

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	1	<p>What is the function of arteries in the body?</p> <p>A1 : To exchange nutrients with the body's tissues</p> <p>A2 : To carry both oxygenated and deoxygenated blood away from the heart</p> <p>A3 : To carry only oxygenated blood away from the heart</p> <p>A4 : To return blood to the heart</p>	4.0	1.00
Objective Question				
2	2	<p>Which organ is responsible for creating bile?</p> <p>A1 : Gall bladder</p> <p>A2 : Stomach</p> <p>A3 : Liver</p> <p>A4 : Pancreas</p>	4.0	1.00
Objective Question				
3	3	<p>Adrenocorticotrophic hormone will enter the blood stream, and act on which structure in the body?</p> <p>A1 : Pituitary gland</p> <p>A2 : Kidney</p> <p>A3 : Liver</p> <p>A4 : Adrenal gland</p>	4.0	1.00
Objective Question				
4	4	<p>Which immune cell is part of acquired immunity?</p> <p>A1 : Macrophage</p>	4.0	1.00

		<p>A2 Plasma cell :</p> <p>A3 Eosinophil :</p> <p>A4 Neutrophil :</p>		
Objective Question				
5	5	<p>Which structure releases calcium ions prior to muscle contraction?</p> <p>A1 T-tubule :</p> <p>A2 Sarcoplasmic reticulum :</p> <p>A3 Sarcolemma :</p> <p>A4 Myosin :</p>	4.0	1.00
Objective Question				
6	6	<p>Which portion of the brain is responsible for controlling breathing and heart rate?</p> <p>A1 Hypothalamus :</p> <p>A2 Cerebrum :</p> <p>A3 Cerebellum :</p> <p>A4 Brain stem :</p>	4.0	1.00
Objective Question				
7	7	<p>Which cellular junction acts as a barrier to prevent fluids from passing between cells?</p> <p>A1 Villi :</p> <p>A2 Gap junctions :</p> <p>A3 Desmosomes :</p> <p>A4 Tight junctions :</p>	4.0	1.00
Objective Question				
8	8	<p>Who is known as the Father of Genetics?</p> <p>A1 Hugo de Vries</p>	4.0	1.00

		:  A2 Gregor Johann Mendel :  A3 Charles Darwin :  A4 Aristotle :		
Objective Question				
9	9	Eukaryotic ribosomes are made up of ____ and ____ subunits.  A1 80S and 20S :  A2 40S and 80S :  A3 60S and 40S :  A4 50S and 40S :	4.0	1.00
Objective Question				
10	10	Who discovered transposons in Maize?  A1 Maud Menten :  A2 Barbara McClintock :  A3 Gerty Cori :  A4 Barbara McGonagall :	4.0	1.00
Objective Question				
11	11	Which among the following is NOT a structural polysachharide?  A1 Cellulose :  A2 Glycogen :  A3 Pectin :  A4 Chitin :	4.0	1.00
Objective Question				
12	12	Which portion of the neuron receives electrical signals from other neurons?	4.0	1.00

		<p>A1 Axon hillock :</p> <p>A2 Dendrites :</p> <p>A3 Axons :</p> <p>A4 Cell body :</p>		
Objective Question				
13	13	<p>If a cell is incapable of catabolizing very long fatty acid chains, it most likely has a problem with which of the following organelles?</p> <p>A1 Mitochondria :</p> <p>A2 Golgi apparatus :</p> <p>A3 Peroxisomes :</p> <p>A4 Smooth endoplasmic reticulum :</p>	4.0	1.00
Objective Question				
14	14	<p>Which of the following will not result from enzymatic activity in a cell?</p> <p>A1 Decreasing the activation energy for a reaction :</p> <p>A2 Making a reaction more exothermic :</p> <p>A3 Increasing the forward rate of a reaction :</p> <p>A4 Increasing the reverse rate of a reaction :</p>	4.0	1.00
Objective Question				
15	15	<p>What level of protein structure is determined only by hydrogen bonds?</p> <p>A1 Secondary structure :</p> <p>A2 Primary structure :</p> <p>A3 Tertiary structure :</p> <p>A4 Quaternary structure :</p>	4.0	1.00

