Section -A

1. Electrical charge is stored in :

(a) Battery (b) Capacitor
(c) Voltmeter (d) Wire

2. Which of them will have minimum resistance to flow of electric current ?

(a) Glasses (b) Saline aquifer
(c) Granite (d) Lime Stone

3. What would be effect on shape of cupper metallic tube carrying electric current due to narrate magnetic field

a. No effect
b. It will swell from middle
c. It will shrink from middle
d. Will be eclipse shape

4. What would be effect on time period of pendulum one laced on equator and other on pole

a. No effect
b. Time period would be greater at poles
c. Time period would be greater at equator
d. Pendulum will stop at poles

5. The main reason for release of energy from sun is

a. Fusion of hydrogen
b. Fission of hydrogen
c. Fusion of Helium
d. Fission of Helium

6. At ground state of hydrogen atom its Bohr radius is 5.3×10^{-11}m and mean velocity is 2.1 ´ 106 m/s. What would be value of fundamental time unit ?

a. 2.5×10^{-17} sec b. 2.52×10^{-5} sec
c. 1.2×10^{-17} sec d. 1.52×10^{-17} sec

7. Angle between two vectors $2\hat{i} + 3\hat{j}$ and $3\hat{i} - 2\hat{j}$ will be

(*a*) 30° (*b*) 45°
(*c*) 60° (*d*) 90°

8. Relative mean kinetic energy for Helium atom (atomic weight 4) and Argon (atomic weight 40) would be

(*a*) 1 : 10 (*b*) 1 : 4
(*c*) 1 : 100 (*d*) 1 :16

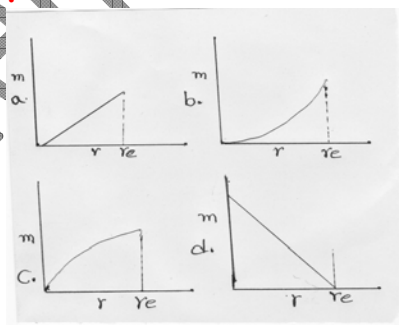
9. During combustion of carbon in presence of oxygen CO_2 is formed. What will be effect on release of CO_2 if availability of oxygen is doubled ?

(*a*) No change
(*b*) Will double
(*c*) Will half
(*d*) Will increase four times

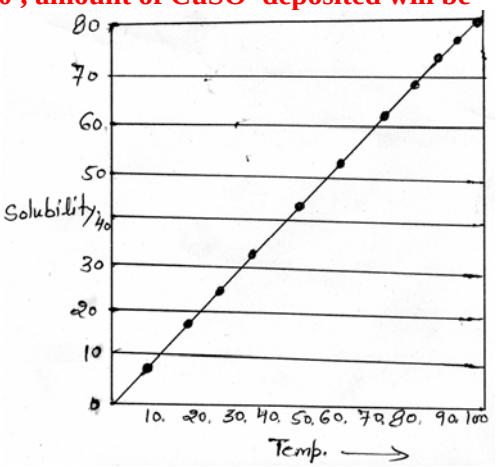
10. If iodine stored in a closed chamber is slowly evacuated to sublime. What would be effect on sublimation rate and mean free path ?

(*a*) Both will increase
(*b*) Both will decrease
(*c*) Sublimation rate will increase while free path decrease
(*d*) Sublimation rate decrease and free path increase.

11. Assuming equal density through out different layers of the earth, if radius 'r' of sleeted part is gradually increased from centre of earth (where $r = r_e$ (radius of earth) what would be correct graphical representation for change in mass ?



