a) Super-cooled liquid
 - (b) Polymeric mixture
 - (c) Micro-crystalline solid
 - (d) Gel
6. A radioactive element gets spilled over the floor of a room. Its half-life is 30 days. If the initial activity is ten times the permissible value, after how many days will it be safe to enter the room?
 - (a) 10 days
 - (b) 100 days
 - (c) 300 days
 - (d) 1000 days
7. Hydrogen bomb is based on the principle of:
 - (a) Nuclear fusion
 - (b) Natural radioactivity
 - (c) Artificial radioactivity
 - (d) Nuclear fission
8. Nylon threads are made of:
 - (a) Polyester polymer
 - (b) Polyamide polymer
 - (c) Polyethylene polymer
 - (d) Polyvinyl polymer
9. Which of the following element is used as the photoconductive material used in the drum of photocopier machine?
 - (a) Aluminium
 - (b) Selenium
 - (c) Barium
 - (d) Caesium
10. The red soil is red in colour because it is:
 - (a) Rich in humus.
 - (b) Rich in iron compounds.

- (c) Rich in potash.
 - (d) Derived from volcanic origin.
11. When light passes from air to glass, its velocity:
- (a) Increases
 - (b) Decreases
 - (c) Remains same
 - (d) May or may not change
12. Cynophobia is:
- (a) Fear of clouds
 - (b) Fear of dogs
 - (c) Fear of blue colour
 - (d) Fear of snow
13. What is the shape of a classical shaving mirror?
- (a) Flat
 - (b) Concave
 - (c) Planoconcave
 - (d) Convex
14. Supernova is:
- (a) A black hole
 - (b) An explosion of a star
 - (c) A comet
 - (d) An asteroid
15. The deepest oceanic trench is located in which ocean?
- (a) Pacific Ocean
 - (b) Atlantic Ocean
 - (c) Indian ocean
 - (d) Arctic ocean
16. Ocean tides are created because of:
- (a) Gravitational pull of moon.
 - (b) Gravitational pull of earth.
 - (c) Rotation of earth.
 - (d) Gravitational pull of sun.
17. Red light is used for signals because it has:
- (a) High frequency
 - (b) Long wavelength
 - (c) High intensity
 - (d) Low refraction
18. Which of the following is TRUE regarding bright red colour of sun during sunset and sunrise?
- (a) Sun's surface temperature is high at that time.
 - (b) Light other than red is scattered as rays have to travel longer distance.
 - (c) Red rays are scattered while travelling longer distance.
 - (d) Due to electromagnetic phenomenon at Sun's surface during that time.
19. Lunar eclipse occurs when?
- (a) Earth comes in between Sun and Moon.
 - (b) Moon comes in between Sun and Earth.
 - (c) Sun comes in between Earth and Moon.
 - (d) Mars comes in between Sun and Earth.
20. The most abundant element in the universe is:
- (a) Oxygen

- (b) Hydrogen
- (c) Carbon Dioxide
- (d) Silicon

21. The Theory of Motivation by Maslow is based on:

- (a) Theories X and Y.
- (b) Two factor Theory.
- (c) Hierarchy of Needs.
- (d) Motivator- Hygiene Theory.

22. Turbidity in water is measured with:

- (a) Spectrophotometer
- (b) Nephelometer
- (c) Colorimeter
- (d) pH meter

23. A railway carriage having a mass of 5000 kg is moving with a speed of 12 m/sec on a curve of 150 m radius. If the track is level (i.e. without super elevation) find the lateral thrust on the outer rail?

- (a) 400 N
- (b) 3600 N
- (c) 4800 N
- (d) 5208 N

24. Golden revolution refers to:

- (a) Gold demonetization
- (b) Production of oil seeds
- (c) Production of horticulture
- (d) Production of eggs

25. One kilometre is equal to how many miles?

- (a) 0.84
- (b) 0.5
- (c) (1)6
- (d) 0.62

26. Which of the following is **NOT** a Kharif crop?

- (a) Maize
- (b) Mustard
- (c) Rice
- (d) Sugarcane

27. Which of the following is **NOT** a SAARC country?

- (a) Afghanistan
- (b) Pakistan
- (c) Nepal
- (d) Indonesia

28. Headquarters of United Nations (UNO) are in:

- (a) Geneva
- (b) New York
- (c) Sydney
- (d) Washington

29. WHO declared COVID-19 as a Pandemic on:

- (a) 1st January, 2020.
- (b) 1st December, 2019.
- (c) 30th January, 2020.
- (d) 11th March, 2020.

