

- Q1.** The current geological age in which human activity is a major driver of climate and environment change is called
 (a) Anthropocene (b) **Holocene**
 (c) Pliocene (d) Paleogene
- Q2.** Gerontology is the study of
 (a) **Old age** (b) Planets
 (c) Rainfall (d) Soil
- Q3.** The laws of planetary motion were proposed by
 (a) **Kepler** (b) Newton
 (c) Galileo (d) Bessel
- Q4.** Which of the following remains a liquid at room temperature?
 (a) Chlorine (b) **Bromine**
 (c) Phosphorus (d) Nitrogen
- Q5.** Upon emission of a positron by radioisotope, the atomic number of the daughter atom
 (a) Increases by 1 (b) Increases by 2
 (c) **Decreases by 1** (d) Decreases by 2
- Q6.** The Nobel Prize was given for the first time in the year
 (a) 1900 (b) **1901**
 (c) 1911 (d) 1921
- Q7.** Who invented the periodic table?
 (a) Anton van Leuwenhoek
 (b) CS Chandrasekhar
 (c) **Dmitri Mendeleev**
 (d) Alfred Noble
- Q8.** Who is known as the father of nuclear physics?
 (a) **Ernest Rutherford**
 (b) Niels Bohr
 (c) John Dalton
 (d) Robert Boyle
- Q9.** Grass appears green because it
 (a) **Reflects green color**
 (b) Absorbs green color
 (c) Reflects white color
 (d) Absorbs white color
- Q10.** A molecule absorbs light of a particular wavelength and continues to emit the light of higher wavelength for a substantial time after excitation. The phenomena is called
 (a) **Phosphorescence**
 (b) Fluorescence
 (c) Chemiluminescence
 (d) Cerenkov radiation
- Q11.** Air bags used for the safety of car drivers contain
 (a) Sodium carbonate
 (b) **Sodium azide**
 (c) Magnesium Chloride
 (d) Sodium nitrite
- Q12.** The loudness of a sound wave is determined by its
 (a) Frequency (b) Wavelength
 (c) Velocity (d) **Amplitude**
- Q13.** Red light is used for signals because it has
 (a) High frequency
 (b) **Long wavelength**
 (c) High intensity
 (d) Low refraction
- Q14.** Venturi meter is used to measure
 (a) **Fluid pressure**

- (b) Fluid speed
(c) Fluid density
(d) Fluid temperature
- Q15.** Regarding Dmitri Ivanovsky, pick the incorrect sentence
(a) A Russian botanist has been credited as one of the first discoverers of the structure of viruses on Electron microscopy.
(b) He investigated a tobacco plant disease which was transmissible and caused an agent extremely small, such that it could pass through Chamber land filters
(c) He gave the concept of 'Contagium fixium'; i. e., the viruses are particulate.
(d) Ivanovsky's work on the yellow pigment of plant leaves showed that these protected chlorophyll from the detrimental effect of blue and violet light.
- Q16.** What is the biological polymer in paper?
(a) Starch (b) Cellulose
(c) Graphite (d) polystyrene
- Q17.** What is the chemical used to make toothpaste white?
(a) Titanium dioxide
(b) Charcoal
(c) Calcium chloride
(d) Calcium carbonate
- Q18.** Which metal is generally used in the making of microchips?
(a) Vanadium (b) Boron
(c) Platinum (d) Silicon
- Q19.** What is known as the God particle?
(a) Deuteron (b) Proton
(c) Higgs Boson (d) Neutron
- Q20.** Which one of the following metals pollutes the air of a city having a large number of automobiles?
(a) Cadmium (b) Chromium
(c) Lead (d) Copper
- Q21.** Which of the following is not a mixture?
(a) Glass (b) Graphite
(c) Steel (d) Aluminium
- Q22.** The axis of earth's rotation relative to orbital plane is tilted by
(a) 22.5 degrees
(b) 23.5 degrees
(c) 24.5 degrees
(d) 25.5 degrees
- Q23.** Tsunamis are usually caused by:
(a) Tides
(b) Overfishing
(c) Underwater earthquakes
(d) Nuclear explosions
- Q24.** The Kalka Shimla railway is an example of
(a) Broad gauge railway
(b) Meter gauge railway
(c) Narrow gauge railway
(d) Monorail
- Q25.** Heavy floods in Kerala this year led to the outbreak of which of the following diseases?
(a) Leptospirosis
(b) Typhoid
(c) Yellow fever
(d) Influenza