Objective Question			
16	16	<p>Which phase of mitosis involves the separation of chromatids?</p> <p>A1 : Prophase</p> <p>A2 : Metaphase</p> <p>A3 : Telophase</p> <p>A4 : Anaphase</p>	4.01.00
Objective Question			
17	17	<p>What is the purpose of the prostate gland in males?</p> <p>A1 : Add to the fluidity of semen</p> <p>A2 : Produce sperm</p> <p>A3 : Store sperm</p> <p>A4 : Release hormones to create sperm</p>	4.01.00
Objective Question			
18	18	<p>What term best describes when one species exhibits two or more defined phenotypes within the same population?</p> <p>A1 : Natural selection</p> <p>A2 : Polymorphism</p> <p>A3 : Allopatry</p> <p>A4 : Assortative mating</p>	4.01.00
Objective Question			
19	19	<p>Which of the following proteins is necessary for nucleosome formation?</p> <p>A1 : Histones</p> <p>A2 : Chromatin</p> <p>A3 : Nuclear lamin</p>	4.01.00

		A4 Histone methyltransferases :		
Objective Question				
20	20	Which of the following best describes an oncogene?  A1 : A gene that regulates cell growth  A2 : A gene that stimulates apoptosis in cells  A3 : A gene that no longer makes a viable protein  A4 : A gene that causes uncontrollable growth	4.0	1.00
Objective Question				
21	21	Which of the following pairs is inter-converted in the process of mutarotation?  A1 : $\alpha$ -D-glucose and $\beta$ -D-glucose  A2 : D-glucose and L-glucose  A3 : D-glucose and D-fructose  A4 : $\alpha$ -D-glucopyranose and $\alpha$ -D-glucosefuranose	4.0	1.00
Objective Question				
22	22	Which statement is correct?  A1 : Most enzymes are proteins  A2 : All enzymes are lipids  A3 : All enzymes are proteins  A4 : All enzymes and hormones are proteins	4.0	1.00
Objective Question				
23	23	Which of the following acts as the precursor of Coenzyme A?  A1 : Pantothenic acid  A2 : Biotin  A3 Folic acid	4.0	1.00

		:  A4 Niacin :		
Objective Question				
24	24	ATP is required in the transport of  A1 Water molecules :  A2 All molecules across a membrane :  A3 Molecules to areas of lower concentrations :  A4 Molecules to areas of higher concentrations :	4.0	1.00
Objective Question				
25	25	The earliest cellular life forms appear to have been  A1 Viruses :  A2 One-celled plants :  A3 One-celled animals :  A4 Bacteria :	4.0	1.00
Objective Question				
26	26	Which of the following gases is least likely to have existed in the early atmosphere of the Earth?  A1 NH <sub>3</sub> :  A2 CO <sub>2</sub> :  A3 N <sub>2</sub> :  A4 O <sub>2</sub> :	4.0	1.00
Objective Question				
27	27	Darwin explained his theory of evolution in a book called  A1 On the origin of species :  A2 The principles of population :	4.0	1.00

		<p>A3 : Survival of the fittest</p> <p>A4 : Around the world in eighty days</p>		
Objective Question				
28	28	<p>The ozone layer around the Earth helps in</p> <p>A1 : Preserving the magnetic field of the earth</p> <p>A2 : Filtering UV radiation</p> <p>A3 : Filtering IR radiation</p> <p>A4 : Supplying oxygen to birds of flight</p>	4.0	1.00
Objective Question				
29	29	<p>Immunological memory is manifested during</p> <p>A1 : Adaptive immune responses</p> <p>A2 : Non-specific immune responses</p> <p>A3 : Innate immune responses</p> <p>A4 : All of these</p>	4.0	1.00
Objective Question				
30	30	<p>Which of the following is not an example of symbiosis?</p> <p>A1 : Lichens</p> <p>A2 : Mycorrhizae</p> <p>A3 : Tapeworms and humans</p> <p>A4 : Clownfish and sea anemones</p>	4.0	1.00
Objective Question				
31	31	<p>The term Detritivore includes</p> <p>A1 : Decomposers</p>	4.0	1.00