30. In a single throw of two dices, what is the probability of getting a sum of 8 or 11?
(a) $1/36$
(b) $3/36$
(c) $5/36$
(d) $7/36$
31. The sum of the digits of a two-digit number is 7. The number obtained by interchanging the digits exceeds the original number by 27. Find the original number:
(a) 34
(b) 25
(c) 43
(d) 52
32. A scientist is weighing each of 30 fishes. Their mean weight worked out is 30 gm and a standard deviation of 2 gm. Later, it was found that the measuring scale was misaligned and always under reported every fish weight by 2 gm. The CORRECT mean and standard deviation (in gm) of fishes are respectively:
(a) 28, 2
(b) 28, 4
(c) 32, 2
(d) 32, 4
33. The mean, median, mode of a data set are 135, 133 and 130, respectively. The distribution of the data set is:
(a) Symmetrical
(b) Negatively skewed
(c) Positively skewed
(d) Normal
34. Specificity of a test:
(a) Is the same as the true positive rate.
(b) Is the same as the false positive rate.
(c) Is the ability of a test to correctly identify patients with the disease.
(d) Is the ability of a test to correctly identify patients without the disease.
35. What type of bias is reduced by randomisation?
(a) Ascertainment Bias
(b) Selection bias
(c) Publication bias
(d) Bias in handling dropout
36. Non-parametric data is best represented by:
(a) Mean and Standard deviation.
(b) Median and Interquartile range.
(c) Mode and interquartile..0
(d) Median and standard deviation.
37. Which of the following is a method of integrating the findings of prior research studies using statistical procedures?
(a) Meta-analysis
(b) Secondary analysis
(c) Content analysis
(d) Grounded theory
38. The reporting of results is preferred to report with confidence intervals (CIs) as compared to p-value because:
(a) CIs are easy to interpret as compared to the p- value.
(b) The CIs provide significance and variability of the estimate.

- (c) CIs are more accurate for studies with a large sample size.
(d) CIs are easy to calculate as compared to the p- values.
39. Which of the following mean is **NOT** used to report measure of central tendency?
(a) Arithmetic mean
(b) Geometric mean
(c) Relative mean
(d) Harmonic mean
40. What is the best way to minimize the chances of a type-I error in a diagnostics test?
(a) Improving the sensitivity of the test.
(b) Improving the specificity of the test.
(c) Reducing the prevalence of the disease.
(d) Reducing the incidence of the disease.
41. What does the term 'longitudinal study design' mean?
(a) A study completed far away from where the researcher lives.
(b) A study which is very long to read.
(c) A study with two long arms.
(d) A study completed over a distinct period of time to map changes.
42. Both the affinity of a drug for its receptor and its intrinsic activity are determined by its:
(a) Chemical structure
(b) Dissociation constant
(c) Allosteric antagonism
(d) Stereoisomeric properties
43. Emulsification of fats is carried out by:
(a) Bile pigments
(b) Bile salts
(c) HCl
(d) Pancreatic juice.
44. Coenzyme A is a derivative of:
(a) Thiamine
(b) Riboflavin
(c) Panthothenate
(d) Niacin
45. Molisch test is the test for:
(a) Carbohydrates
(b) Fats
(c) Oils
(d) Proteins
46. The proteinaceous molecule that joins a non- protein prosthetic group to form a functional enzyme, is called:
(a) Apoenzyme
(b) Co-factor
(c) Isoenzyme
(d) Holoenzyme
47. Adult human hemoglobin consists of:
(a) Two subunits (α , α)
(b) Two subunits (β , β)
(c) Four subunits (2α , 2β)
(d) Four subunits (2α , 2γ)



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48. Erythrocytes have this antioxidant which protects the integrity of the cell membrane from oxidative damage:
- (a) Ascorbic acid
 - (b) Vitamin E
 - (c) Hemoglobin
 - (d) Glutathione
49. Alpha- oxidation of fatty acids takes place in:
- (a) Golgi bodies
 - (b) Mitochondria
 - (c) Peroxisomes
 - (d) Endoplasmic reticulum
50. An object that **CANNOT** be superimposed on its mirror image is known as:
- (a) Chiral
 - (b) Achiral
 - (c) Amphichiral
 - (d) non-chiral
51. The function of the centrosome is:
- (a) Formation of spindle fibres
 - (b) Osmoregulation
 - (c) Secretion
 - (d) Protein synthesis
52. The pyrimidine bases present in DNA are:
- (a) Cytosine and thymidine
 - (b) Cytidine and thymidine
 - (c) Cytosine and thymine
 - (d) Cytosine and thiamine
53. The coding sequences of a gene are called:
- (a) Introns
 - (b) Exons
 - (c) Interferons
 - (d) transposons
54. Okazaki fragments are formed on:
- (a) Leading strand.
 - (b) Lagging strand.
 - (c) Parental strand.
 - (d) Not formed during DNA replication.
55. What is central dogma?
- (a) Flow of genetic information from DNA to protein to RNA.
 - (b) Flow of genetic information from DNA to RNA to protein.
 - (c) Flow of genetic information from RNA to DNA to protein.
 - (d) Flow of genetic information from RNA to protein to DNA.
56. In gene cloning, the term vector refers to:
- (a) The sticky ends of a DNA fragment.
 - (b) A plasmid used to transfer DNA into a living cell.
 - (c) The enzyme that cuts DNA at specific sites.
 - (d) A DNA probe used to identify a particular gene.
57. All of the following codons terminate protein biosynthesis **EXCEPT**:
- (a) UAA
 - (b) UAG
 - (c) UGA