12. As shown in graph solubility of CuSO4 increased as the temperature of solution is increased. Suppose under saturated condition temperature of solution is dropped from 60° to 30°, amount of $CuSO^4$ deposited will be



(*a*) 24 g
(*b*) 44 g
(*c*) 20 g

(*d*) 100 g

13. Which of the following is not a major green house gas in stratosphere ?

(*a*) CO_2
(*b*) Methane
(*c*) Ozone
(*d*) Water vapors

14. Boiling pint of water at sea level is 100o C. What would be its boiling point at top of Mount Everest?

(*a*) 100° C
(*b*) 104° C
(*c*) 114° C
(*d*) 74° C

15. Atmospheric pressure decline with altitudees as shown in table

Height	0 Km	2 Km	4 Km	6 Km	8 Km
Pressure (mbar)	900	800	650	450	200

What would be atmospheric pressure at height of 5 km?

(*a*) 720
(*b*) 550
(*c*) 640
(*d*) 420

16. Mostly inner material of earth remains in solid state. Seldom has it melted and do not remain inside and expelled to the surface of earth because

(*a*) It is just beneath the earth crust
(*b*) Due to buoyancy
(*c*) Due to high pressure
(*d*) More density of surrounding rocks

17. Among the following which ocean receives maximum sediments ?

(*a*) Arabian Ocean
(*b*) Indian Ocean
(*c*) Bay of Bengal
(*d*) Dead Sea

18. The amount of rainfall in summer at any place is shown in table.

Jan	March	June	Dec
550	90	10	450

The probable place would be:

(*a*) India
(*b*) North America
(*c*) Australia
(*d*) Sri Lanka

19. Half life of any radioactive material is 50 days. How many half life it will take to become 12.5% of the original amount ?

(*a*) 1 (*b*) 2
(*c*) 3 (*d*) 4

20. What is probability of getting first three female pups out of a litter of 7 ?

(*a*) 1/8
(*b*) 7/8
(*c*) 3/27
(*d*) 37/64

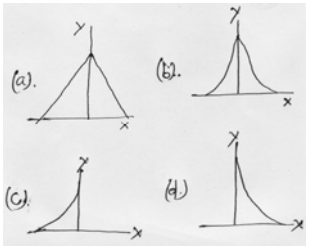
21. If two sides of isosceles triangle are 7 cm and 16 cm respectively. What would be length of its third side ?

(*a*) 7 cm
(*b*) 16 cm
(*c*) 23 cm
(*d*) $(16^2 - 7^2)^{-1/2}$

22. A crystalline sphere of radius 1 cm is broken into pieces of 0.01 cm radius each. What would be change in surface area ?

(*a*) 0
(*b*) 10
(*c*) 100
(*d*) 1000

23. Graphical representation for function $e^{-|x|}$ will be



24. If value of ϕ is 360°, then as per equation r = aϕ, shape of object would be (where r is distance from origin and a is constant)

(*a*) Spiran
(*b*) Circle
(*c*) Sphere
(*d*) Eclipese

25. A non-maglkignant tumor with radius 'r' shrinks at constant rate with time 't'. It can be represented by equation

(*a*) $r = r_o + k/t$
(*b*) $r = r_o - k/t$
(*c*) $r = r_o - kt$
(*d*) $r = r_o - k/t$

26. a committee of two members has to be selected out of 3 men and 2 women. In how many possible ways it can be done
(*a*) 20
(*b*) 25
(*c*) 100
(*d*) 120

27. Which logical gate is represented by the following truth table ?

P	Q	result
0	0	0
0	1	0
1	0	0
1	1	1

(*a*) AND
(*b*) OR
(*c*) NOR
(*d*) XOR

28. Sum of two binary numbers 101 and 011 would be
(*a*) 1000
(*b*) 100
(*c*) 101
(*d*) 1001

29. Consider the following computer program
Input 'Z'
Do
A = 3.143*Z*Z
Print A
The program computes area of
(*a*) Circle
(*b*) Sphere
(*c*) Triangle
(*d*) Square

