PROVISIONAL ANSWER KEY

Name of Post : Lab Technician

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Last Date to Send suggestion

1. All Suggestions are to be sent with reference to website published Question paper with provisional Answer key.
2. All Suggestions are to be sent in the given format only.
3. The decision of the appointed experts in this regard will be final for acceptance / rejection of representations from the candidates received.
4. Candidate must ensure the above compliance.
5. Right answer has been in the right most column.
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Lab Technician

1.	તામારે ટ્રેન પકડવાની છે. રેખાંતિક શબ્દનો કૃદંત છે			D
	(A)	ભવિષ્યકૃદંત	(B) ભૂતકૃદંત	
	(C)	વર્તમાન કૃદંત	(D) વિધ્યર્થકૃદંત	
2.	નીચેનામાંથી કયા શબ્દમા વિસર્ગ વપરાયો છે ?			D
	(A)	કર્ક	(B) કમ	
	(C)	કૃત્ય	(D) દુઃખ	
3.	`પ્રતિ + એક'ની સંધિ કરો			A
	(A)	પ્રત્યેક	(B) પ્રતિક	
	(C)	પ્રતીક	(D) પ્રત્યીક	
4.	ખોટા જોડકા ઓળખાઓ.			C
	(A)	બાલિકા-અંબિકા	(B) ગાયિકા - સંપાદિકા	
	(C)	નાસિકા - આજિવિકા	(D) કાલિકા - સારિકા	
5.	શાશ્વતનો વિરુદ્ધાર્થ શબ્દ_____ છે.			A
	(A)	ક્ષણિક	(B) આશ્વસ્ત	
	(C)	આશ્વત	(D) નાશ્વત	
6.	મુસાફરીમાં સાથે લીધેલું ખાવાનું એટલે_____			A
	(A)	ભાથું	(B) ટિફિન	
	(C)	ફુડ પેકેટ	(D) નાસ્તો	
7.	હથિયાર તરીકે ફૂલનો ઉપયોગ કરનાર કામદેવ			B
	(A)	પુષ્પદેવ	(B) પુષ્પધન્વા	
	(C)	ફુલદેવ	(D) ફૂલણદેવ	
8.	બધા મહાપુરુષ ટાઇમટેબલ રાખતા (સમાસ બતાવો)			A
	(A)	કર્મધારય	(B) ઉપપદ	
	(C)	તત્પુરુષ	(D) દિગુ	
9.	'દમયંતીનું મુખ તો ચંદ્ર છે' માં ક્યો અલંકાર છે ?			B
	(A)	ઉપમા	(B) રૂપક	
	(C)	યમક	(D) શ્લેષ	
10.	રેખાંકિત શબ્દની સંજ્ઞાનો પ્રકાર બતાઓ `રવિવારે શિક્ષકોની મીટિંગ હતી'.			B
	(A)	દ્રવ્યવાચક	(B) જાતિવાચક	
	(C)	વ્યક્તિવાચક	(D) સમૂહવાચક	
11.	'મેં વિદાય લીધી' વાક્યમાંથી કર્મણિ વાક્ય શોધો.			D
	(A)	હું વિદાય લઉ છું.	(B) મેં વિદાય લઈ લીધી હતી	
	(C)	હું વિદાય લઈશ	(D) મારાથી વિદાય લેવાઈ	
12.	રેખાંકિત શબ્દની સંજ્ઞાનો પ્રકાર બતાઓ. `અમદાવાદ એ મેગાસિટી બનવાનું છે'.			A
	(A)	વ્યક્તિવાચક	(B) જાતિવાચક	
	(C)	ભાવવાચક	(D) સમૂહવાચક	

13.	કોઈ પણ શાસ્ત્રની સાંકેતિક સંજ્ઞા કે શબ્દ ને_____કહેવાય.				D
	(A)	મુખ્યપદ	(B)	શાસ્ત્રોક્તિ	
	(C)	શ્લોક	(D)	પરિભાષા	
14.	`ઉત્પ્રેક્ષા' અલંકારનું ઉદાહરણ શોધો.				B
	(A)	જીવન વાડી કરમાઈ ગઈ	(B)	હૈડું જાણે હિમાલય	
	(C)	સીતાનું મુખ ચંદ્ર જેવું છે	(D)	ગાંધીજી તે ગાંધીજી	
15.	'ઉજ્જવળ' ની સંધિનો સાચો વિકલ્પ_____ છે.				B
	(A)	ઉદ્ + જ્વર	(B)	ઉદ્ + જ્વળ	
	(C)	ઉદ્ + જ્જવળ	(D)	ઉત્ + જ્વર	
16.	`શ્રી' શબ્દમાં કયા વર્ણ છે ?				A
	(A)	શ્ + ર્ + ઇ	(B)	ષ્ + ર્ + ઇ	
	(C)	સ્ + ર્ + ઇ	(D)	ષ્ + સ્ + ઇ	
17.	રેખાંકિત પદની વિભક્તિ ઓળખો. ' <u>માત !</u> મીઠી તુજ ચરણ પડીને માંગીએ શુભ કઈંક'				A
	(A)	સંબોધન	(B)	કર્તા	
	(C)	કર્મ	(D)	કરણ	
18.	ખૂટે નહિં એવું એટલે _____				A
	(A)	અખૂટ	(B)	નખૂટ	
	(C)	વિખૂટ	(D)	આટૂટ	
19.	હરિગીતિકા છંદની માત્રાઓ કેટલી હોય છે ?				D
	(A)	32	(B)	24	
	(C)	15	(D)	28	
20.	શરીરનો સુડોળ, સુઘટ્ટ બાંધો એટલે_____				A
	(A)	કાઠું	(B)	પટ્ટો	
	(C)	પહેલવાન	(D)	ખડતલ	
21.	ગુજરાતી ભાષામાં માન્ય અર્ધભેદક સ્વરો કેટલા છે ?				C
	(A)	બાર	(B)	અગિયાર	
	(C)	આઠ	(D)	દસ	
22.	`ફેંકી શકાય એવા હથિયાર' માટે કયો શબ્દ વપરાય છે ?				A
	(A)	અસ્ત્ર	(B)	શસ્ત્ર	
	(C)	શસ્ત્રાસ્ત્ર	(D)	શસ્ત્રો	
23.	રેખાંકિત વિશેષણનો પ્રકાર બતાવો. `સ્વામી ! તે <u>અગાધ</u> જળ ક્યાં ગયું ?				A
	(A)	પરિમાણવાચક	(B)	ગુણવાચક	
	(C)	કર્તૃવાચક	(D)	સાર્વનામિક	
24.	ચક્ષુ અર્થાત્				B
	(A)	નજર	(B)	આંખ	
	(C)	સાપ	(D)	જોવું	
25.	નીચેનામાંથી ક્યો જોડકો ખોટો છે ?				C
	(A)	સંદેહ-શંકા	(B)	વદન-ચેહરો	
	(C)	અભિશાપ-દુઆ	(D)	કપાળ-ભાલ	
26.	Men _____ to abolish wars up to now, but maybe they will find a way in the future.				C
	(A)	have never manage	(B)	has never managed	
	(C)	have never managed	(D)	will have never managed	

27.	The jury _____ divided in their opinions. (A) were (B) was (C) may (D) might	A
28.	Giving up wrong pleasure is not self-sacrifice, _____ self-culture. (A) and (B) but (C) if (D) that	B