		<p>A2 Primary consumers :</p> <p>A3 Secondary consumers :</p> <p>A4 Autotrophs :</p>		
Objective Question				
32	32	<p>The science of classification is called</p> <p>A1 Domain :</p> <p>A2 Taxonomy :</p> <p>A3 Chronology :</p> <p>A4 Binomial nomenclature :</p>	4.0	1.00
Objective Question				
33	33	<p>The development of a vascular system in plants allowed</p> <p>A1 Water to move from roots to the leaves :</p> <p>A2 Carbohydrates to move from the leaves to the roots :</p> <p>A3 A rigid structure that allows plants to grow taller :</p> <p>A4 All of these :</p>	4.0	1.00
Objective Question				
34	34	<p>The process of double fertilization is unique to</p> <p>A1 Angiosperms :</p> <p>A2 Cycads :</p> <p>A3 Gymnosperms :</p> <p>A4 Ginkos :</p>	4.0	1.00
Objective Question				
35	35	<p>The body plan common to both insects and annelids is</p> <p>A1 Acoelomate</p>	4.0	1.00

		<p>:</p> <p>A2 Pseudocoel :</p> <p>A3 Coelom :</p> <p>A4 Hemocoel :</p>		
Objective Question				
36	36	<p>The infectious substance of prions is</p> <p>A1 Protein :</p> <p>A2 Glycophosphate :</p> <p>A3 DNA :</p> <p>A4 RNA :</p>	4.0	1.00
Objective Question				
37	37	<p>Which component of immune system is crippled in AIDS?</p> <p>A1 B-cell :</p> <p>A2 Macrophage :</p> <p>A3 Helper T-cells :</p> <p>A4 NK-cells :</p>	4.0	1.00
Objective Question				
38	38	<p>Several enzymes are involved in DNA repair pathways. Which one of the following enzymes is also referred to as a suicidal enzyme?</p> <p>A1 Ligase :</p> <p>A2 Polymerase :</p> <p>A3 Methyltransferase :</p> <p>A4 Excision repair enzyme :</p>	4.0	1.00
Objective Question				

39	39	<p>Glycolysis is the pathway used by cells to extract energy from glucose. Oxygen is NOT necessary for glycolysis and the presence of oxygen can indirectly suppress glycolysis. This phenomenon is known as</p> <p>A1 : Pasteur effect</p> <p>A2 : Warburg effect</p> <p>A3 : Keneman effect</p> <p>A4 : Klein effect</p>	4.0	1.00
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Objective Question

40	40	<p>The largest reserve of energy in humans is</p> <p>A1 : muscle glycogen</p> <p>A2 : liver glycogen</p> <p>A3 : adipose tissue triacylglycerol</p> <p>A4 : blood glucose</p>	4.0	1.00
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Objective Question

41	41	<p>The mechanism of action of several anti-cancer drugs is by inhibition of DNA synthesis. Which one of the following dais molecules impairs purine biosynthesis?</p> <p>A1 : 5-Fluorouracil</p> <p>A2 : Cisplatin</p> <p>A3 : Methotrexate</p> <p>A4 : Acyclovir</p>	4.0	1.00
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Objective Question