- Q26. Where was India's first specialized hospital for elephants unveiled on 17th November 2018?
- (a) Coimbatore, Tamil Nadu
(b) Wyanad, Kerala
(c) Mathura, Uttar Pradesh
(d) Coorg, Karnataka
- Q27. Who performed the world's first heart transplant?
- (a) Dr. Venugopal
(b) William Harvey
(c) Christian Bernard
(d) Robert Koch
- Q28. Our National science Day is celebrated on February 28 to honour which scientist's discovery?
- (a) Sir C V Raman
(b) Homi J Bhaba
(c) APJ Abdul Kalam
(d) Jagdish Chander Bose
- Q29. Recently in Kerala, which highly infectious virus caused an outbreak?
- (a) Japanese encephalitis virus
(b) Nipah virus
(c) Ebola virus
(d) Zika virus
- Q30. How many megabytes (MB) are there in one gigabyte (GB):
- (a) 1000 (b) 2000
(c) 220 (d) 1024
- Q31. RAM in computers usually stands for:
- (a) Remove All Memory
(b) Read and memorize
(c) Random access memory
(d) Roast all mice
- Q32. The most appropriate yardstick for measuring comparative scatteredness in different sets of data is
- (a) Arithmetic mean
(b) Mean deviation
(c) Variance
(d) Coefficient of variation
- Q33. In a group of 400 students, 120 are males. 30% of the males are vegetarians, whereas 76 females are non-vegetarians what is the probability that a randomly chosen student from the group is vegetarian?
- (a) 0.72 (b) 0.60
(c) 0.48 (d) 0.30
- Q34. In a single throw of two dice, what is the probability of getting a sum of 8 or 11?
- (a) 1/36 (b) 3/36
(c) 5/36 (d) 7/36
- Q35. For studying association between two attributes, the most appropriate test procedure is
- (a) X^2 test (b) F-test
(c) t-test (d) Z-test
- Q36. In testing significance of hypotheses,
- (a) Type-1 error has always more serious repercussions than Type-2 error
(b) Type-2 error has always more serious repercussions than Type-1 error
(c) Relative seriousness of the two errors depends upon the situation being handled
(d) The two errors induce no effect, whatsoever, on the conclusions drawn.

- Q37. In a binomial distribution, if chances of getting success are 50% and we perform an exceedingly large number of trials, then the distribution will look like
(a) Normal (b) Poisson
(c) Binomial (d) Uniform
- Q38. Random sampling' means
(a) Haphazard sampling
(b) Hoch-poch sampling
(c) The sampling wherein the enumerator makes use of his/her personal judgement
(d) The sampling which is governed by the rules and regulations of probability theory
- Q39. For a normally distributed population, Cumulative density function has the shape of
(a) Straight line
(b) Inverted u
(c) Sigmoid
(d) Sine-wave
- Q40. The most appropriate measure of dispersion when the data are contaminated by outliers is
(a) Range
(b) Standard deviation
(c) Mean deviation
(d) Quartile deviation
- Q41. If male and female children are equally likely to be borne, what is the probability that a randomly chosen family of 3 children has at least one but not more than two females?
(a) 1.00 (b) 0.75
(c) 0.50 (d) 0.25
- Q42. prussic acid is another name of
(a) Sulphuric acid
(b) Nitric oxide
(c) Oxalic acid
(d) Hydrogen cyanide
- Q43. Which vitamin is only found in animal products?
(a) Vitamin A
(b) Vitamin B₃
(c) Vitamin B₁₂
(d) Vitamin C
- Q44. Which is the largest human cell?
(a) Liver (b) Ovum
(c) Spleen (d) Skin
- Q45. The term 'Allelopathy' refers to
(a) A biological phenomenon where an organism Produces one or more biochemicals that influences germination, growth, survival, and reproduction of other organisms.
(b) The modern system of Medicine
(c) A level of vulnerability of a habitat to invasions From 'allelic' species.
(d) The negative impact of non-living factors on living organisms in a specific environment.
- Q46. Who coined the terms autosomal "dominant "and recessive" for genetic characters?
(a) Marie Curie
(b) Joseph Lister
(c) Carl Correns