29.	It _____ since early morning. (A) raining (B) have raining (C) have been raining (D) has been raining	D
30.	I did not know it until you _____. (A) speaking (B) speak (C) spoke (D) has speak	C
31.	We _____ for his call since 4:20 pm. (A) has been waiting (B) have been waiting (C) am being waiting (D) are being waiting	B
32.	The dog ran _____ the road. (A) across (B) in (C) behind (D) beneath	A
33.	She has gone to Chennai, _____ is her birthplace. (A) what (B) where (C) when (D) which	D
34.	I would die before I _____ . (A) lying (B) am lie (C) has lied (D) lie	D
35.	We _____ our breakfast half an hour ago. (A) will finish (B) has finished (C) finished (D) are finishing	C
36.	According to the present market rate, twelve dozen _____ one hundred rupees. (A) Costing (B) Costed (C) Having cost (D) Cost	D
37.	The formation of paragraphs _____ very important. (A) are (B) were (C) is (D) have	C
38.	He _____ where he could find work. (A) going (B) going to (C) gone (D) went	D
39.	He walks _____ he is slightly lame. (A) as though (B) though not (C) so though (D) has though	A
40.	It started to rain while we _____ tennis. (A) are playing (B) has playing (C) playing (D) were playing	D
41.	Correct the following sentence: It was bitter cold. (A) It was bitterly cold. (B) It was bitter colder. (C) It was bit coldest. (D) It was bittery cold.	A
42.	I _____ for half an hour when it suddenly started to rain. (A) has been walking (B) have been walking (C) had been walking (D) could been walking	C
43.	Fifteen minutes _____ allowed to each speaker. (A) are (B) have (C) been (D) is	D
44.	Leave Nell and _____ to toil alone. (A) He (B) Me (C) Mine (D) His	B
45.	I _____ him for a long time. (A) known (B) have known (C) has known (D) has been known	B
46.	Answer the first question before you _____ further. (A) proceeding (B) proceed (C) were proceed (D) proceeded	B
47.	Each of the suspected men _____ arrested. (A) is (B) are (C) were (D) have	A

48.	The soup _____ good. (A) have tastes (B) had been tastes (C) has tasting (D) tastes	D
49.	Neither his father nor his mother _____ alive. (A) are (B) were (C) is (D) have	C
50.	Change the Voice of the following sentence. "Shall I ever forget those happy days?" (A) Will those happy days ever be forgotten? (B) Shall those happy days forgotten? (C) Will be those happy days ever forgotten? (D) Shall I ever be forgetting those happy days?	A
51.	At what temperature, citric acid should be mixed in milk for curding? (A) 50˚C (B) 60˚C (C) 70˚C (D) 82˚C	D
52.	Monocytes differentiate into which kind of phagocytic cells? (A) Neutrophil (B) B cell (C) Macrophage (D) T cell	C
53.	Genetic change can occur only in (A) One way (B) Two ways (C) Three ways (D) Four ways	D
54.	What are the approaches used in making nanosystems (A) Top-down (B) Bottom-up (C) Both (A) and (B) (D) None of these	C
55.	Which bacteria can absorb metals on their cell surfaces? (A) Proteus (B) Bacillus (C) Streptococcus (D) All of these	D
56.	Databases on DNA sequences contain which types of sequences? (A) EST and GST sequences (B) Genomic DNA and cDNA sequences (C) Organellar DNA sequences and sequences of other molecules such as tRNA, small RNAs (D) All of these	D
57.	The term nanotechnology was first used by _____. (A) Richard Feynman (B) Norio Taniguichi (C) Eric Dexler (D) Karl Peter	B
58.	Which of the following are parts of the human respiratory system? (A) Trachea (B) Diaphragm (C) The lungs (D) All of the above	D
59.	Which one of the following technology is used in making memory chips? (A) Nano design. (B) Nanofabrication. (C) Microassay. (D) Tissue engineering.	B