30. Among the following which is a object oriented language
(*a*) PASCAL
(*b*) FORTRAN
(*c*) C**
(*d*) COBOL

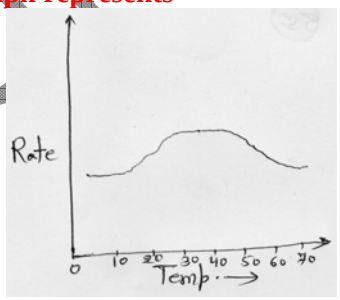
31. If five flowers have nectar amount 10, 20, 30, 40, 50 µl respectively. If a bee consumes all the nectar from flowers, then at the end bee is rewarded with how much mean amount of nectar
(*a*) 10
(*b*) 20
(*c*) 30
(*d*) 150

32. Starch on treatment with dilute H_2SO_4 yields free glucose but cellulose not because
(*a*) Cellulose is branched
(*b*) Cellulose is branched
(*c*) Starch is carbohydrate
(*d*) Starch is linear

33. Major weight of human body is due to
(*a*) C (*b*) P
(*c*) N (*d*) O

34. If all parameters related with cokroach are doubled such as height width and length, it will not survive because of
(*a*) Low surface area to volume ratio
(*b*) High surface area to volume ratio
(*c*) Exchange of gases
(*d*) Problem is excretion

35. The graph represents



(*a*) Exothermic reaction
(*b*) Isolated reaction
(*c*) Endothermic reaction
(*d*) Physiologial reaction

36. Corollas force is due to rotation of earth on moving object. The direction of corollas force is
(*a*) along the axis of rotation of the moving object
(*b*) against the axis of rotation of the joving objet
(*c*) Perpendicular to the axis of rotation of the moving object
(*d*) tangential to the axis of rotation of the moving object.

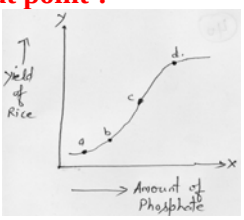
37. Area required to store fats in seed as compare to carbohydrate would be
(*a*) Equal
(*b*) More
(*c*) Less
(*d*) Slightly more

38. Terminal electron acceptor for metabolic reactions in organisms is
(*a*) CO_2
(*b*) H_2

(*c*) O_2
(*d*) H_2O

39. If plarents with genotype AABBccddeeFF and aabbCCDDEEff are crossed, the genotype of resulting progency will be
(*a*) AABBccDDeeFf
(*b*) AaBbCcDdEfFf
(*c*) aaBBccDDeeFF
(*d*) AaBbCCddEfFf

40. The effect of input of any fertilizer on rice yield is shown in graph. The optimum utilization of nutrient is at point ?



(*a*) a
(*b*) b
(*c*) c
(*d*) d

Section -B

41.Trasduction has been used exgtensively for genome mapping for bacteria. Which of the following process is useful for gene mapping?
(*a*) Generalized transduction
(*b*) Sepcialized transaction
(*c*) Site specific recombination
(*d*) Bacterial lysis

42. Molecular marker can not be utilized for
(*a*) Mapping of genes
(*b*) identifying the clones
(*c*) Identifyingthe locus of gene on chromosome
(*d*) Identifying the expressed product.

43. Sxi genes of Drosophila regulate expression at
(*a*) Transcriptionl level
(*b*) Post transcriptiona level
(*c*) Translational level
(*d*) Post translational level

44. Which function is not related with Th1 cells
(*a*) Secretion of IL-2
(*b*) Promoting antibody binding to soluble antigens
(*c*) IFN-γ
(*d*) Induce phagocytosis

45. Cysteine Asparate protein kinases involved in process of apoptosis function as
(*a*) Initiator and executioner
(*b*) Initiator and inflammator
(*c*) Initiator, inflammatory and executioner
(*d*) Inflammatory and executioner

46. Which of the following is a component of MAP kinase signal transduction pathway ?
(*a*) IP_3
(*b*) ERK
(*c*) Protein Kinase B
(*d*) JAK kinase