42	42	<p>A simple bacterial test for mutagenic carcinogens is</p> <p>A1 : Ames test</p> <p>A2 : Redox test</p> <p>A3 : Bacteriophage</p> <p>A4 Gene splicing</p>	4.0	1.00
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Objective Question				
43	43	<p>The coenzyme not involved in hydrogen transfer</p> <p>A1 FMN :</p> <p>A2 FAD :</p> <p>A3 NADP<sup>+</sup> :</p> <p>A4 FH4<sup>+</sup> :</p>	4.0	1.00
Objective Question				
44	44	<p>Which of the following is not a fat soluble vitamin?</p> <p>A1 Vitamin D :</p> <p>A2 Vitamin C :</p> <p>A3 Vitamin A :</p> <p>A4 Vitamin E :</p>	4.0	1.00
Objective Question				
45	45	<p>The first pharmaceutical product of recombinant DNA technology approved for human use</p> <p>A1 Insulin :</p> <p>A2 Growth hormone :</p> <p>A3 Interferon :</p> <p>A4 Hepatitis B vaccine :</p>	4.0	1.00
Objective Question				
46	46	<p>The bacterial communication phenomenon that uses secreted signal molecules to assess population density is termed</p> <p>A1 Cell Density sensing :</p> <p>A2 Decorum sensing :</p> <p>A3 Quorum sensing :</p>	4.0	1.00

		A4 Dispersalsensing :		
Objective Question				
47	47	<p>The mordant used in Gram staining method is</p> <p>A1 Crystal violet :</p> <p>A2 Ethyl alcohol :</p> <p>A3 Iodine :</p> <p>A4 Safranin :</p>	4.0	1.00
Objective Question				
48	48	<p>Phosphatidyl serine, an important component of biological membrane, is located in</p> <p>A1 The outer leaflet but flip flops to inner leaflet under specific conditions :</p> <p>A2 Both the leaflets :</p> <p>A3 The middle of the bilayer :</p> <p>A4 The inner leaflet but flip flops to outer leaflet under specific conditions :</p>	4.0	1.00
Objective Question				
49	49	<p>Dark-grown seedlings display ‘triple response’ when exposed to ethylene. Which of the following is not a part of ‘triple response’?</p> <p>A1 Decrease in epicotyl elongation :</p> <p>A2 Rapid unfolding and expansion of leaves :</p> <p>A3 Thickening of shoot :</p> <p>A4 Horizontal growth of epicotyl :</p>	4.0	1.00
Objective Question				
50	50	<p>Which of the following macromolecules is broken down by pepsin in the stomach?</p> <p>A1 Proteins :</p> <p>A2 Carbohydrates :</p>	4.0	1.00

		<p>A3 Nucleic acids :</p> <p>A4 Lipids :</p>		
Objective Question				
51	51	<p>If a person has an A blood type, which of the following statements is true?</p> <p>A1 The person cannot be given type O blood :</p> <p>A2 The person can be given type B blood :</p> <p>A3 The person makes A antibodies :</p> <p>A4 The person makes B antibodies :</p>	4.0	1.00
Objective Question				
52	52	<p>_____ are specialized cell junctions that connect the cytoplasm of two cells and allow for the exchange of various ions and molecules.</p> <p>A1 Tight junctions :</p> <p>A2 Desmosomes :</p> <p>A3 Adherens junctions :</p> <p>A4 Gap junctions :</p>	4.0	1.00
Objective Question				
53	53	<p>Hemoglobin is a protein that consists of four subunits: two copies of the <math>\alpha</math> and two copies of the <math>\beta</math> subunit. How many individual polypeptide chains are present in a fully folded molecule of hemoglobin?</p> <p>A1 Four :</p> <p>A2 Three :</p> <p>A3 Two :</p> <p>A4 One :</p>	4.0	1.00
Objective Question				
54	54	<p>A scientist has discovered a mutation that prevents cells from passing anaphase of mitosis. Of the following options, which is the most likely target of the mutation?</p> <p>A1 Microtubule formation</p>	4.0	1.00

		<p>:</p> <p>A2 Myosin</p> <p>:</p> <p>A3 Proteins involved in chromosome condensation</p> <p>:</p> <p>A4 Actin synthesis</p> <p>:</p>		
Objective Question				
55	55	<p>Which bacterial reproductive process does not involve any genetic recombination?</p> <p>A1 Conjugation</p> <p>:</p> <p>A2 Transformation</p> <p>:</p> <p>A3 Binary fission</p> <p>:</p> <p>A4 Transduction</p> <p>:</p>	4.0	1.00
Objective Question				
56	56	<p>Which of the following is the main component in the fungal cell wall?</p> <p>A1 Chitin</p> <p>:</p> <p>A2 Peptidoglycan</p> <p>:</p> <p>A3 Cellulose</p> <p>:</p> <p>A4 Phospholipids</p> <p>:</p>	4.0	1.00
Objective Question				
57	57	<p>Which of the following is not a constituent of virus?</p> <p>A1 RNA</p> <p>:</p> <p>A2 DNA</p> <p>:</p> <p>A3 Ribosome</p> <p>:</p> <p>A4 Lipids</p> <p>:</p>	4.0	1.00
Objective Question				
58	58	Human beings have diploid cells. This indicates that	4.0	1.00