60.	Nitric acid is used for detection of (A) Adulteration of wax, vegetable ghee and animal fat in ghee (B) Adulteration of vegetable oil in ghee (C) Adulteration of cotton oil in ghee (D) All of these	D
61.	Which part of a cell carries the information that is passed from one generation to the next? (A) Cell (B) Nucleus (C) Cytoplasm (D) Chloroplast	B
62.	Which of the following cells of the immune system do not perform phagocytosis? (A) Macrophage (B) Neutrophil (C) Eosinophil (D) Basophil	D
63.	Plants found in the wild and other land races cannot be protected under an IPR system as they do not the requirements for: (A) Stability (B) Microorganisms (C) Protection (D) None of these	C
64.	Which type of glial cell is responsible for glucose uptake from the blood (A) Ependyma (B) Oligodendrocytes (C) Microglia (D) Astrocytes	D
65.	Genetic engineering means (A) Meiotic division of cells (B) Nucleotide transfer (C) Deletion and repair mechanism (D) None of the above	C
66.	Which of the following scientist isolated anaerobic nitrogen-fixing soil bacteria and studies the decomposition of cellulose (A) Robert Koch (B) Loius Pasteur (C) Sergei Winogradsky (D) None of the above	C

67.	PLLA is _____. (A) Poly Lactic Acid. (B) Poly L-Lactic Acid. (C) Poly Lactose Acid. (D) Poly DL Lactic Acid.	B
68.	Studies of plant diseases is called (A) Virology (B) Plant Pathology (C) Mycology (D) None of these	B
69.	A new variety shall be registered under PPVFR act 2001 if it confirms to the criteria of novelty and fulfils the (A) Subject matter claimed (B) Real world use (C) DUS test (D) Novelty	C
70.	Meat, milk, egg, soybean and fish powder have maximum amount of vitamin (A) Vitamin K (B) Vitamin C (C) Vitamin D (D) Vitamin B	D
71.	The total number of bacteria frequently _____ after fumigation (A) Increase (B) Decrease (C) Remain Constant (D) None of these	A
72.	The set of techniques that enables DNA from different sources to be identified, isolated and recombined so that new characteristics can be introduced into an organism is called (A) Recombinant DNA technology (B) Genetic engineering (C) Molecular biology technology (D) All of these	D
73.	Which of the following cells is involved in cell-mediated immunity? (A) Leukemia (B) T cells (C) Mast cells (D) Thrombocytes	B
74.	Lactic acid fermentation is used in production of (A) Brown bread (B) Beer production (C) Malted drinks (D) Different types of cheese	D
75.	Which indicates the correct order of steps involved in production of ethanol from starch substrate? (A) Starch → Pyruvate → Glucose → Acetaldehyde → Ethanol (B) Starch → Glucose → Pyruvate→ Acetaldehyde → Ethanol (C) Starch → Acetaldehyde → Glucose → Pyruvate → Ethanol (D) Starch → Pyruvate → Acetaldehyde → Glucose → Ethanol	B
76.	Which of the following protects our body against disease-causing pathogens? (A) Respiratory system (B) Immune system (C) Digestive system (D) Respiratory system	B
77.	Which of the following gas is released out during the process of human respiration? (A) Oxygen (B) Hydrogen (C) Carbon dioxide (D) None of the above	C
78.	Bitterness in cheese is caused by (A) High acidity (B) Poor quality of milk (C) Low salt per cent (D) All of these	D
79.	The recombinant DNA technique was engineered by (A) Stanley Norman Cohen (B) Herbert Boyer (C) Both (A) & (B) (D) None of these	C
80.	cDNA is _____ (A) compact DNA (B) circular DNA (C) complementary DNA (D) closed DNA	C
81.	The combination of biology and IT is (A) Cell biology (B) Biotechnology (C) Bioinformatics (D) Nanotechnology	C
82.	Patentability requirements as per the Indian Patents Act are: (A) It should be new (B) It should involve an inventive step (C) It should be capable of industrial application (D) All of these	D