(d) UUA

58. In normal form, DNA helix is?

- (a) Double strand, Right-handed structure.
- (b) Double strand, Left-handed structure.
- (c) Double strand, Straight structure.
- (d) Double strand, Zig-zag structure.

59. Which of the following is the name of the human genetic disorder resulting from defects in nucleotide excision repair?

- (a) Hereditary nonpolyposis colorectal cancer (HNPCC).
- (b) Xeroderma pigmentosum (XP).
- (c) Lynch syndrome.
- (d) Diabetes.

60. The mRNA codon of valine is:

- (a) UGG
- (b) GUG
- (c) CCA
- (d) TTG

61. Frame shift mutation results from:

- (a) Substitution of at least three bases.
- (b) Deletion of single base.
- (c) Addition of a codon.
- (d) Deletion of a codon.

62. Which of the following is also called "suicide enzyme"?

- (a) DNA glycosylase
- (b) DNA photolyase
- (c) O⁶ alkyl guanine transferase (ada)
- (d) Exonuclease

63. RNAs that catalyse biological reactions such as self-splicing introns, are known as:

- (a) Ribozymes
- (b) Micro RNAs
- (c) Spliceozymes
- (d) Small nucleolar RNAs

64. Emmanuelle Charpentier and Jennifer A. Doudna have been awarded the Nobel Prize in Chemistry in 2020 for their work on:

- (a) Development of lithium ion batteries.
- (b) Phage display of peptides and antibodies.
- (c) CRISPR/Cas9 genetic scissors.
- (d) Discovery of hepatitis C virus.

65. Arneth count is used to count:

- (a) Dots in reticulocytes
- (b) Micronuclei
- (c) lobes of eosinophils
- (d) lobes of neutrophils

66. Lens protein is an example of:

- (a) Cross reacting foreign antigen.
- (b) Sequestered antigen.
- (c) Molecular mimicry.
- (d) Forbidden clone.

67. In hybridoma technology, B cells are fused with:

- (a) T cells
 - (b) Myeloma cells
 - (c) NK cells
 - (d) Macrophages
68. Which one of the following is an example of artificial passive immunization?
- (a) In utero infection.
 - (b) Injection of adjuvant alone.
 - (c) Transplacental passage of antibody.
 - (d) Injection of pooled human gamma globulin.
69. Phagocytosis enhanced by coating the surface of antigen is called:
- (a) Opsonization
 - (b) Chemotaxis
 - (c) Decoding
 - (d) Complement fixation
70. The following constitutes approximately 75% of total immunoglobulins in humans:
- (a) IgG
 - (b) IgM
 - (c) IgE
 - (d) IgA
71. Granulomatous inflammation is an example of which type of hypersensitivity?
- (a) Type I
 - (b) Type II
 - (c) Type III
 - (d) Type IV
72. Which of the following is **NOT** an intracellular TLR (toll like receptor)?
- (a) TLR 2
 - (b) TLR 3
 - (c) TLR 7
 - (d) TLR 9
73. All are secondary lymphoid organs, **EXCEPT**:
- (a) Spleen
 - (b) Lymph nodes
 - (c) Thymus
 - (d) Mucosal associated lymphoid tissue
74. A molecule that reacts with specific antibody but is **NOT** immunogenic by itself is called:
- (a) Carrier
 - (b) Antigen
 - (c) Hapten
 - (d) Immunogen
75. Which class of antibody usually provides defence against helminthic infections?
- (a) IgA
 - (b) IgG
 - (c) IgE
 - (d) IgM
76. Mammography is used in the screening of:
- (a) Carcinoma stomach
 - (b) Breast cancer
 - (c) Lung carcinoma
 - (d) Thyroid carcinoma