47. Which kinase activity is associated with phytochrome photreceptors responsible for Red/Far red response ?
(*a*) Histidine
(*b*) Tyrosine
(*c*) Aspartate
(*d*) Ser/Thr kinase

48. Fas protein invovled in cell mediated immune response
(*a*) have death domain
(*b*) act as inducer
(*c*) geneates G protein
(*d*) inhibit apoptosis

49. Bubonic plaque caused by *Yersinta pestis* cannot be eradicated completely because
(*a*) Casual organism canno be culture in vitro
(*b*) Antibodies are not generated by causal organism
(*c*) Casual organism do not express surface antigents
(*d*) Y. Pestis have broad host range

50. Mycobacteria tuberculosis is able to cause disease because as it enters host cell it donot allow endosome to mature into
(*a*) Lysosomes
(*b*) Peroxisomes
(*c*) ER
(*d*) Golgi

51. Sendai Virus enters host cell by
(*a*) Endocytosis
(*b*) Phagocytosis
(*c*) Cell fusion
(*d*) Receptor mediated endocytosis

52. Red wine and Red grpaes are important source of which anti-tumour agent
(*a*) Taxol
(*b*) Cincristine
(*c*) Resveratol
(*d*) Bardystanin

53. Maximum possible siomers for glucose are
(*a*) 4
(*b*) 8
(*c*) 16
(*d*) 32

54. Which of the following is NOT a property of a enzyme
(*a*) from complex with subtrate
(*b*) decrease activation energy
(*c*) decrease Gibb's free energy
(*d*) Increass rate of reaction

55. Which era is characterized by dramatic diversification among eukaryotes ?
(*a*) Cambrian
(*b*) Devonian
(*c*) Carboniferous
(*d*) Triassic

56. An organism influence the evolutionary pace of the other organism in
(*a*) Coevolution
(*b*) Parallel evolution
(*c*) Convergent evolution
(*d*) Divergent evolution

57. A population of 200 is in Hardy-Weinberg equilibrium with allele frequency of 'A' = 0.7 and 'a' = 0.3. The number of carriers in popularion will be
(*a*) 18
(*b*) 42
(*c*) 84
(*d*) 98

58. Air inhaled during breathing contains principle gases in order $N_2>O_2>CO_2>H_2$. The gases in exhaled air would be in order.
(*a*) $N_2>CO_2>O_2>H_2$
(*b*) $N_2>O_2>CO_2>H_2$
(*c*) $N_2>CO_2>H_2>O_2$
(*d*) $N_2>H_2>CO_2>CO_2$

59. Distance betwene the two linked genes A and B is 20 Cm. On test cross of with recessive parent how many offspring will have genotype
(*a*) 10
(*b*) 20
(*c*) 40
(*d*) 80

60. In *Neurospora crossa* tetrad analysis showed following resut + : m :: 6 : 2. The phenomenon involved for above result would be
(*a*) Branch migration
(*b*) Strand exchange
(*c*) Holiday junction
(*d*) DNA replication

61. A poky *Neurospora* was crossed with normal *Neurospora* and following results were obtained
Poky × Normal → all poky
Normal × Poky→ all Normal

62. The Mendelian law of independent assortment is due to arrangement of chromosome during
(*a*) Anaphase-I
(*b*) Anaphase-II
(*c*) S-Phase
(*d*) Cytokinesis

63. Among the following most variable stage of cell cycle is
(*a*) G1
(*b*) S
(*c*) G2
(*d*) M

64. It has been obseved that during prolong animal cell culture and differentiation cell tends to stop dividing. They are said to be in
(*a*) Apoptosis
(*b*) Quiescent
(*c*) Senescence
(*d*) G1

65. Type of mutation which is most suitable for study of regulation of cell like DNA replication is
(*a*) Gain of function
(*b*) Loss of function
(*c*) Suppressor mutation
(*d*) Conditional mutation