- (d) Gregor Mendel
- Q47. Which one of the following pairs is not correctly matched?
- (a) Alexander Flemming: Penicillin
(b) William Harvey: Blood circulation
(c) Louis Pasteur: Tubercle bacilli
(d) Edward Jenner: Vaccine
- Q48. Which disease has been eradicated from the world?
- (a) Poliomyelitis
(b) Guinea worm disease
(c) Chicken pox
(d) Smallpox
- Q49. Who was the first to use antiseptics during surgery?
- (a) Alexander Fleming
(b) Joseph Lister
(c) Ronald Ross
(d) Louis Pasteur
- Q50. Which country has successfully eliminated malaria?
- (a) India (b) Pakistan
(c) Bangladesh (d) Sri Lanka
- PART II- SECTION-B: LIFE SCIENCE**
- Q51. The highly repetitive DNA in the eukaryotes occupies the which fraction of the Cot Curve
- (a) Slow
(b) Intermediate
(c) Fast
(d) All of the above
- Q52. Which of the following type of enzyme inhibition is also called as end-product inhibition?
- (a) Substrate regulation
(b) Feedback inhibition
(c) Competitive inhibition
(d) Non-competitive inhibition
- Q53. Cholesterol does not act as the precursor for
- (a) Cardiolipin
(b) Progesterone
(c) Cortisol
(d) Estradiol
- Q54. Allopurinol is used for the treatment of gout. It is an inhibitor of
- (a) Thymidylate synthase
(b) Xanthine oxidase
(c) Hypoxanthine-guanine phosphoribosyl transferase
(d) Adenosine phosphoribosyl transferase
- Q55. α -oxidation of fatty acids takes place in
- (a) Endoplasmic reticulum
(b) Cytosol
(c) Mitochondria
(d) Peroxisomes
- Q56. Which of the following enzyme participates in both the citric acid cycle and the electron transport chain?
- (a) NADH dehydrogenase
(b) Malate dehydrogenase
(c) Succinate dehydrogenase
(d) Isocitrate dehydrogenase
- Q57. Which of the following molecule yields maximum number of ATPs upon oxidation?
- (a) Glutamate (b) Pyruvate

- (c) Palmitate (d) Glucose
- Q58.** Which is true about enzymes?
(a) All enzymes are proteins
(b) All enzymes are vitamins
(c) All enzymes are not proteins
(d) All proteins are enzymes
- Q59.** Wavelength range of absorption peptide bond is
(a) 190-230 nm
(b) 240-270 nm
(c) 160-180 nm
(d) 250-280 nm
- Q60.** Pick up the amino acid, which is present in the body but not found in proteins
(a) Arginine
(b) 4-Hydroxyproline
(c) Ornithine
(d) Selenocysteine
- Q61.** Alu elements in human genome represent:
(a) Exons
(b) Introns
(c) Nucleotide repeats
(d) Transposable elements
- Q62.** Which of the following structures is known to maintain the shape of a cell?
(a) Ribosomes
(b) Microtubules
(c) Nucleus
(d) Mitochondria
- Q63.** Calmodulin contributes to signal transduction by binding to
(a) CAMP
(b) Calcium
(c) Magnesium
- (d) Sodium
- Q64.** Crossing over occurs in which phase
(a) Prophase I
(b) Telophase I
(c) Anaphase I
(d) Metaphase I
- Q65.** The non-sister chromatids twist around and exchange segments with each other during
(a) Leptotene (b) Diakinesis
(c) Diplotene (d) Pachytene
- Q66.** Human genome contains about
(a) 2 billion base pairs
(b) 3 billion base pairs
(c) 4 billion base pairs
(d) 5 billion base pairs
- Q67.** Which of the following amino acid is present abundantly in histones?
(a) Aspartic acid
(b) Tryptophan
(c) Arginine
(d) Glycine
- Q68.** Which of the following growth media would you expect to result in synthesis of high levels of mRNA for the enzymes of the E. coli lac operon?
(a) High glucose, high lactose
(b) Low glucose, low lactose
(c) High glucose, low lactose
(d) No glucose, high lactose
- Q69.** What is the mode of action of exonuclease III?
(a) Exonuclease III acts on single stranded DNA in 3'-5' direction