77. Vomit centre is located in:
(a) Medulla oblongata
(b) Pons
(c) Cerebellum
(d) Spinal cord
78. Which of the following carries deoxygenated blood?
(a) Carotid artery
(b) Pulmonary artery
(c) Pulmonary vein
(d) Aorta
79. Hypermetropia is:
(a) Image of nearby objects is formed in front of retina.
(b) Far objects look blurred.
(c) Near sightedness.
(d) Long sightedness.
80. The umbilical cord contains:
(a) Two veins and one artery.
(b) Two arteries and two veins.
(c) Two arteries and one vein.
(d) One artery and one vein.
81. Which of the following is a drug used to lower cholesterol levels in blood?
(a) Amlodipine
(b) Angiotensin
(c) Adrenaline
(d) Atorvastatin
82. A 36-year-old male, a known case of bronchial asthma has a tidal volume of 300 mL, dead space volume of 200 mL and respiratory rate of 20 breaths per minute. What would be the value of pulmonary ventilation in this patient?
(a) 2 L
(b) 4 L
(c) 5 L
(d) 6 L
83. Cardiac muscle **CANNOT** be tetanized because of which of the following reason?
(a) Sodium ion channel.
(b) Long absolute refractory period.
(c) Pacemaker activity.
(d) Presence of intercalated disc.
84. An action potential in a nerve:
(a) Is terminated by influx of Na^+ excessive receptors.
(b) Is terminated by efflux of K^+ .
(c) Is initiated by efflux of Na^+ .
(d) Is initiated by influx of K^+ .
85. Insulin & Glucagon are the hormones secreted by:
(a) Pituitary gland
(b) Adrenal gland
(c) Pancreas
(d) Thyroid gland
86. Sweat is secreted by:
(a) Endocrine glands
(b) Eccrine glands

- (c) Holocrine glands
(d) Mucous glands
87. Which of the following is known as the pacemaker of heart?
(a) AV node
(b) Purkinje fibers
(c) AV bundle
(d) SA node
88. Which of the following connective tissue often serves as a support framework for epithelium?
(a) Areolar tissue.
(b) Adipose tissue.
(c) Dense regular connective tissue.
(d) Dense irregular connective tissue.
89. Which of the following hormone is secreted by alpha cells of pancreas?
(a) Progesterone
(b) Insulin
(c) Calcitonin
(d) Glucagon
90. The breast milk secreted up to 2 weeks after delivery is called:
(a) Mature milk
(b) Hind milk
(c) Transitional milk
(d) Fore milk
91. Device used to prevent tension on suture line after repair of cleft lip is:
(a) Yogan's bow
(b) Lamb's nipple
(c) Logaan's bow
(d) Neck collar
92. Mittelschmerz pain is associated with:
(a) Menstruation
(b) Ovulation
(c) Appendicitis
(d) Dyspareunia
93. Coupling and repulsion are two aspects of a single phenomenon called:
(a) Crossing over
(b) Mutation
(c) Linkage
(d) Recombination
94. A cow with red coat is crossed with a bull having white coat. Their offspring produced in F₁ generation showed roan coat. This effect is produced due to juxtaposition of small patches of red and white colour. What can be assumed about the gene controlling coat colour in cattle?
(a) The alleles of gene controlling coat colour show a perfect dominant recessive relationship.
(b) The alleles of gene controlling coat colour are incompletely dominant.
(c) The alleles of gene controlling coat colour are co- dominant.
(d) The alleles of gene controlling coat colour show epistasis.
95. Three copies of chromosome 21 means that a person has:
(a) Patau syndrome
(b) Klinefelter syndrome
(c) Down syndrome
(d) Edwards syndrome



