

CII – iPATE 2.0 (2021)

Computer Based PAN India Examination

Category: GRADUATE ENGINEER (ENTRY LEVEL)

Engineering Discipline: BIOTECHNOLOGY

Questions & Answers

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Paper Structure

Question Nos.	Sections & Topics		Marks
1 to 20	Section I : Cognitive Abilities	<ul style="list-style-type: none">Quantitative AptitudeAnalytical ReasoningData InterpretationEnglish Communication	20
21 to 40	Section II : Professional Abilities	<ul style="list-style-type: none">Project ManagementHealth, Safety & Risk ManagementEnvironmental LawsSocial Responsibility & EthicsFinance & AccountsLegal, Contracts & Arbitration	20
41 to 50	Section III (A) : Technical Abilities	Physics & Chemistry (10+2 level)	10
51 to 100	Section III (B) : Technical Abilities	Engineering Discipline	50
TOTAL			100

NOTE:

- Exam Duration: 3 Hours
- Total 100 no. of Questions of 1 Mark each with Negative Marking of ½ Mark for every wrong answer
- Questions (Section wise) and respective Answer Options shuffled at Candidates' terminal

Question No. 1	Discriminant of a second-degree polynomial with integer coefficients cannot be:			
Answer Options	A)	B)	C)	D)
	43	33	68	25
Right Answer	A			

Question No. 2	How many subsets A of {1, 2, 3, 4, 5, 6, 7, 8, 9, and 10} have the property that no two elements of A sum to 11?			
Answer Options	A)	B)	C)	D)
	1024	512	343	243
Right Answer	C			

Question No. 3	Viru and Aarti started a car journey from Chandigarh to Delhi, which are 288 km apart. Viru took 12 hours more than Aarti to complete the journey. Had Viru travelled at double his actual speed, he would have taken 4 hours less than Aarti to complete the journey. Find the respective speeds (in km/hr) at which Viru and Aarti travelled.			
Answer Options	A)	B)	C)	D)
	14.4 and 9	14.5 and 28.5	9 and 14.4	15 and 20
Right Answer	C			

Question No. 4	The height of a trapezoid whose diagonals are mutually perpendicular is equal to 4. Find the area of the trapezoid if it is known that the length of one of its diagonals is equal to 5.			
Answer Options	A)	B)	C)	D)
	50/3 square units	100/3 square units	16/6 square units	None of these
Right Answer	A			

Question No. 5	A polyhedron has faces that are all either triangles or squares. No two square-faces share an edge, and no two triangular-faces share an edge. What is the ratio of triangular-faces to the number of square-faces?			
Answer Options	A)	B)	C)	D)
	03:04	04:03	01:02	04:05
Right Answer	B			

Question No. 6	Your mind likes reading and it actually has a number of important health affects you can't get in any other way. Reading gives you a unique "pause button" for comprehension. Typically, when you read, you have more time to think. When you watch a film or listen to a tape, you don't press that pause button. Reading requires a great deal of concentration, which calls your intelligence to action. The author of this passage would agree that:			
Answer Options	A)	B)	C)	D)
	Reading is a good way to relax, since it doesn't require that much thinking.	Watching a movie has the same effect on the intelligence as reading.	Reading develops your intelligence.	Both A and C
Right Answer	C			

Question No. 7	Read the following information carefully and answer the question given below. P stands 5m west of R. T stands 5m south of Q. T stands 6m east of U. V stands 2m west of Q. A stands 2m south of U. V stands 3m north of R. If G stands 7m east of P, then in which direction does G stands with respect to T?			
Answer Options	A)	B)	C)	D)
	West	East	South	North
Right Answer	D			

Question No. 8	The French Revolution began in 1789 and ended in the late 1790s with the ascent of Napoleon Bonaparte. During this period, French citizens razed and redesigned their country's political landscape, uprooting centuries-old institutions such as absolute monarchy and the feudal system. Like the American Revolution before it, the French Revolution was influenced by Enlightenment ideals, particularly the concepts of popular sovereignty and inalienable rights. From this passage it can be concluded that:			
Answer Options	A)	B)	C)	D)
	The French revolution began before the Russian Revolution.	In the French Revolution their monarch was killed.	The American Revolution happened before the French Revolution.	Napoleon initiated the French Revolution.
Right Answer	C			