		<p>A1 : Humans have homologous chromosome pairs</p> <p>A2 : Humans have two stages of cell division</p> <p>A3 : Humans have two chromosomes in each cell nucleus</p> <p>A4 : Humans have both sex chromosomes and somatic chromosomes</p>		
Objective Question				
59	59	<p>Which of the following accurately describes the promoter?</p> <p>A1 : The protein that attaches to DNA in order to create mRNA</p> <p>A2 : The binding site for DNA polymerase on DNA</p> <p>A3 : The attachment point for a ribosome before translation</p> <p>A4 : A sequence of DNA used to signal the beginning point of transcription</p>	4.0	1.00
Objective Question				
60	60	<p>Which of the following blots is used to identify known RNA fragments?</p> <p>A1 : Eastern blotting</p> <p>A2 : Western blotting</p> <p>A3 : Northern blotting</p> <p>A4 : Southern blotting</p>	4.0	1.00
Objective Question				
61	61	<p>Which of the following statements best describes the mechanism of RNA interference?</p> <p>A1 : Globally interfere with translation by blocking all mRNA</p> <p>A2 : Interfere with translation by targeting specific tRNA molecules</p> <p>A3 : Interfere with translation by blocking a target mRNA</p> <p>A4 : Interfere with translation by targeting ribosomes</p>	4.0	1.00



Objective Question				
62	62	<p>When would it be appropriate to use extraction in order to separate compounds in a solution?</p> <p>A1 : When the compounds have similar polarities, but differing solubility.</p> <p>A2 : When the compounds have differing conjugated double bond lengths, but similar molecular weights.</p> <p>A3 : When the compounds have differing molecular weights, but similar solubility.</p> <p>A4 : When the compounds have similar molecular weights, but differing polarities.</p>	4.0	1.00
Objective Question				
63	63	<p>Which one of the following compounds is generally translocated in the phloem?</p> <p>A1 : Sucrose</p> <p>A2 : D-Glucose</p> <p>A3 : D-Mannose</p> <p>A4 : D-Fructose</p>	4.0	1.00
Objective Question				
64	64	<p>If you run a pentavalent IgM through SDS-polyacrylamide gel electrophoresis, how many bands are you supposed to get by Western Blotting using alkaline phosphatase-conjugated secondary antibody?</p> <p>A1 : Five</p> <p>A2 : Four</p> <p>A3 : Three</p> <p>A4 : One</p>	4.0	1.00
Objective Question				
65	65	<p>Which type of mutation creates a premature stop codon in the mRNA?</p> <p>A1 : Missense mutation</p> <p>A2 : Frameshift mutation</p> <p>A3 : Nonsense mutation</p>	4.0	1.00

		A4 Silent mutation :		
Objective Question				
66	66	Which gland releases oxytocin and antidiuretic hormone?  A1 Adrenal cortex :  A2 Posterior pituitary gland :  A3 Thyroid gland :  A4 Anterior pituitary gland :	4.0	1.00
Objective Question				
67	67	Which of the following products is produced in the highest quantity during the Krebs cycle?  A1 NADH :  A2 FADH <sub>2</sub> :  A3 ATP :  A4 CO <sub>2</sub> :	4.0	1.00
Objective Question				
68	68	Choose the mismatch:  A1 Bilateral symmetry – Fish :  A2 First triploblastic – Flatworms :  A3 Free-living flatworm – Planaria :  A4 Radial symmetry – Larvae of echnioderms :	4.0	1.00
Objective Question				
69	69	A scientist is working with a breed of dog and has noticed that two traits, ear length and color, behave in normal dominant-recessive hierarchies. Long ears (A) are dominant to short ears (a) and black coloration (B) is dominant to yellow coloration (b). If he breeds a long eared, black dog (AaBb) with a short eared yellow dog (aabb), what would be the resulting phenotypic ratios of the offspring?  A1 9 long ears, black : 3 long ears, yellow : 3 short ears, black : 1 short ears, yellow :  A2 9 long ears, black : 3 long ears, yellow : 4 short ears, black :	4.0	1.00