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96. In four o'clock plants, the gene for red flower colour (R) is incompletely dominant over the gene for white flower colour (r), hence the plants heterozygous for flower colour (Rr) have pink flowers. What will be the ratio of off-springs in a cross between red flowers and pink flowers?
- (a) 75% red flowers, 25% pink flowers.
 - (b) All red flowers.
 - (c) 50% red flowers, 50% pink flowers.
 - (d) Red: pink: white:: 1: 2: 1.
97. The characters which appear in the first filial generation are called:
- (a) Recessive characters
 - (b) Dominant characters
 - (c) Holandric characters
 - (d) Lethal characters
98. Which of the following characters was **NOT** chosen by Mendel?
- (a) Pod shape
 - (b) Pod colour
 - (c) Location of flower
 - (d) Location of pod
99. A complete set of chromosomes, which is inherited as a unit from one parent is called as:
- (a) Gamete
 - (b) Genotype
 - (c) Gene
 - (d) Genome
100. Which of the following is **NOT** an example of recessive autosomal disease?
- (a) Haemophilia
 - (b) Cystic fibrosis
 - (c) Phenylketonuria
 - (d) Sickle cell anaemia
101. Consider a 16-year-old person whose father (heterozygous) was stricken with Huntington's disease at age 39. Huntington's disease is an autosomal dominant disorder. What is the probability that the 16-year-old will also have this disease?
- (a) 25%
 - (b) 50%
 - (c) 75%
 - (d) 100%
102. In most species, mitochondrial DNA is passed down from:
- (a) Father
 - (b) Mother
 - (c) DNA
 - (d) Both mother and father
103. What is the typical pattern for euchromatin in G banding?
- (a) Lightly stained due to GC rich content.
 - (b) Lightly stained due to AT rich content.
 - (c) Darkly stained due to GC rich content.
 - (d) Darkly stained due to AT rich content.
104. Red data book is a Russian document containing data of:
- (a) All plant species.
 - (b) All bird species.
 - (c) Economically important species.
 - (d) Endangered species.
105. Atropine is useful in poisoning due to:

- (a) Paraquat
 - (b) Cyanide
 - (c) Acetaminophen
 - (d) Organophosphates
106. Bicollateral vascular bundles are found in:
- (a) Cucurbitaceae
 - (b) Fabaceae
 - (c) Solanaceae
 - (d) Poaceae
107. Continuity of cytoplasm from cell to cell is maintained through cytoplasmic connections in plants called:
- (a) Endoplasmic reticulum (ER)
 - (b) Tight junction
 - (c) Gap junction
 - (d) Plasmodesmata
108. The enzyme RuBisCO is involved in which part of photosynthesis:
- (a) Light dependent reaction
 - (b) Z scheme
 - (c) Calvin cycle
 - (d) C4 Carbon fixation
109. Which of the following is a chill-tolerant plant?
- (a) Coleus
 - (b) Dieffenbachia
 - (c) Croton
 - (d) Arabidopsis
110. Which tissue conducts food in plants?
- (a) Xylem
 - (b) Phloem
 - (c) Parenchyma
 - (d) Sclereids
111. Maximum ozone layer is found in which layer of atmosphere?
- (a) Troposphere
 - (b) Stratosphere
 - (c) Mesosphere
 - (d) Thermosphere
112. Which of the following is a free-living nitrogen fixing bacterium?
- (a) Clostridium
 - (b) Nitrosomonas
 - (c) Rhizobium
 - (d) Nitrobacter
113. Ladybird beetle is used as biological control for:
- (a) Mosquitoes
 - (b) Aphids
 - (c) Sparrows
 - (d) Cockroaches
114. Silk is harvested from which of the following?
- (a) Chironomus
 - (b) Vespula vulgaris
 - (c) Bombyx mori
 - (d) Drosophila melanogaster

115. Which of the following insect can be used for production of formic acid?
(a) Bed bugs
(b) Crickets
(c) Locusts
(d) Red ants
116. Frogs have the ability to change the colour to hide them from their enemies. This protective coloration is known as:
(a) Aestivation
(b) Concealment
(c) Mimicry
(d) Hibernation
117. The vertebrae of birds are characteristically:
(a) Acoelous
(b) Heterocoelous
(c) Opisthocoelus
(d) Amphicoelous
118. The study of molluscs is called:
(a) Osteology
(b) Neurology
(c) Conchology
(d) Malacology
119. Proboscis glands are the excretory organ of:
(a) Hemichordate
(b) Urochordata
(c) Cephalochordate
(d) Chordata
120. In camel, the hump is mainly made up of which tissue?
(a) Adipose tissue
(b) Areolar tissue
(c) Muscular
(d) Skeletal
121. Coronaviruses are which kind of viruses?
(a) dsDNA viruses
(b) ssDNA viruses
(c) dsRNA viruses
(d) ssRNA viruses
122. Cold sterilization uses which of the following rays:
(a) Gamma rays
(b) X-rays
(c) Infrared rays
(d) Autoclave
123. The causative agent of Kala-azar is:
(a) Leishmania
(b) Trypanosoma
(c) Ascaris
(d) Cryptosporidium
124. Salmonella typhi is causative organism of:
(a) Malta fever

- (b) Black fever
- (c) Dengue fever
- (d) Enteric fever

125. Acid fast staining can be used to demonstrate all of the following, **EXCEPT**:

- (a) Atypical mycobacteria
- (b) Cryptosporidium
- (c) Cryptococcus
- (d) Cyclospora