83.	The total number of essential vitamins required for the proper functioning of the human body is _____. (A) 12 (B) 13 (C) 15 (D) 22	B
84.	TEM is _____ (A) Transmission Electron Microscope (B) Transmit Electron Microscope (C) Transmission Electrical Microscope (D) Transmit Electrical Microscope	A
85.	Body's own cells are protected from membrane attack complex by surface glycoprotein called (A) MHC (B) DAF (C) TCR (D) BCR	B
86.	High temperature short time (HTST) method refers to (A) Continuous pasteurization (B) Flash method (C) Heating milk at 71.7˚C for 15 minutes (D) All of these	D

87.	One megabase pairs (Mb) is equal to how many base pairs? (A) 10^5 bp (B) 10^6 bp (C) 10^8 bp (D) 10^9 bp	B
88.	The current processes of production of ethanol from cellulose are based which of the following microorganisms? (A) Trichoderma reesei (B) Sacharomyces cerevisiae (C) Recomninant E.coli (D) All of these	D
89.	Pruteen is made by mixing bacteria in (A) Methanol (B) Ethanol (C) Petroleum (D) Vaseline	A
90.	Expand MRFM (A) Magnetic Resonance Force Microscopy (B) Molecule Resonance Microscopy (C) Magnetic Resonance Imaging (D) Molecule Resonance Imaging	A
91.	The fungi grown on the dead bodies are called as (A) Coprophilous fungi (B) Keratinaceous fungi (C) Amphibious fungi (D) All of these	B
92.	In Biotechnology, the significance of copyright would be: (A) Possibility of copyrighting sequences (B) Methods or manuals of exponential procedures (C) Both (A) & (B) (D) None of these	C
93.	Food is spoiled by fungus (A) Aspergillus niger (B) Aspergillus repens (C) Aspergillus glaucas (D) All of these	A
94.	Germicidal property of milk is due to presence of (A) Lactenin (B) Fatty acids (C) Amino acids (D) All of these	A
95.	Biofilm bacteria are beneficial in their (A) Accumulation and attachment to damage tissues in the human body (B) Invasive penetration of cooling tower and storage tanks (C) Involvement in nutrients exchange between microbes in plant roots (D) Accumulation on hard surface such as teeth	C
96.	What produces hydrogen gas which can be used as a pollution free fuel? (A) Chlamydomonas (B) Clostridium (C) Both (A) and (B) (D) Green Plants	B
97.	Which of the following refers to Next Gen Sequencing? (A) 454 Pyro sequencing (B) Illumina (Solexa) sequencing (C) Solid sequencing (D) All of these	D
98.	The important steps in solid waste management are (A) Waste generation and collection (B) On-Site handling, storage and Processing (C) Transport and disposal (D) All of these	D
99.	A biochemical mixed bag containing vitamins, herbs, nutrients and prescription drugs are called as _____ (A) antioxidants (B) smart drugs (C) drugs (D) nootropics	B
100.	Sex factor of bacteria is known as (A) H Factor (B) F Factor (C) S Factor (D) None of these	B
101.	The genetic instructions for forming a polypeptide chain are carried to the ribosome by the (A) tRNA (B) rRNA (C) mRNA (D) DNA	C
102.	Lead in water can cause (A) Kidney damage (B) Hair falling (C) Eye disease (D) Minimata's disease	C
103.	Majority of antigens are (A) Proteins (B) Carbohydrates (C) Nucleic acids (D) Lipids	A
104.	Virus is (A) An Obligate parasite (B) An Obligate saprophyte (C) A Facultative parasite (D) A Facultative saprophyte	A
105.	In plant-related inventions, the parent lines employed to produce a hybrid plant can be kept as a (A) Trade secret (B) Industrial design (C) Geographical indications (D) Trademark	A
106.	Nanoparticles that are used as pharmaceutical delivery systems are called as _____ (A) nanocapsules (B) nanocarriers (C) nanotubes (D) nanoarray	B

107.	Which of the following will increase with advancement of lactation period? (A) Ca and P (B) Cl (C) Fat (D) All of these	D