		<p>A3 : 15 long ears, black : 1 short ears, yellow</p> <p>A4 : 1 long ears, black : 1 long ears, yellow : 1 short ears, black : 1 short ears, yellow</p>		
Objective Question				
70	70	<p>The Calvin cycle takes place in the _____ and occurs _____.</p> <p>A1 : Stroma, only during the absence of light</p> <p>A2 : cytoplasm, whenever the appropriate nutrients are present</p> <p>A3 : cytoplasm, only during the absence of light</p> <p>A4 : stroma, whenever the appropriate nutrients are present</p>	4.0	1.00
Objective Question				
71	71	<p>A Karyotype analysis of a sample revealed its Karyotype formula to be 47,XX,+13. This result indicates _____ syndrome.</p> <p>A1 : Klinefelter syndrome</p> <p>A2 : Edward's syndrome</p> <p>A3 : Patau's syndrome</p> <p>A4 : Cri du chat syndrome</p>	4.0	1.00
Objective Question				
72	72	<p>A type of cancer that begins in the cells of the immune system is</p> <p>A1 : Sarcoma</p> <p>A2 : Leukemia</p> <p>A3 : Myeloma</p> <p>A4 : Carcinoma</p>	4.0	1.00
Objective Question				
73	73	<p>The disease African Sleeping Sickness is transmitted by</p> <p>A1 : Mosquito</p>	4.0	1.00

		<p>A2 Housefly :</p> <p>A3 Tsetse fly :</p> <p>A4 Snail :</p>		
Objective Question				
74	74	<p>In human males, testosterone is produced mainly by</p> <p>A1 Leydig cells :</p> <p>A2 Sertoli cells :</p> <p>A3 Epididymis :</p> <p>A4 Seminiferous tubules :</p>	4.0	1.00
Objective Question				
75	75	<p>Some mushrooms are poisonous and popularly referred to as “Death caps” and “Destroying Angels”. Which one of the following is the deadliest?</p> <p>A1 <i>Amanita verna</i> :</p> <p>A2 <i>Volvarellavolvacea</i> :</p> <p>A3 <i>Agaricusxanthodermus</i> :</p> <p>A4 <i>Pleurotussajar-caju</i> :</p>	4.0	1.00
Objective Question				
76	76	<p>Flower is a modified shoot or a branch. Which one of the following DOES NOT provide evidence in support of the above statement?</p> <p>A1 Axis nature of the thalamus :</p> <p>A2 Leaf-like arrangement of the floral members :</p> <p>A3 Homology of floral and vegetative buds :</p> <p>A4 Occurrence of mitosis in the floral tissues :</p>	4.0	1.00
Objective Question				
77	77		4.0	1.00

		<p>Anoxygenic photosynthetic bacteria possess bacteriochlorophyll which absorbs light in the</p> <p>A1 : visible range</p> <p>A2 : infra-red region</p> <p>A3 : same range as plant chlorophylls</p> <p>A4 : ultra-violet region</p>		
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Objective Question

78	78	<p>How many times can a 6 kb fragment be present in 3.9 micrograms of DNA containing 6 billion bases? Assume the MW of one bp to be 650 Da.</p> <p>A1 : 1</p> <p>A2 : 100</p> <p>A3 : 600,000</p> <p>A4 : 100 million</p>	4.0	1.00
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Objective Question