Question No. 9	A, B, C, D and E are sitting on a bench. A is sitting next to B, C is sitting next to D, D is not sitting with E who is on the left end of the bench. C is on the second position from the right. A is to the right of B and E. A and C are sitting together. In which position A is sitting?			
Answer Options	A)	B)	C)	D)
	Between B and C	Between E and D	Between B and D	Between C and E
Right Answer	A			

Question No. 10	A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A. Who is to the right of P?			
Answer Options	A)	B)	C)	D)
	X	Z	S	A
Right Answer	A			

Question No. 11	In the following question choose the word which is the exact OPPOSITE of the given word. STRINGENT			
Answer Options	A)	B)	C)	D)
	Magnanimous	Vehement	General	Lenient
Right Answer	D			

Question No. 12	Some proverbs/idioms are given below together with their meanings. Choose the correct meaning of proverb/idiom. To catch a tartar			
Answer Options	A)	B)	C)	D)
	To trap wanted criminal with great difficulty	To catch a dangerous person	To meet with disaster	To deal with a person who is more than one's match
Right Answer	B			

Question No. 13	Which of the phrases A), B), C) and D) given below each sentence should replace the word/phrase printed in bold in the sentence to make it grammatically correct? If the sentence is correct as it is given and no correction is required, mark (E) as the answer. Since the girl did not want to be disturbed while studying, she left the phone off hooks.			
Answer Options	A)	B)	C)	D)
	of hook	for the hook	off hooking	off the hook
Right Answer	D			

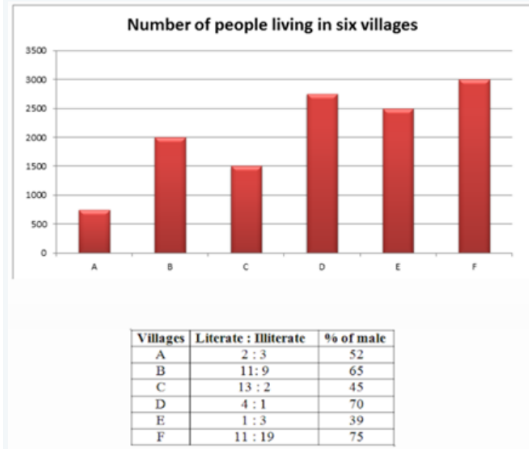
Question No. 14	In the following question choose the word which is the exact OPPOSITE of the given word. FICKLE			
Answer Options	A)	B)	C)	D)
	Courageous	Sincere	Steadfast	Humble
Right Answer	C			

Question No. 15	<p>In question below, the passage consists of six sentences. The first and sixth sentence are given in the correct places. The middle four sentences in each have been removed and jumbled up. These are labelled as P, Q, R and S. Find out the proper order for the four sentences.</p> <p>S1: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.</p> <p>P: For a committee is not just a mere collection of individuals.</p> <p>Q: On him rests much of the responsibility for the success or failure of the committee.</p> <p>R: While this is happening, we have an opportunity to get the 'feel' of this committee.</p> <p>S: As the meeting opens, he runs briskly through a number of formalities.</p> <p>S6: From the moment its members meet, it begins to have a sort nebulous life of its own.</p> <p>The Proper sequence should be:</p>			
Answer Options	A)	B)	C)	D)
	RSQP	QSRP	SQPR	PQRS
Right Answer	B			

Question
No. 16

Question nos. 16 to 20:

Following bar chart represents the number of people in 6 different villages (A, B, C, D, E and F) and the tabular column depicts the ratio of literate to illiterate people and percentage of male living in those villages.



If 40% of the female from village B is literate, then what is the percentage of male, who is illiterate from village B?