108.	India has initiated genome sequencing project of: (A) Rice (B) Tomato (C) Pigeonpea (D) Humans	C
109.	'Ozone-hole' means: (A) Large sized hole in the ozone layer (B) Thinning of the ozone layer (C) Small holes scattered in the ozone layer (D) Thickening of the ozone layer	B
110.	Which one is the commonly used in animal cell culture media? (A) Placental cord blood (B) Cattle serum (C) Foetal calf serum (D) Horse serum	C
111.	RNA contains (A) Hexose (B) Ribose (C) Fructose (D) Glucose	B
112.	Nematodes are (A) Saprophyte (B) Predator (C) Pathogenic (D) All of these	D
113.	Penicillin is obtained by (A) Streptomyces griseus (B) Penicillin chrysogenum (C) Penicillum griseofulvum (D) Aspergillus fumigatus	B
114.	In foggy and hazy environment, birds are able to locate position of sun and their path by means of (A) Infra-red wavelength (B) Ultra-violet radiations (C) Magnetic system (D) Pheromones	B
115.	Who reported first time the germicidal property on goat milk? (A) Fokker (B) R. Hook (C) Mc Millon (D) Michael	A
116.	Intellectual Property is categories into: (A) Industrial property (B) Artistic and Literary property (C) Both (A) & (B) (D) None of these	C
117.	Which of the following would most likely cause a mutation with the greatest deleterious effect? (A) An insertion of a nucleotide triplet into a DNA strand that codes for an mRNA (B) A single addition of a nucleotide in a DNA strand that codes for an mRNA (C) a deletion of a nucleotide triplet from a DNA strand that codes for an mRNA (D) All of these	B
118.	Distance between two strands of DNA is (A) 34 Å (B) 20 Å (C) 3.4 Å (D) 340 Å	B
119.	Nanopores are made up of _____ (A) carbon (B) gold (C) titanium (D) silicon	D
120.	Smog is the product of (A) Smoke (B) Fog (C) Soot (D) Both (A) and (B)	D
121.	Which biosensor is most sensitive? (A) Potentiometric (B) Conductimetric (C) Piezoelectric (D) Thermometric	D
122.	Which enzyme plays an important role in reverse transcription? (A) DNA polymerase (B) RNA polymerase (C) Reverse transcriptase (D) Isomerase	C
123.	Reverse transcription is found only in (A) Bacteria (B) Virus (C) Protozoa (D) Fungus	B
124.	_____ in the brush border and cytosol of the enterocyte are potentially the most important barrier to the adsorption of small biologically active peptides across the intestinal mucosa (A) Proteases (B) Amylases (C) Lipases (D) Trypsin	A
125.	It is an idea, a design, an invention, a manuscript etc., which can ultimately give rise to useful product/application is called: (A) Intellectual Property (B) Intellectual Property Right (C) Both (A) & (B) (D) None of these	A

126.	Soil erosion can be prevented by:				B
	(A)	Restricted human activity	(B)	Good plant cover	
	(C)	Checking movement of animal	(D)	Wind screen alone	
127.	The colour of colostrum is yellow due to presence of				A
	(A)	Carotene	(B)	Blood particles	
	(C)	Immune globulin	(D)	All of these	
128.	The glucose syrup composition is typically				B
	(A)	90-95% glucose, 10-15% maltose and 3-5% isomaltose	(B)	95-97% glucose, 1-2% maltose and 0.5-2.0 % isomaltose	
	(C)	80-90% glucose, 5-10% maltose and 8-10% isomaltose	(D)	85-90% glucose, 5-10% maltose and 5-10% isomaltose	
129.	Which techniques can be used for radioactive labelling of probes?				D
	(A)	Nick translation and direct labeling	(B)	End labeling and primer extension	
	(C)	Method based on RNA polymerases	(D)	All of these	
130.	Vericides are used to control				B
	(A)	Bacteria	(B)	Virus	
	(C)	Nematodes	(D)	Fungus	
131.	Nanoparticles in biomedical application are _____.				C
	(A)	Nanocapsules	(B)	Nanospheres	
	(C)	Both (A) & (B)	(D)	None of these	