- (b) Exonuclease III acts on double stranded DNA in 5'-3'direction
- (c) Exonuclease III acts on single stranded DNA in 5'-3'direction
- (d) Exonuclease III acts on double stranded DNA in 3'-5'direction
- Q70.** The specific DNA sequences to which the transcription factors bind are referred to as
- (a) Replication elements
- (b) Blocking factors
- (c) Transcription factors
- (d) Regulatory elements**
- Q71.** Which of the following statement is incorrect regarding DNA methylation?
- (a) S-Adenosyl Methionine (SAM) is one of the most important methyl donors.
- (b) It is catalysed by enzymes
- (c) Occurs at CpG islands
- (d) Mainly G is methylated**
- Q72.** Which of the following is not an example of post translational modification?
- (a) Addition of prosthetic groups
- (b) Proteolytic Processing
- (c) mRNA splicing**
- (d) Loss of signal sequences
- Q73.** Which of the following statement is incorrect about the genetic code is?
- (a) A codon is a triplet of nucleotides that codes for a specific amino acid
- (b) A specific first codon in the sequence establishes the reading frame
- (c) A codon specifies more than one amino acid**
- (d) Nucleotide triplets are read in a successive, nonoverlapping fashion
- Q74.** Human telomeres consist of Tandem repeats of sequence
- (a) (TTAGGG)_n**
- (b) (TTAAGGG)_n
- (c) (TTAAGG)_n
- (d) (TTAAAGG)_n
- Q75.** The original codon changes to stop codon in which type of mutation
- (a) Sense mutation
- (b) Mis-sense mutation
- (c) Non-sense mutation**
- (d) Reverse mutation
- Q76.** If the amount of 'G' in a DNA sample is 20%. What will be the amount of 'T'?
- (a) 40% (b) 50%
- (c) 30%** (d) 20%
- Q77.** Which of the following takes place in both bacterial as well as eukaryotic mRNA synthesis?
- (a) Poly A tailing
- (b) 5' Capping
- (c) Splicing
- (d) DNA dependent RNA synthesis**
- Q78.** The TATA box:
- (a) Present on the template strand
- (b) Present about 70 base pairs away from transcription start site**
- (c) Serves as the signal for attachment of RNAP-II
- (d) Acts as silencer of the gene

- Q79. Which of the following substances will not stimulate an immune response unless they are bound to a larger molecule?
(a) Hapten (b) Antigen
(c) Antibody (d) Virus
- Q80. Which of the following is the major immunoglobulin in human serum, accounting for 80% of the immunoglobulin pool?
(a) IgM (b) IgE
(c) IgD (d) IgG
- Q81. Type I hypersensitivity is mediated by which of the following immunoglobulin's?
(a) IgA (b) IgG
(c) IgE (d) IgM
- Q82. Acute inflammation characteristically involves?
(a) Influx of mast cells.
(b) Capillary endothelial cell enlargement
(c) Influx of neutrophils
(d) Influx of macrophages
- Q83. A tissue graft between two people who are not genetically identical is termed a
(a) Isograft
(b) Heterograft
(c) Xenograft
(d) Allograft
- Q84. Cell-mediated immunity
(a) Can be transferred passively using sera
(b) is mediated by B and T cells
(c) Is mediated by T cells, macrophages and interleukins
(d) Forms the major part of innate immunity
- Q85. B cells differentiate to form
(a) Plasma cells
(b) Effector cells
(c) Plasma cells and memory cells
(d) Germinal cells
- Q86. Opsonin is the
(a) Cell wall component
(b) Plasma component
(c) Serum component
(d) Cytoplasm component
- Q87. The class of an immunoglobulin
(a) is determined by Class I and Class II major histocompatibility complex proteins
(b) is determined by the carbohydrate attached to the light chain is
(c) Determined by the antigen
(d) is determined by the heavy chain type
- Q88. J Chain is present in which antibodies
(a) IgG (b) IgM
(c) IgE (d) IgD
- Q89. Which of the following structures is an example of lymphatic vessel?
(a) Thoracic duct
(b) Parotid duct
(c) Bile duct
(d) Cystic duct
- Q90. Which connective tissue cells are responsible for synthesising collagen fibres?
(a) Macrophages
(b) Fibroblast
(c) Mast cell
(d) Adipocytes