Answer Options	A) 38%	B) 35%	C) 37%	D) cannot be determined
Right Answer	C			

Question No. 17	What is the percentage of literate people in all the six villages together?			
Answer Options	A) 55%	B) 53%	C) 51%	D) cannot be determined
Right Answer	B			

Question No. 18	What is the ratio between numbers of illiterate people from villages B, C & D to number of females from villages A, E & F?			
Answer Options	A) 320:527	B) 527:330	C) 330:527	D) 527:320
Right Answer	C			

Question No. 19	If 3% of female from village D & 5% of female from village E are literate then what is the total number of literate males from D & F together?			
Answer Options	A) 1823	B) 1723	C) 1623	D) cannot be determined
Right Answer	D			

Question No. 20	The number of females from villages A & C is how much percentage more or less than number of females from villages D & F?			
Answer Options	A) 25.72%	B) 25.76%	C) 24.76%	D) 24.72%
Right Answer	C			

Question No. 21	A project plan results in a project schedule seems to be too long. If the project network diagram cannot change but extra personnel resources is available, what is the best thing to do?			
Answer Options	A)	B)	C)	D)
	Fast track the project	Level the resources	Crash the project	Any other option
Right Answer	C			

Question No. 22	Which of the following is not Project Management's goal			
Answer Options	A)	B)	C)	D)
	Keeping overall cost within the budget	Delivering the project/goods to the client at agreed time	Maintaining a satisfactory and well-functioning development	Avoiding customer/client complaints
Right Answer	D			

Question No. 23	You have recently been named as Project Manager of a new project under a Contract. The Project Management Unit (PMU) gave you the contract signed by the Customer and a Statement of Work and asked you to go on with initiation. Which document should you develop next?			
Answer Options	A)	B)	C)	D)
	Project Manager Plan	Milestone Schedule	Project Charter	Scope Statement
Right Answer	C			

Question No. 24	The analysis tool for a quality problem that involves selecting the problem, identifying major categories of potential causes and associating likely specific causes is			
Answer Options	A)	B)	C)	D)
	Pareto chart	Fishbone diagram	Scatter diagram	Check list
Right Answer	B			

Question No. 25	The Occupational Safety & Health Administration requires employers to have Hearing Conservation Plans if the average 8-hour noise exposure is more than			
Answer Options	A)	B)	C)	D)
	1000 dB	500 dB	105 dB	85 dB
Right Answer	D			

Question No. 26	Ammonia becomes an immediate danger to your life and health when it is present at the following level or greater			
Answer Options	A)	B)	C)	D)
	10 ppm	30 ppm	300 ppm	1000 ppm
Right Answer	C			

Question No. 27	Exposure to high levels of noise can lead to which of the following:			
Answer Options	A)	B)	C)	D)
	High blood pressure	Gastrointestinal problems	Chronic fatigue	All of the above
Right Answer	D			

Question No. 28	Which type of fire extinguishing system is most commonly used to protect areas containing valuable equipment such as data processing rooms, telecommunications switches, and process control rooms?			
Answer Options	A)	B)	C)	D)
	Fixed extinguishing systems	Portable extinguishing systems	Hose extinguishing systems	It's up to the discretion the employer
Right Answer	A			

Question No. 29	If you need to wear glasses with your eye or face protection, which of the following options is acceptable			
Answer Options	A)	B)	C)	D)
	Wearing prescription spectacles with side shields and protective lenses that meet safety requirements and also correct your vision	Wearing goggles that fit comfortably over your glasses	Wearing goggles that have corrective lenses mounted behind the protective lenses	All of the above
Right Answer	D			

Question No. 30	Under which Section of Environment Pollution Act, the CPCB can issue the directions directly to industries			
Answer Options	A)	B)	C)	D)
	Section 16	Section 18	Section 11	Section 5
Right Answer	D			

Question No. 31	Which of these divisions of Pollution Control Implementation deals with Air Polluting Industries			
Answer Options	A)	B)	C)	D)
	PCI - I	PCI - II	PCI - III	SSI & Law
Right Answer	B			

Question No. 32	The Kyoto Protocol is an international treaty which extends the United Nations Framework Convention on Climate Change (UNFCCC). In which year the convention held?			
Answer Options	A)	B)	C)	D)
	1987	1995	1992	1997
Right Answer	C			