126. Omeprazole is a drug often used to treat which of the following?

- (a) Protein deficiency
- (b) Pellagra
- (c) Peptic ulcer
- (d) Migraine

127. The process of killing all microorganisms along with their spores is:

- (a) Disinfection
- (b) Sterilization
- (c) Antisepsis
- (d) Sanitization

128. Cervical cancer is strongly associated with:

- (a) Viral infection
- (b) Alcohol consumption
- (c) Infertility
- (d) Obesity

129. A device in which large volume of living cells are cultured to get a specific product is called:

- (a) Thermocycler
- (b) Agitator
- (c) Bioreactor
- (d) Assimilator

130. The sticky ends of a fragmented DNA molecule are made of:

- (a) Calcium salts
- (b) Endonuclease enzyme
- (c) Unpaired bases
- (d) Methyl groups

131. Line probe assay (LiPA) is based on:

- (a) Reverse hybridization technology.
- (b) Hybridization technique.
- (c) Amplification technique.
- (d) Cell sorting.

132. Western blotting is the technique used for identification of:

- (a) DNA
- (b) RNA
- (c) Protein
- (d) Carbohydrate

133. Weakness of hydrogen bonding between bases in sticky ends are stabilized by a process called as:

- (a) Reannealing
- (b) Ligation
- (c) Base-pairing
- (d) Annealing

134. SSP-PCR is:
- (a) Single strand primer-polymerase chain reaction.
 - (b) Single strand probe-polymerase chain reaction.
 - (c) Sequence specific primer-polymerase chain reaction.
 - (d) Sequence specific probe-polymerase chain reaction.
135. Golden rice is yellow in colour due to the presence of:
- (a) Riboflavin
 - (b) Beta-carotene
 - (c) Vitamin B1
 - (d) Complex genetic material
136. Insulin is produced by genetic engineering using:
- (a) Saccharomyces
 - (b) Escherichia coli
 - (c) Rhizobium
 - (d) Mycobacterium tuberculosis
137. Microinjection is a method used to:
- (a) Produce sticky ends of DNA.
 - (b) Provide protection against pathogen.
 - (c) Purify the DNA.
 - (d) Inject recombinant DNA into the nucleus of an animal cell.
138. In recombinant DNA technology, the term vector refers to:
- (a) The enzyme that cuts DNA into restriction fragments.
 - (b) The sticky end of a DNA fragment.
 - (c) A plasmid used to transfer DNA into a living cell.
 - (d) A DNA fragment which carries only origin.
139. The term "Molecular scissors" refers to:
- (a) Recombinant DNA
 - (b) Restriction enzymes
 - (c) Taq polymerase
 - (d) Palindromic nucleotide sequences
140. Which of the following is **NOT** used as a vector in molecular cloning?
- (a) Plasmid
 - (b) Cosmid
 - (c) Hapten
 - (d) Bacterial artificial chromosome
141. In SDS-PAGE the movement of proteins is from:
- (a) Cathode to anode
 - (b) Anode to cathode
 - (c) Neutral to anode
 - (d) Neutral to cathode
142. Similarity index is useful for assessing:
- (a) Novelty
 - (b) Conciseness
 - (c) Correctness of translation
 - (d) Plagiarism

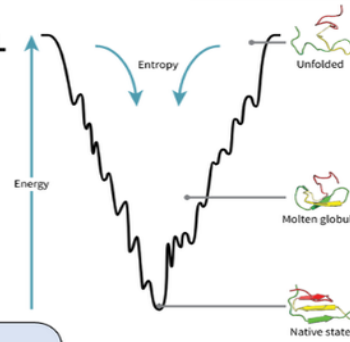
VEDEMY'S CAPSULE (VEDEMY'S SPECIAL NOTES)

Amino acid Classes

Essential
Semi-essential
Non-Polar
Polar Uncharged
Negative charged
Positive charged
Gluco-ketogenic
Ketogenic

My Very Talented Friend Is Waiting For KajoL
RahuL
GAV के लोग PILW लेकर FM सुन रहे थे
CN(कार्टून नेटवर्क) पे STY(सत्य) Ques पूछते हैं
Ye DEKh
RaHuL bola
Itni Talented WYF (wife)
KajoL