66. The glycocalyx around cell membrane can be determined by
(*a*) Methylene blue
(*b*) Iodine
(*c*) Saffranin
(*d*) lectins

67. Small amount of lethal mutation always tend to remain in population is due to
(*a*) Mutation selection balance
(*b*) Frequency dependent selection
(*c*) Positive selection
(*d*) Negative selection

68. During evolution increased orngamentation in male is a result of
(*a*) Directional selection
(*b*) Co-evolution

(*c*) Sexual selection
(*d*) Natural selection

69. The harmone responsible for regulating spermatogenesis in human is
(*a*) Testosterone
(*b*) FSH
(*c*) LH
(*d*) Estrogen

70. Exponential growth inbacteria would be expected during
(*a*) lag phase
(*b*) log phase
(*c*) Stationary phase
(*d*) Deceleration phase

71. Thylokoid membrane has lateral asymmetrical poisitioning of phtosytem in chloroplast. Which statement is correct ?
(*a*) PS-I in non appressed portion and PS-II in appressed portion
(*b*) PS-II in no appressed portion and PS-I in appressed portion.
(*c*) Both PS-I and PS-II in appressed portion
(*d*) Both PS-I and PS-II in non appressed portion of thylakoid

72. Which organelle require intact membrance system for ATP synthesis
(a) Chlorplast
(b) Mitochondria
(c) Chlorplast & Mitochondria
(d) ER

73. The movement of chloroplast is mediated by
(a) Dynein
(b) Kinesin
(c) Actin
(d)Myosin

74. The flagellin protein is associated with
(a) Bacteria
(b) Protist
(c) Virus
(d) Eukaryotic cell

75. Starch filled plastids are responsible for geotropism in columella cell beneath the root cap. they are termed as
(a) Amyloplast
(b) Elioplast
(c) Chloroplast
(d) Proplastid

76. ABC transporter in plants which are responsible for detoxification of Xenobiotics and prevent oxidative damage are located at
(a) Tonoplast
(b) Peroxisome
(c) ER
(d) Plasma membrane

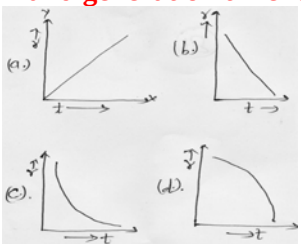
77. Which technique is most suitable to study transcription factor and its binding site
(a) DNAse I foot printing
(b) Western blotting
(c) Northern blotting
(d) Micoarray

78. Which of them is not utilized for comparison of operational taxonomic unit (OTU) in numerical taxonomy
(a) Unweighted pair group method
(b) Percentage similarity
(c) Jaccarrd Coefficient
(d) Genetic Similarity

79. Which statement is correct regarding concogenes
(a) They are viral genes
(b) They mutated form of genes controlling cell division
(c) They are mutated viral genes
(d) They suppresses tumors

80. A sample is no normal distribution ranging from ($\mu-1\sigma$) to ($\mu+2\sigma$). The data in range would be
(a) 17
(b) 50
(c) 67
(d) 98

81. Among the following which graph reprsent correct relationship between intrinsic rate of growth 'r' and generation time 't'



82. Among the following which is not a result of acid rain
(a) Low amount of phosphate availability
(b) Low amount of aluminium availability
(c) Low availability of nutrients to plant

(d) Increased acidity of soil

83. Organ identity genes are responsible for correct positioning of floral organs on floral meristem. Mutation in them will lead to
(a) Loss of organs from certain whorls
(b) More number of organs in certain whorls
(c) Appearance of organs at incorrect positions
(d) No flower

84. In hydra if any part is lost remaining portion repattern itself and give rise to complete organism. Such a pattern of development is termed as
(a) Epimorphosis
(b) Morphallaxis
(c) Regenration
(d) Healing

85. Generally organism tends to remain in realized niche. Under what condition realized niche can be greater than fundamental niche
(a) Abundance of resources
(b) Heterogeneity of resources
(c) One species helping other in utiliztion of resources
(d) Moving of organism from source to new sink area