- Q91.** Structure in descending order related to Bile duct
- (a) Head of pancreas, first part of duodenum, lesser omentum
 - (b) First part of duodenum, lesser omentum, head of pancreas
 - (c) Lesser omentum, first part of duodenum, head of pancreas.**
 - (d) Head of pancreas, lesser omentum, first part of duodenum
- Q92.** Coronary arteries arise from
- (a) Ascending aorta**
 - (b) Arch of aorta
 - (c) Subclavian artery
 - (d) Descending aorta
- Q93.** Thyroid hormones act through
- (a) Nuclear receptors**
 - (b) Plasma membrane receptors
 - (c) Cytosolic receptors
 - (d) ER receptors
- Q94.** Which of the following causes Byssinosis?
- (a) Cotton dust**
 - (b) Benzopyrene
 - (c) Peroxyacetylene nitrate
 - (d) Lead
- Q95.** Which part of the body best represents the core body temperature?
- (a) Oral cavity
 - (b) Axilla
 - (c) Rectum**
 - (d) Nasal cavity
- Q96.** The velocity of blood flow is highest in
- (a) Ascending aorta**
 - (b) Capillaries
 - (c) Large veins
 - (d) Pulmonary trunk
- Q97.** Insulin increases entry of glucose in the liver cells by increasing the
- (a) Number of glucose transporters (GLUT- on the hepatocytes**
 - (b) Activity of glucokinase which decreases intracellular free glucose thus promoting diffusion
 - (c) Activity of Na^+/K^+ ATPase which utilizes glucose for its energy requirements, thus decreasing free glucose within the cell
 - (d) Activity of transcription factors for the production of glucose transporters in the hepatocytes
- Q98.** Physiological dead space is calculated by
- (a) Dalton's laws
 - (b) Bohr equation**
 - (c) Boyle's laws
 - (d) Charle's laws
- Q99.** In a female with sex chromosomes XXX, how many Barr bodies will be there:
- (a) 1
 - (b) 2**
 - (c) 3
 - (d) 4
- Q100.** The common example of point mutation is:
- (a) Color blindness
 - (b) Down's Syndrome
 - (c) Sickle cell anaemia**
 - (d) Thalassemia
- Q101.** Ames test used to screen mutagenicity is based on
- (a) Reversion of arginine auxotrophic mutants to prototrophic

- (b) Reversion of histidine auxotrophic mutants to prototrophic
- (c) Reversion of tyrosine auxotrophic mutants to prototrophic
- (d) No reversion of auxotrophic mutants
- Q102.** Pyrimidine dimer formation is a sign of DNA damage. They are induced by
- (a) Spontaneous deamination of nucleotide bases
- (b) UV light
- (c) Alkylating agents
- (d) Depurination of nucleotide bases
- Q103.** In *Drosophila*, the sex is determined by
- (a) the ratio of pairs of X chromosomes to the pairs to autosomes
- (b) X and Y chromosomes
- (c) The ratio of number of X chromosomes to the sets of autosomes
- (d) Whether the egg is fertilized or develops parthenogenetically
- Q104.** In the F₂ generation of a Mendelian dihybrid cross, the number of genotypes and phenotypes are
- (a) Genotypes 16, phenotypes 4
- (b) Genotypes 9, phenotypes 4
- (c) Genotypes 4, phenotypes 9
- (d) Genotypes 8, phenotypes 4
- Q105.** Tuberculosis lesions are prominent in digestive tract rather than in respiratory tract in
- (a) Poultry
- (b) Cattle
- (c) Horse
- (d) Rodents
- Q106.** Person having sex chromosomes XXY suffers from which of the following
- (a) Down's syndrome
- (b) Edward's syndrome
- (c) Klinefelter's syndrome
- (d) Patau's syndrome
- Q107.** Multiple genes are involved in the inheritance of which of the following disease
- (a) Skin color
- (b) Color blindness
- (c) Sickle-cell anemia
- (d) Phenylketonuria
- Q108.** Which of these genomes have maximum ploidy?
- (a) Humans
- (b) Bacteria
- (c) Fungi
- (d) Plants
- Q109.** The study of nests of birds is known as
- (a) Craniology
- (b) Nidology
- (c) Ichnology
- (d) Myremecology
- Q110.** Jurassic period of the Mesozoic era is characterized by
- (a) Dinosaurs become extinct and angiosperms appear
- (b) Radiation of reptiles and origin of mammal like reptiles
- (c) Gymnosperms are dominant and first birds appear
- (d) Flowering plants and first dinosaurs appear
- Q111.** Name the phylum that has highest number of species
- (a) Arthropoda
- (b) Brachiopoda