Protein Folding Curve

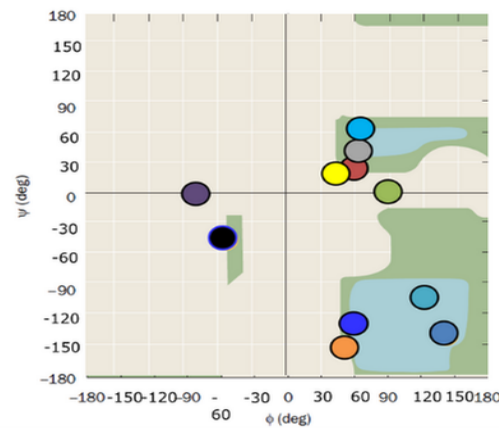
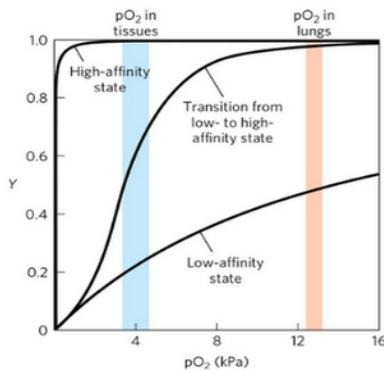


Energy profile-
High
U- Unstructured
M- molten globule
D- discrete structure
N- native
A- amorphous
A- amyloid
Low
Urmila
Matoldkar ka
DNA
Achha hai

Hemoglobin

State of Hb - **MOLD**
Oxy Hb
Less acidic (Tensed state)
Deoxy Hb
More acidic (Relaxed state)

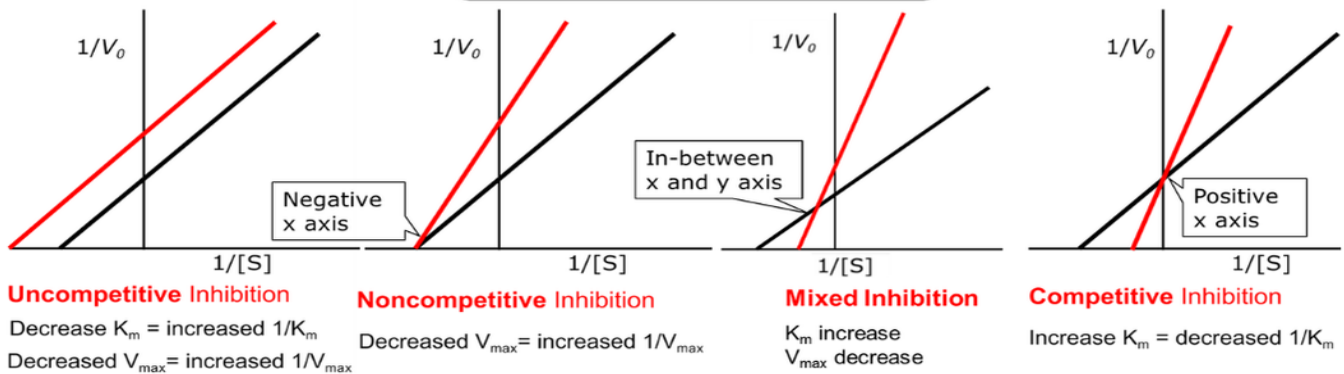
H+, Temp. BPG, CO₂
Affinity of Curve - **DRIL**
Increase
Left shift
Decrease
Right shift



Ramachandran plot

Secondary Structure	Phi	Psi
AP β Sheet	+140°	-135°
P β Sheet	+120°	-115°
CTH	+50°	-150°
L- α -H	-60°	-50°
R- α -H	+60°	+50°
Type-I i+1	+60°	+30°
Type-I i+2	+90°	0°
Type-II i+1	+60°	-120°
Type-II i+2	-80°	0°

Enzyme Inhibition Curve



UP ke NANA patekar MI ka PC lekar aaye
Uncompetitive Negative x axis In-between x and y axis
Non-competitive Mixed Positive x axis
Competitive

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143. The study of the biochemical, cellular, and physiological effects of drugs and their mechanisms of action is known as:
- (a) Pharmacokinetics
 - (b) Pharmacometrics
 - (c) Pharmacodynamics
 - (d) Pharmacology
144. DNA Sequencing 'depth' is also known by another term:
- (a) Amount
 - (b) Coverage
 - (c) Trend
 - (d) Consensus
145. Which of the following is a nucleotide sequence data base?
- (a) EMBL
 - (b) SWISS PROT
 - (c) PROSITE
 - (d) TREMBL
146. BLAST uses a to find matching words, whereas FASTA identifies identical matching words using the _____:
- (a) Substitution matrix, Hashing procedure.
 - (b) Substitution matrix, Blocks.
 - (c) Hashing procedure, Substitution matrix.
 - (d) Ktups, Substitution matrix.
147. Which of the following is **NOT** a ruminant?
- (a) Cow
 - (b) Goat
 - (c) Giraffe
 - (d) Pig
148. Ranikhet disease is a viral disease of:
- (a) Poultry
 - (b) Bovine
 - (c) Equine
 - (d) Ovine
149. Which of the following relates to 'sustainable development'?
- (a) Brundtland commission Report
 - (b) Montreal Protocol
 - (c) Paris Agreement
 - (d) Kyoto Protocol
150. Which environmental problem is the result of chemical reactions in the atmosphere that involves sulphur dioxide?
- (a) Melting of glaciers
 - (b) Deforestation
 - (c) Acid Rain
 - (d) Global Warming