132.	Depletion of Ozone layer is due to				A
	(A)	Oxides of nitrogen	(B)	Oxides of carbon	
	(C)	Oxides of sulphur	(D)	None of these	
133.	The direct ELISA test requires				A
	(A)	Known antibody	(B)	Known antigen	
	(C)	Complement	(D)	Patient antibody	
134.	Bacteria of the genus Nitrosomonas use _____ as their electron source				C
	(A)	Light	(B)	Succinate	
	(C)	Ammonia	(D)	H_2S	
135.	Goitre and the enlarged thyroid gland are mainly diagnosed in patients with deficiencies of which of the following minerals?				B
	(A)	Iron	(B)	Iodine	
	(C)	Calcium	(D)	Phosphorus	
136.	The minimum chromosome number recoded in algae is				C
	(A)	N=6	(B)	N=7	
	(C)	N=2	(D)	N=4	
137.	For patenting a plant variety should be				A
	(A)	DUS	(B)	DUD	
	(C)	DDS	(D)	Any of these	
138.	Artificial insemination is better than natural insemination in cattle because				D
	(A)	Semen of good bulls can be provided everywhere	(B)	There is no likelihood of contagious disease	
	(C)	It is economical	(D)	All of these	
139.	DNA fingerprinting is used for				D
	(A)	Identification of varieties	(B)	Resolving disputed parentages	
	(C)	Identification of criminals	(D)	All of these	
140.	Stem rot of paddy is caused by				A
	(A)	Sclerotium oryzae	(B)	Claviceps purpurea	
	(C)	Ustilaginoiea virens	(D)	All of these	
141.	Nanodevices use _____ to move linearly by rotation				C
	(A)	ATP	(B)	electricity	
	(C)	motor proteins	(D)	ADP	
142.	Carbon monoxide is harmful to human being as it is				C
	(A)	Carcinogenic	(B)	Antagonistic to CO_2	
	(C)	With higher affinity for haemoglobin as compared to oxygen	(D)	Destructive to O_3	
143.	Blood is transported to capillaries in myocardium by				D
	(A)	Pulmonary arteries	(B)	The coronary sinus	
	(C)	The fossa ovalis	(D)	Coronary arteries	
144.	Monoclonal antibiotics are produced by				D
	(A)	Sarcoma cells	(B)	Germ cells	
	(C)	Somatic cells	(D)	Hybrid of carcinogen cell and bone cell	

145.	Which has the smallest genome size?				A
	(A)	Mycoplasma genitalium	(B)	Saccharomyces cerevisiae	
	(C)	E. coli	(D)	Caenorhabditis elegans	
146.	Leaf rust of wheat is caused by				B
	(A)	Puccinia graminis	(B)	Puccinia recondite	
	(C)	Puccinia striformis	(D)	Melampsora lini	
147.	Genetic variation can be introduced into bacteria by all of the following methods except				D
	(A)	transduction	(B)	mutation	
	(C)	transformation	(D)	DNA amplification	
148.	What is the major advantage of the plant with VAM association in fungi				D
	(A)	Increased Mn absorption	(B)	Increased K absorption	
	(C)	Increased N_2 absorption	(D)	Increased P absorption	
149.	Bioethics is related to				D
	(A)	Preventing biopiracy	(B)	Regulation of unethical activities like gene cloning in animal	
	(C)	Preventing theft of living materials	(D)	Moral guidance to the problem in biology	
150.	Shot-gum sequencing was conceptualized by:				A
	(A)	Craig Venter	(B)	Michelmore	
	(C)	Giovannono	(D)	Young	
151.	The nucleic code of plant virus is made of				A
	(A)	RNA	(B)	DNA	
	(C)	RNA & DNA	(D)	None of these	
152.	Pashmina is obtained from a variety of				B
	(A)	Sheep	(B)	Goat	
	(C)	Rabbit	(D)	Yak	
153.	In eighteenth century, _____ developed the first natural classification bases on anatomical characteristics				A
	(A)	Carolus Linnaeus	(B)	Niles Eldredge	
	(C)	Steven Jay Gould	(D)	Lynn Margulis	
154.	Which of the following vitamins cannot be produced by our body?				D
	(A)	Vitamin A	(B)	Vitamin K	
	(C)	Vitamin C	(D)	All of the above	
155.	Which of the following diseases is an example of non-communicable diseases?				D
	(A)	Cancer	(B)	Diabetes	
	(C)	Hypertension	(D)	All of the above	
156.	Which approaches can be used for gene identification?				D
	(A)	Exon trapping	(B)	cDNA capture	