- (c) Echinodermata
(d) Mollusca
- Q112.** Which of the following is not an Insect?
(a) Beetle
(b) Spider
(c) House fly
(d) Mosquito
- Q113.** Who wrote the book "Origin of species"?
(a) Jean-Baptiste Lamarck
(b) Charles Darwin
(c) Hugo de Vries
(d) Gregor Mendel
- Q114.** Silk is produced by
(a) *Apis indica*
(b) *Bombyx mori*
(c) *Laccifer lacca*
(d) *Dactylopius coccus*
- Q115.** Kennel cough in dogs is caused by
(a) *Brucella nielitensis*
(b) *Corynebacterium renale*
(c) *Bordetella bronchiseptica*
(d) *Bacillus anthracis*
- Q116.** Yolk sac route inoculation should be done on
(a) 6-8 day's old fertile eggs
(b) 10-12 day's old fertile eggs
(c) 12-14 day's old fertile eggs
(d) 14-16 day's old fertile eggs
- Q117.** Which of the following is not an occupational zoonotic disease?
(a) Brucellosis
(b) Plague
(c) Anthrax
(d) Salmonellosis
- Q118.** Fusion of male gamete with the polar nuclei of embryo sac is known as
(a) Double fertilization
(b) Pollination
(c) Embryogeny
(d) Triple fusion
- Q119.** Which one of the plants introduced from new world to the old world?
(a) Potato (b) Wheat
(c) Rice (d) Sugarcane
- Q120.** Which one of the following is caused by fungus?
(a) Sandal spike
(b) Crown gall disease
(c) Powdery mildew
(d) Citrus canker
- Q121.** Elicitors are molecules that
(a) Induce cell division in plants
(b) Stimulates defence response in plants
(c) Simulates hairy root formation
(d) Stimulates plant growth
- Q122.** Which of the following is dimorphic fungus?
(a) *Aspergillus flovus*
(b) *Histoplasma capsulatum*
(c) *Trichophyton mentagrophytes*
(d) *Cryptococcus neoformans*
- Q123.** Which of the following organism is an obligate aerobe?
(a) *E. coli*
(b) *Pseudomonas aeruginosa*
(c) *Staphylococcus*
(d) *Acinetobacter*

- Q124.** Which of the following organism is not transmitted by soil?
- (a) Brucella
 - (b) Coccidioidomycosis
 - (c) Tetanus
 - (d) Anthrax**
- Q125.** Phenol co-efficient indicates
- (a) Purity of a disinfectant
 - (b) Dilution of a disinfectant
 - (c) Efficacy of a disinfectant**
 - (d) Quantity of a disinfectant
- Q126.** Definitive host of guinea worm is
- (a) Man**
 - (b) Cyclops
 - (c) Snail
 - (d) Tick
- Q127.** Which one of the following is true?
- (a) Agar has nutrient properties
 - (b) Chocolate medium is selective medium
 - (c) Addition of selective substances in a solid medium is tailed enrichment media
 - (d) Nutrient broth is basal medium**
- Q128.** Plasmids which do not possess information for self-transfer to another cell are known as
- (a) Conjugative plasmids
 - (b) Cryptic plasmids
 - (c) Non-conjugative plasmids**
 - (d) Incompatible plasmids
- Q129.** An example of single stranded linear DNA virus is
- (a) Parvovirus B19**
 - (b) Papilloma virus
 - (c) Hepatitis B virus
 - (d) Epstein Barr virus
- Q130.** Limulus amoebocyte lysate assay is used for the detection of bacterial
- (a) Pili
 - (b) Endotoxins**
 - (c) Peptidoglycan
 - (d) Capsule
- Q131.** Creutzfeldt-Jakob disease (CID) is caused by
- (a) DNA viruses
 - (b) Bacteria
 - (c) Prions**
 - (d) RNA Viruses
- Q132.** The technique used to detect the presence of DNA or RNA in a non-fractionated DNA sample is
- (a) Colony hybridization
 - (b) In situ hybridization
 - (c) Dot blot technique**
 - (d) Western blotting
- Q133.** Chromosome painting used to detect chromosome translocation is also called:
- (a) Probing
 - (b) FISH**
 - (c) M-FISH
 - (d) Karyotyping
- Q134.** Which protein moves the least from point of application of sample while electrophoresis
- (a) alphaglobulin
 - (b) beta globulin
 - (c) gammaglobulin**