79	79	<p>Which one of the following sequence is logically INCORRECT?</p> <p>A1 : Chordate, Hominidae, Man</p> <p>A2 : Angiosperm, Poaceae, Rice</p> <p>A3 : Insecta, Crustacea, Butterfly</p> <p>A4 : Chordata, Reptilia, Dinosaur</p>	4.0	1.00
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Objective Question

80	80	<p>In a population at Hardy-Weinberg equilibrium, the frequency of a recessive allele that causes a genetic disorder is 0.3. What percentage of the population is expected to suffer from this condition?</p> <p>A1 : 9%</p> <p>A2 : 0.3%</p> <p>A3 : 0.09%</p> <p>A4 : 30%</p>	4.0	1.00
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Objective Question				
81	81	<p>Deserts are arid ecosystems that occur near latitudes of 30 degrees North and South. Which one of the following can explain this geographic pattern?</p> <p>A1 : High mountains in these regions create extensive rain shadows</p> <p>A2 : Effect of global warming is stronger in these regions</p> <p>A3 These regions used to be lush forests, but have been converted to deserts due to extensive logging and subsequent degradation</p> <p>A4 : Patterns in atmospheric circulation called Hadley cells that influence temperature and moisture content of air</p>	4.0	1.00
Objective Question				
82	82	<p>Chromatin has several levels of structure. The bead on a string structure of DNA wound around the nucleosome has a width of</p> <p>A1 : 11 nm</p> <p>A2 : 33 nm</p> <p>A3 : 22 nm</p> <p>A4 : 5.5 nm</p>	4.0	1.00
Objective Question				
83	83	<p>A polypeptide chain is made up of 101 amino acid residues. The polypeptide has 200 bonds about which rotation can occur. Assume that three orientations are possible about each of the e bonds. Based on these assumptions, how many random coil conformations are possible for the polypeptide chain?</p> <p>A1 : <math>3^{200}</math></p> <p>A2 : <math>200^3</math></p> <p>A3 : <math>101 \times 3^{200}</math></p> <p>A4 : <math>101 \times 200^3</math></p>	4.0	1.00
Objective Question				
84	84	<p>The ions that mediate the upstroke of a typical neuronal action potential is</p> <p>A1 : sodium</p> <p>A2 : chloride</p>	4.0	1.00

		<p>A3 potassium :</p> <p>A4 magnesium :</p>		
Objective Question				
85	85	<p>Under normal physiological conditions, the calcium pump of the smooth endoplasmic reticulum pumps calcium into the</p> <p>A1 lumen by hydrolysing cytosolic ATP :</p> <p>A2 lumen by hydrolysing ATP in the lumen :</p> <p>A3 cytosol by hydrolysing cytosolic ATP :</p> <p>A4 cytosol by hydrolysing ATP in the lumen :</p>	4.0	1.00
Objective Question				
86	86	<p>An enzyme catalyst</p> <p>A1 decreases the difference in free energy between reactants and products :</p> <p>A2 decreases the activation energy of a chemical reaction :</p> <p>A3 increases the difference in free energy between reactants and products :</p> <p>A4 decreases the activation energy in proportion to the decrease in the difference in free energy between reactants and products :</p>	4.0	1.00
Objective Question				
87	87	<p>Which of the following experimental data revealed that DNA has regularly repeating three-dimensional structure?</p> <p>A1 Fibre diffraction :</p> <p>A2 Chargaff's observations :</p> <p>A3 Crystal structure :</p> <p>A4 Mass spectrometry :</p>	4.0	1.00
Objective Question				
88	88	<p>Mycoplasma colonies have a characteristic appearance like that of</p> <p>A1 Seeds in watermelon pulp :</p>	4.0	1.00