86. According to survival of fittest concept of natural selection one species out compete other species. Under such condition not wo species can co-exist in same niche but more than one species can live in same niche under condition
(a) Abundant resources
(b) High competition
(c) Marginal Overlapping
(d) utilization of different resources

87. The inbreeding coefficient of offspring on marriage between brother and sister sibling will be
(a) 0.5
(b) 0.05
(c) 0.25
(d) 0.75

88. Which would be suitable for constructing the genomic library 70 kb of DNA
(a) YAC
(b) BAC
(c) P1 based vector
(d) Cosmid

89. If we want to obtain glycosylated protein from microbe. Suitable choice will be
(a) Bacteria
(b) Yeast
(c) Mycoplasma
(d) Animal Cell

90. Glycosylation of protein occurs in
(a) ER
(b) Golgi
(c) Mitochondria
(d) Nucleus

91. Among the following which antibiotic will inhibit protein synthesis in chloroplast?
(a) Cyclohexamide
(b) Chlorophenicol
(c) Rifamcin
(d) Ricin

92. World wide maximum cultivated transgenic crop is
(a) Insect resistance cotton
(b) Herbicide resistance sybeans
(c) Growing plant for desired molecules
(d) Edible vaccines

93. Elevated level of RBC and low affinity of hemoglobin for oxygen is an adaptation for
(a) High attitudes
(b) Poles
(c) Low attitudes
(d) Marine

94. Perennial habit among trees would be more preferred under conditions
(a) Low survival during sapling stage and high during adult
(b) High survival during sapling stage and high during adult
(c) Low survival during sapling stage and low during adult
(d) High survival during sapling stage and high during adult

95. Most of trees of India in tropocal forest belongs to family
(a) Arecacea
(b) Fabaceae
(c) Dipterocarpaceae
(d) Bromeliacae

96. Scientific names of bacteria, fungi, plants and animals are given by
(a) International Unionof Biological Nomenclature
(b) There is different organization for naming plants and fungus

(c) There are three different organization for naming bacteria, plant and animals.
(d) Names of plants and animals are given by same organization

97. Among the following imino acid is
(a) Proline
(b) Arginine
(c) Typtophan
(d) Lysine

98. pl for hypothetical protein consisting of only apolar amino acids will be
(a) Independent on charge over N and C terminus
(b) Depend on number of amino acids
(c) Depend on mass of amino acids
(d) Independent of type of amino acids.

99. What would be effect of photosynthesis in C_3 and C_4 plants on elevating the concentration of CO_2 under light saturated condition?
(a) No effect on both type plants
(b) C_3 plant will saturate fast and C_4 plant remain unaffected
(c) C_4 plants saturate fast and C_3 plants remain unaffected
(d) Both type plants wil saturate fast

100. Common metabolites in nucleotide biosynthesis from glucose by pentose phospate pathway is
(a) PRPP (Phospho ribosyl pyrophosphate)
(b) Glyceraldeyde-3-Phospate
(c) Di Hydroxy Acetone Phospate
(d) Fructose-6-P

101. Which statement is not correct for nerve impulse transmission?
(a) Minimum threshold intensity is required
(b) Depends upon diamter of neuron
(c) Action potential is proportional to signal intensity
(d) Nerve cells show all or none effect

102. A gene consists of two introns and a 5' UTR region, the probable number of exon will be
(a) 2 (b) 3
(c) 4 (d) 5

103. Which is correct for termination of transcription in eukaryotes?
(a) Terminates prior to polyaderylation
(b) Terminates during polyadenylation
(c) Terminates after poly adenylation
(d) Forms hair pin loop

104. Heritability due to genetic variance for a trait of importnace is 0.2. Which would be most appropriate approach to select trait in next generation in a short time?
(a) Pedigree selection
(b) Mass selection
(c) Family selection
(d) Selection by progeny testing