	(C)	cDNA selection	(D)	All of these	
157.	Biopatents are:				A
	(A)	Right to use invention	(B)	Right to use biological entities	
	(C)	Right to use products	(D)	Right to use process	
158.	Which scientist isolated ribosomal RNA genes in 1965?				B
	(A)	Maxam and Gilbert	(B)	Wallace and Birnstiel	
	(C)	Sanger and Southern	(D)	Brown and Gilbert	
159.	BOD is:				C
	(A)	Biological oxygen deficit	(B)	Biosphere oxygen demand	
	(C)	Biological oxygen demand	(D)	None of these	
160.	The branch of biology, which involves the study of immune systems in all organisms is called_____.				C
	(A)	Zoology	(B)	Microbiology	
	(C)	Immunology	(D)	Biotechnology	
161.	Which of the search tools id used to compare submitted amino acid sequence with nucleotide sequence database?				D
	(A)	BLASTn	(B)	BLASTx	
	(C)	rBLASTx	(D)	tBLASTn	
162.	Which of the following immunity is obtained during a lifetime?				A
	(A)	Acquired immunity	(B)	Active immunity	
	(C)	Passive immunity	(D)	None of the above.	
163.	Biogas produced by bacterial digestion of organic matter through which processes?				B
	(A)	Aerobic digestion	(B)	Anaerobic digestion	
	(C)	Both (A) and (B)	(D)	Partially aerobic digestion	
164.	The PPVFR Authority (PPVFRA) began registration of plant varieties in which years?				C
	(A)	2005	(B)	2006	
	(C)	2007	(D)	2008	

165.	According to Oparin and Haldane, which of the following statement is true? (A) Organic molecules probable arose at a number of different points on the Earth, these molecules eventually merged (B) The first organic molecules were formed in the atmosphere (C) The formation of the initial building blocks of life was probably complete within two or three million years (D) All of the above	B
166.	A queen honeybee lays egg of (A) One type from which all castes develop (B) Two types, one forming queen and workers and second forming drones (C) Three types forming queen, drone and workers (D) Unfertilised die while fertilized ones form all castes	B
167.	Which of the following organs contains 'Bundle of His'? (A) Pancreas (B) Brain (C) Kidney (D) Heart	D
168.	Which database is used by ENTREZ for bibliographic or citation search? (A) SWISS-PORT (B) PubMed (C) TrEMBL (D) PDB	B
169.	Which biotechnology related matters can be patented? (A) Method/process of production (B) Products, etc. (C) Applications of the various processes/products (D) Any of these	D
170.	What will be the effect of tillage operation on thermal conductivity of soil? (A) Remain unchanged (B) Decrease (C) Increase (D) First increase then decrease	B
171.	Heartbeat originates from (A) Papillary muscles (B) SA node (C) AV node (D) Purkinje fibres	B
172.	A polyphasic approach for prokaryotic classification consists of information based on (A) Phenotype (B) Genotype (C) Phylogeny (D) All of the Above	D
173.	Colonies from a master plates are either lifted or replicate plates onto a nitrocellulose filter, cells are lysed, DNA is denatured & hybridized with radioactive probe to detect the colonies having DNA/RNA sequences complementary to the probe is called (A) Colony hybridization (B) Northern hybridization (C) Southern hybridization (D) None of these	A
174.	Hormones: (A) Are chemical regulators that are conveyed from one organ to another via the blood stream (B) May be secreted by endocrine cells (C) May be secreted by nerve cells (D) All of these	D
175.	Which programmes can be used for identifications/detection of genes from genome sequences of prokaryotes? (A) Glimmer (B) GENMARK (C) GeneFinder (D) Both (A) and (B)	D
176.	Night blindness is caused due to the deficiencies of_____. (A) vitamin A (B) vitamin B (C) vitamin C (D) vitamin E	A