- (d) albumin
- Q135.** Micro biosensors are based on
- (a) ions effect
 - (b) ion sensitive field effect transistor**
 - (c) Piezoelectric effect
 - (d) magnetic effect
- Q136.** P1 cloning vector allow cloning of DNA of the length of
- (a) 100 kbp**
 - (b) 50 kbp
 - (c) 20 kbp
 - (d) 10 kbp
- Q137.** The name Alec Jeffery is associated with
- (a) DNA Sequencing
 - (b) RNA Sequencing
 - (c) DNA Fingerprinting**
 - (d) Site-directed Mutagenesis
- Q138.** Hot-start PCR is a modification of PCR. Which of the following is not corresponding to it?
- (a) The basis is that extension is not started until the first cycle reaches its maximum temperature
 - (b) The polymerase is added after the first cycle has reached its maximum temperature or melting temperature
 - (c) It is satisfactory for small number of Samples**
 - (d) It leads to generation of non-specific products
- Q139.** Which of the following cannot be used to analyse unstained biological samples?
- (a) Dark-field microscopy
 - (b) Electron microscopy**
 - (c) Fluorescence microscopy
 - (d) Phase-contrast microscopy
- Q140.** Which of the following vector contains telomeric sequences?
- (a) Plasmid vector
 - (b) Lambda vector
 - (c) M13 vector
 - (d) Yeast vector**
- Q141.** The uptake of external DNA into bacterial cell is facilitated in the presence of
- (a) Calcium chloride**
 - (b) Polymerase
 - (c) Endonuclease
 - (d) Plasmid
- Q142.** In gel electrophoresis, which of the following molecule will move faster if the amount of DNA present is same in all?
- (a) Linear
 - (b) Supercoiled**
 - (c) Nicked
 - (d) Circular
- Q143.** Biochips are made up of
- (a) Semi-conducting molecules inserted into the protein frame work**
 - (b) Conducting molecules inserted into the protein frame work
 - (c) Non-conducting molecules inserted into the protein frame work
 - (d) Conducting molecules
- Q144.** Which of the following is a nucleotide sequence data base?
- (a) EMBL**
 - (b) SWISS PROT
 - (c) PROSITE

(d) TREMBL

Q145. The collection of proteins that can be produced by a given species is:

- (a) Considered as species' genetic complement
- (b) Correlates with the size of the organism
- (c) Called the Proteome.**
- (d) Called as Transcriptome

Q146. Difference in wavelength or frequency (units) between positions of band maxima of absorption and emission spectra of the same electronic transition is known as

- (a) Vavilov rule
- (b) Stokes shift**
- (c) Kasha's rule
- (d) Stokes line

Q147. Which of the following does not absorb UV radiation?

- (a) Benzoic acid
- (b) Chloro-hexane**
- (c) Nitrobenzene

(d) Butadiene

ENVIRONMENTAL SCIENCES

Q148. Which of the following is categorized as third generation pesticide?

- (a) Organophosphates
- (b) Chlorinated hydrocarbon s
- (c) Juvenile hormone**
- (d) Rotenone

Q149. Rumen Gas largely consist of Carbon Dioxide and methane in the proportion of

- (a) 50: 50
- (b) 65 : 35**
- (c) 40: 30
- (d) 80 : 20

Q150. An example of ruminant animal is

- (a) Horse
- (b) Cow**
- (c) Rabbit
- (d) Rhinocer