105. Which statement is correct regarding functioning of topo-isomerase
(a) Separate double stranded DNA
(b) Act as primer
(c) Renaturate the SS DNA
(d) Attach to super coiled DNa and relax it

106. A protein specially abundant in desiccated seeds and also help in osmotic adjustment
(a) LEA
(b) Hsp
(c) Globin
(d) α-amylase

107. Initation of hematopoesis in adults occurs at
(a) Liver
(b) Bone marrow
(c) Kidney
(d) Spleen

108. The essential mineral required for cell adhesion protein cadherin is
(a) Calcium
(b) magnesium
(c) Iron
(d) Sodium

109. In an early embryonic transplanation experiment prospective skin cells were transferred near future muscle cell but then also it differentiates into skill cell. The cell would be termed
(a) Determined
(b) Commited
(c) Totipotent
(d) Differentiated

110. Rolling of sheet of cell over other cells during gastrulation is termed as
(a) Epiboly
(b) Ingression
(c) Involulation
(d) Delamination

111. During germination of seeds, after imbibitions of water first step would be
(a) Mobilization of reserve food
(b) Transcription of specific genes
(c) Cell division

(d) Embryo differentiation

112. In tissue culture experiment to initiated to shoots from undifferentiated mass of cell the medium must contain
(a) low auxina dn high cytokinin
(b) High auxin adn high cytokinin
(c) High auxin and low cytokinin
(d) Low auxin and low cytokinin

113. In aroid plant the temperature of inflorescence rise around 8-10°C as compare to plant during maturation. It is due to activity of
(a) Dehydrogenase
(b) Cytochrome oxidase
(c) Alternate oxidase
(d) Peroxidase

114. Which of the metabolite in nitrate assimilation is not located in the chloroplast?
(a) Glutamine
(b) Nitrite
(c) Uric acid
(d) Xanthin

115. If bird is kept is a closed cage that all external clues are blocked then what would be effect on its biological clock
(a) No effect
(b) It will lag behind to small level
(c) It will be random
(d) It will stop functioning

116. Serum contains
(a) Non-fibrinogen proteins, minerals and glucose
(b) Cells corpuscles, mineral and glucose
(c) Cell corpuscles, minerals and non-fibrinogen proteins
(d) Minerals and glucose

117. Main function of sweating is
(a) Thermoregulation of body
(b) Excrete salt
(c) Maintenance of blood volume
(d) Osmoregulation of body

118. Glucose is never seen in urine because it is mainly absorbed by
(a) Proximal tubule
(b) Collecting duct
(c) Ascending loop of Henle
(d) Clucose never enter into Bowman's capsule

119. Among the following which would be most suitable market for selection of animals with agronomic traits
(a) RFLP
(b) RAPD
(c) EST
(d) Minisattelite

120. Suppose a chromosal aberration ina chromosome A B C D E F G leads to A B C D E F G C D F E G . The probable reason is
(a) Duplication and followed by EF inversion
(b) Duplication followed by pericentric inversion
(c) Only duplication
(d) Only Inversion

121. The primary criteria for classifying insects is
(a) Legs
(b) Thorax
(c) Wing
(d) Appendages

122. In Northern hemisphere there is slow turnover of nutrient in terrestrial ecosystem as compare to southern hemisphere. The probable reason is
(a) Plants are not good in uptake of nutrients in northern hemisphere
(b) Temperature is low which is not suitable for nutrient recycling
(c) High rainfall in southern hemisphere
(d) Soil is nutrient deficient in northern hemisphere.