177.	N-butanol is used for making (A) Formaldehyde and urea (B) Petrol (C) Resin (D) All of these	D
178.	Which of the following characteristics are present in the bacteria Deinococcus? (A) Its peptidoglycan consists of L-ornithine (B) Its lacks teichoic acid (C) Its cell membrane consists of large amount of palmitoleic acid (D) All of the above	D
179.	The DNA segment to be cloned is called (A) DNA ligase (B) DNA insert (C) DNA array (D) DNA methylation	B
180.	The protein sequence database are: (A) SWISS-PORT (B) PIR (C) Both (A) and (B) (D) None of these	D
181.	Ionosphere is present in (A) Troposphere (B) Stratosphere (C) Mesosphere (D) Thermosphere	D

182.	Interferons are				A
	(A)	Cytokine barriers	(B)	Physical barriers	
	(C)	Cellular barriers	(D)	Physiological barriers	
183.	How many types of antibodies are there?				A
	(A)	Five	(B)	Three	
	(C)	Two	(D)	Four	
184.	Which of the following component constitute the bacterial cell wall?				B
	(A)	chitin	(B)	peptidoglycan	
	(C)	cellulose	(D)	amylopectin	
185.	The first patent of a life form was issued on:				C
	(A)	March 31, 1980	(B)	March 31, 1981	
	(C)	March 31, 1982	(D)	March 31, 1983	
186.	Virus free plants can be obtained through				D
	(A)	Antibiotic Treatment	(B)	Bordeaux mixture	
	(C)	Root tip culture	(D)	Shoot tip culture	
187.	Which products are obtained from yeast fermentation?				D
	(A)	Acetic acid, caproic acid and lactic acid	(B)	Glycerol, ethanol, butanol and lactic acid	
	(C)	Amyl alcohol and ethyl acetate	(D)	All of these	
188.	Introduction of DNA or recombinant DNA in to a suitable cell/organism is called				B
	(A)	Genetic engineering	(B)	Genetic transformation	
	(C)	Genetic material	(D)	Genetic resource	
189.	Who discovered the first vaccine for prevention of human disease is generally given to				A
	(A)	Edward Jenner for the prevention of small pox	(B)	Louis Pasteur for the prevention of rabies	
	(C)	Louis Pasteur for the prevention of anthrax	(D)	Robert Koch for the prevention of tuberculosis	
190.	Which of the following statements is true about the IgM of humans?				D
	(A)	IgM can cross the placenta	(B)	IgM can protect the mucosal surface	
	(C)	IgM is produced by high-affinity plasma cells	(D)	IgM is primarily restricted in the circulation	
191.	Environment can be improved by				C
	(A)	Wind erosion	(B)	Excessive tree fall	
	(C)	Conservation	(D)	None of the above	
192.	The translated DNA database are				C
	(A)	PROTEIN (NCBI)	(B)	TREMBL	
	(C)	Both (A) and (B)	(D)	None of these	
193.	Aerosol is a system of colloidal particles having a size of:				C
	(A)	5 µm	(B)	1 - 2 µm	
	(C)	less than or equal to 1 µm	(D)	More than 10 µm	
194.	Diseases that spread from one person to another are called _____.				A
	(A)	Communicable diseases	(B)	Degenerative diseases	
	(C)	Non-communicable diseases	(D)	None of the above	
195.	Who is known as father of plant pathology?				A
	(A)	Anton de Bery	(B)	Luis Pasteur	
	(C)	R.L. Tulasne	(D)	Julious Coon	
196.	The function of genes identified using an ab initio method is identified by comparing the gene sequence against known protein using:				A
	(A)	BLAST	(B)	TBLASTX	
	(C)	PROSITE	(D)	PROMOT	
197.	In India, animals in whole and any part thereof are not patentable under section of Patent Act:				C
	(A)	Section2(1) (j)	(B)	Section2(1) (ja)	
	(C)	Section3 (j)	(D)	Section3 (ja)	
198.	Hepatitis is an example of _____.				D
	(A)	Subunit Vaccine	(B)	Killer Vaccine	
	(C)	Toxoids Vaccine	(D)	Recombinant Vaccine	
199.	Which Indian organisation is more active in the area of patenting				B
	(A)	ICAR	(B)	CSIR	
	(C)	ICMR	(D)	BARC	
200.	Which is used as antifoaming agent during antibiotic production?				D
	(A)	Mineral Oil	(B)	Vegetable Oil	
	(C)	Silicones	(D)	Both (B) and (C)	