		<p>A2 A Fried egg :</p> <p>A3 A Zigzag line :</p> <p>A4 An amoeboid/irregular shape :</p>		
Objective Question				
89	89	<p>When a flower can be divided into two equal and similar halves by only one vertical division, it is categorized as</p> <p>A1 Actinomorphic :</p> <p>A2 Asymmetrical :</p> <p>A3 Zygomorphic :</p> <p>A4 Pleomorphic :</p>	4.0	1.00
Objective Question				
90	90	<p>The equilibrium constant <math>K_{eq}</math> for pure water is</p> <p>A1 <math>1.2 \times 10^{-15}</math> :</p> <p>A2 <math>0.18 \times 10^{-15}</math> :</p> <p>A3 <math>1.4 \times 10^{-17}</math> :</p> <p>A4 <math>0.019 \times 10^{-12}</math> :</p>	4.0	1.00
Objective Question				
91	91	<p>Which dye is used in Bradford method?</p> <p>A1 Coomassie Brilliant Blue R-250 :</p> <p>A2 Coomassie Brilliant Blue G-250 :</p> <p>A3 Ninhydrin :</p> <p>A4 Folin – Ciocalteu reagent :</p>	4.0	1.00
Objective Question				
92	92	<p>Which of the following is not a physical method of transfection?</p> <p>A1 Electroporation</p>	4.0	1.00



		:  A2 Particle bombardment :  A3 Liposome-mediated transfection :  A4 Microinjection :		
Objective Question				
93	93	One of the segments of the core promoter sequence of RNA polymerase II is the  A1 GC Box :  A2 CAAT Box :  A3 TATA Box :  A4 GAAT Box :	4.0	1.00
Objective Question				
94	94	Which of the cyclins have/has essential functions in the S-phase of cell cycle?  A1 A-type :  A2 B-type :  A3 D-type :  A4 Both B-type and D-type :	4.0	1.00
Objective Question				
95	95	Graves' disease is associated with  A1 Insufficiency of thyroid hormones :  A2 Excess of thyroid hormones :  A3 Insufficiency of corticosteroids :  A4 Excess of growth hormones :	4.0	1.00
Objective Question				
96	96	During urine formation, the filtration of blood at the glomerulus is	4.0	1.00

		<p>A1 : An active process</p> <p>A2 : An osmotic process</p> <p>A3 : A pressure-dependent physical process</p> <p>A4 : A non energy-mediated transport process</p>		
Objective Question				
97	97	<p>Molar absorption coefficient of phenylalanine is <math>200 \text{ M}^{-1} \text{ cm}^{-1}</math> at 257nm. What is the concentration (g/L) of this amino acid that will give an absorption value of 1 in a cell of 0.5cm path length at 257nm?</p> <p>A1 : 3.3</p> <p>A2 : 0.33</p> <p>A3 : 1.65</p> <p>A4 : 0.17</p>	4.0	1.00
Objective Question				
98	98	<p>In a small village, a doctor over-prescribed Ciprofloxacin (an antibiotic) to his patients. The result was that the majority of his patients had developed a new strain of bacteria that had become resistant to Ciprofloxacin. What is a possible route that may have caused these bacteria to become antibiotic resistant?</p> <p>A1 : The bacteria developed a way to prevent the antibiotic from entering into their cells</p> <p>A2 : The antibiotic lost its potency</p> <p>A3 : The bacteria learned to metabolize the antibiotic</p> <p>A4 : An antibiotic resistant gene was passed on through the plasmids in a group of antibiotic resistant bacteria</p>	4.0	1.00
Objective Question				
99	99	<p>A researcher is performing PCR to amplify a sample of DNA. Unfortunately, he forgot to add the DNA primer prior to starting the experiment. Which of the following results is he most likely to observe?</p> <p>A1 : The reaction will work, but the product will contain many undesired mutations</p> <p>A2 : The reaction will work, but at a significantly slower rate</p> <p>A3 : The reaction will be completely unsuccessful</p>	4.0	1.00

		A4 The reaction will work, but amplify a region that was not his target :		
Objective Question				
100	100	<p>Which of the following is not true of nucleic acids?</p> <p>A1 : Only RNA has a hydroxide group attached to the 2' carbon</p> <p>A2 : Only DNA is read in the 5'-to-3' direction</p> <p>A3 : Both DNA and RNA have nucleotides held together by phosphodiester bonds</p> <p>A4 : ATP and GTP are nucleic acid derivatives</p>	4.0	1.00