123. Which antibody is known to be responsible for allergic reaction
(a) IgG
(b) IgA
(c) IgM
(d) IgE

124. In which technique O-Phenyl Diamine is used as chromogenic substrate
(a) RIA
(b) ELISA
(c) Southern blotting
(d) Western blotting

125. Animal biologist generally uses Line-transect method for estimating density. It is based on assumption that
(a) Organism will not move from marked transect
(b) All organisms are in straight line
(c) That animals on the line are seen
(d) Organism lack any competition

126. Anticodon sequence lies in
(a) DNA
(b) t-RNA
(c) r-RNA

(d) r-RNA

127. ϕ and ψ values for right handed α helix are expected to be

(a) ϕ Negative ψ negative
(b) ϕ Negative ψ positive
(c) ϕ Positive ψ negative
(d) ϕ positive ψ positive

128. Which is correct sequence of evolution of human culture and civilization?

(a) Cave painting> Burial> agriculture> pottery
(b) Cave painting>> agriculture> burial> pottery
(c) Cave painting> Burial> Pottery> Agriculture
(d) Agriculture> burial> Pottery> Cave Painting

129. Which molecule has property of self replication?

(a) Protein
(b) Carbohydrate
(c) Lipids
(d) Nucleic acid

130. The model organism to study cell lineage is

(a) Xenopus
(b) Yeast
(c) Caenorhabdtis elegans
(d) Drosphilia

131. Which of the following organism excrete uric acid?

(a) Human
(b) Fish
(c) Frog
(d) Bird

132. For constructing recombinant plasmid, plasmid and DNA to be inserted are digested with same restriction enzyme and kept in same rection solution. To prevent self sealing of pladmis, which of the following enzyme is utilized?

(a) Alkaline phosphate
(b) Polynucleotide kinase
(c) Terminal transferase
(d) Ligase

133. Immunotoxins are

(a) Bacterial toxins
(b) Antibody for specific antigen tagged with toxin
(c) Low immunogenic toxin
(d) Anti-toxin

134. A aminopurine is attached to ribose sugar by N_9 - C' glycosidic bond would be termed as

(a) Nucleotide
(b) Deoxyadenosine
(c) Adenosine
(d) Adenosine monophosphate

135. 1 ciurie is equal to

(a) 3.7×10^9 Becquerel
(b) 37×10^9 Becquerel
(c) 3.7×10^6 Becquerel
(d) 37×10^6 Becquerel

136. Which of the following is negative regulator of trp operon

(a) Lactose
(b) Allolactose
(c) C-AMP
(d) Tryprophan

137. If there are only 20 individuals in a population then as per IUCN would be kpet under category

(a) Extinct
(b) Rare
(c) Endangered
(d) Critically endangered

138. Maximum absorption of UV light at wavelength 280 nm by a protein is due to

(a) Aromatic amino acids
(b) Aromatic amino acids and peptide bond
(c) Aliphatic amino acids
(d) Aromatic and aliphatic amino acids

139. What percentage of photo active radiation are actually utilized for photosynthesis by plants

(a) Lesser then 1 percent
(b) 1-3 percent
(c) 10-20 percent
(d) >20 percent

140. In knockout mice experiment germline trnansmittion of gene A, null allele from a male chimera shows retarded growth of all mutant heterozygotes. On inbreeding animals produced the expected ratio of heterozygote pups but only 50 percent of heterozygote are with retarded growth of phenotype. This results are consistent with the following

(a) Genomic imprinting
(b) Six linked inheritance
(c) Cytoplasmic inheritance
(d) Dominant effect

***Note**: Paper is being prepared by Helix Academy with help of students of Helix on their memory basis.*

- *For Solutions of this Paper contact to Helix Academy*

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Date and Time of the Commencement of Orientation Class for Dec. & June Exam:

5th July, 2009 (Sunday) at 10.00 am
20th July, 2009 (Monday) at 3.00 pm
5th Jan. 2010 (Tuesday) at 2.00 pm

Regular Batch for GATE Exam-2010

5th August (Wednesday) -2009

Power Packed Guarantee Crash Course For GATE-2010.

2nd Jan.- 2010 (Saturday) at 2.00 pm