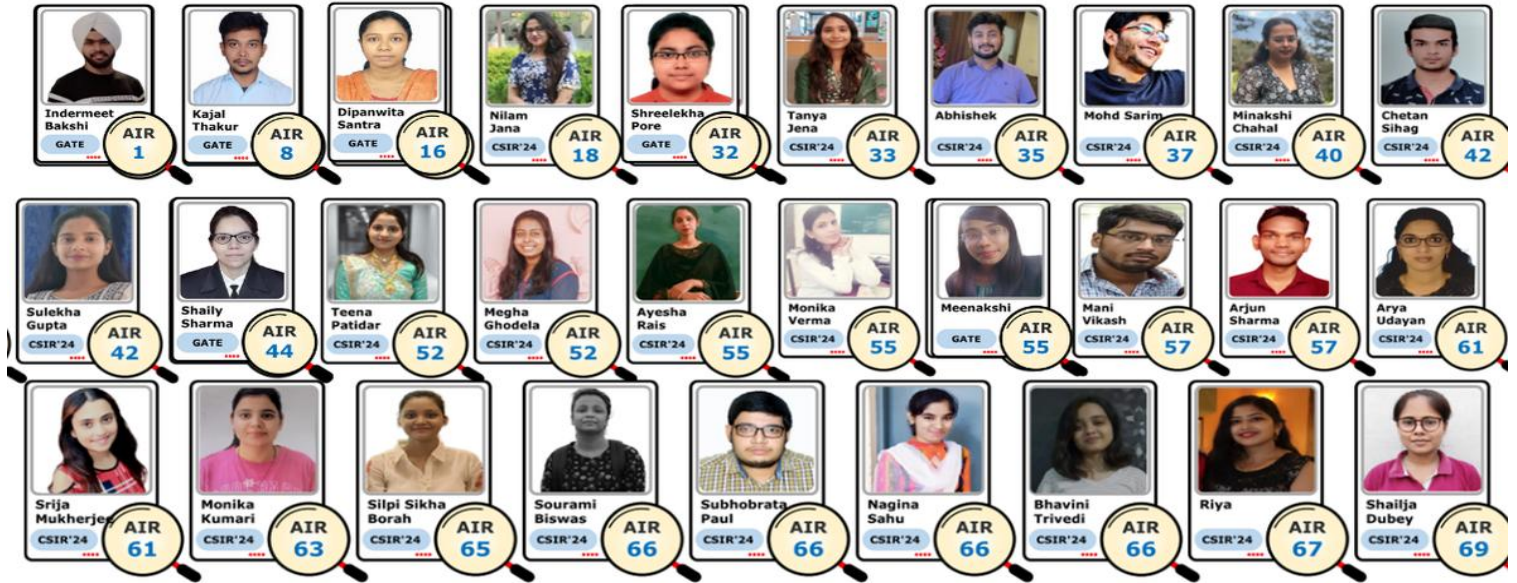
ICMR-BRET-JRF 2020 ANSWER KEY

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21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
c	b	c	c	d	b	d	b	d	d	b	c	c	d	b	b	a	b	c	b
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b	c	a	c	d	b	b	d	a	a	d	a	c	c	c	b	a	b	d	c
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101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
b	b	a	d	d	a	d	c	d	b	b	a	b	c	d	c	b	d	a	a
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
d	a	a	d	c	c	b	a	c	c	a	c	b	c	b	b	d	c	b	c
141	142	143	144	145	146	147	148	149	150										
a	d	c	b	a	a	d	a	a	c										



VEDEMY

RESULTS हो तो कैसे? VEDEMY जैसे India's BEST Result



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scholarship UPTO

90%

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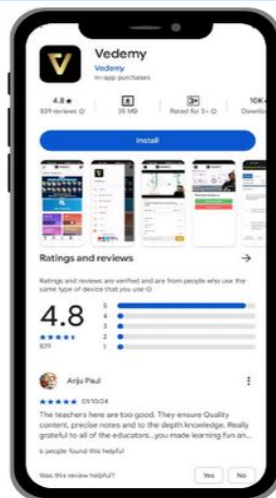
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