Question No. 33	What is the harm from manipulation of Earth's Ozone layer?			
Answer Options	A)	B)	C)	D)
	The average temperature of Earth's surface will increase gradually	The Oxygen content of the atmosphere will decrease	Increased amount of Ultraviolet radiation will reach earth's surface	Sea level will rise as the polar ice caps will gradually melt
Right Answer	C			

Question No. 34	Which of the following would not represent the cash outflows for the business?			
Answer Options	A)	B)	C)	D)
	Purchase of building for cash	The sale of land for cash	Retirement of long-term debt	The payment of cash for dividends
Right Answer	B			

Question No. 35	Which one of the following tangible fixed assets would not normally be depreciated?			
Answer Options	A)	B)	C)	D)
	Buildings	Machinery	Land	Equipment
Right Answer	C			

Question No. 36	A Profit is earned if?			
Answer Options	A)	B)	C)	D)
	Assets exceed Expenditure	Income exceeds Expenditure	Cash Inflow exceeds Cash Outflow	Income exceeds Liabilities
Right Answer	B			

Question No. 37	Which of the following budgets is normally prepared first?			
Answer Options	A)	B)	C)	D)
	Cash budget	Sales budget	Merchandise purchases budget	Selling expense budget
Right Answer	B			

Question No. 38	What is the correct sequence in the formation of a contract?			
Answer Options	A)	B)	C)	D)
	Offer, acceptance, agreement, consideration.	Agreement, consideration, offer, acceptance.	Offer, agreement, consideration, acceptance.	Offer, acceptance, consideration, agreement.
Right Answer	D			

Question No. 39	Which of the following answers is most accurate description of arbitration?			
Answer Options	A)	B)	C)	D)
	An informal meeting between the parties involving a discussion to sort out the dispute	An adjudicative process where the parties submit their disputes for a binding decision to an impartial tribunal	A meeting between the parties where an impartial third party gives decision	An impartial umpire selected to decide after hearing the dispute from parties
Right Answer	B			

Question No. 40	Which of the following answers is not type of alternative dispute resolution?			
Answer Options	A)	B)	C)	D)
	Arbitration	Court proceedings	Conciliation	Mediation
Right Answer	B			

Question No. 41	The equation of state for n moles of an ideal gas is $PV = nRT$, where R is the universal gas constant and all other quantities have their usual meanings. What are the dimensions of R?			
Answer Options	A)	B)	C)	D)
	$M^0L^{-2}K^{-1}mol^{-1}$	$M^0L^2T^{-2}K^{-1}mol^{-1}$	$ML^2T^{-2}K^{-1}mol^{-1}$	$ML^{-2}T^{-2}K^{-1}mol^{-1}$
Right Answer	C			

Question No. 42	A cylindrical tube open at both ends has fundamental frequency n. If one of the ends is closed, the fundamental frequency will become			
Answer Options	A)	B)	C)	D)
	$n/2$	$2n$	$4n$	n
Right Answer	A			

Question No. 43	The speed of sound in a gas is V and the root mean square speed of the gas molecules is V_{rms} . If the ratio of the specific heats of the gas is 1.5, then the ratio of V: V_{rms} will be			
Answer Options	A)	B)	C)	D)
	1:2	1:3	$1:\sqrt{2}$	$1:\sqrt{3}$
Right Answer	C			

Question No. 44	Which of the following phenomena gives evidence of the molecular structure of the matter?			
Answer Options	A)	B)	C)	D)
	Brownian motion	Diffusion	Evaporation	All of these
Right Answer	D			

Question No. 45	Starting with the same initial conditions, an ideal gas expands from volume V_1 to V_2 in three different ways. The work done by the gas is W_1 if the process is purely isobaric, W_2 if the process is purely isochoric and W_3 if the process is purely adiabatic. Then			
Answer Options	A) $W_1 > W_2 > W_3$	B) $W_2 > W_1 > W_3$	C) $W_1 > W_3 > W_2$	D) $W_3 > W_1 > W_2$
Right Answer	A			

Question No. 46	A vessel contains a mixture of 1 mole of oxygen and two moles of nitrogen at 300K. The ratio of the rotational kinetic energy per O_2 molecule to that per N_2 molecule is			
Answer Options	A) 1:1	B) 1:2	C) 2:1	D) Depends on the moment of inertia of the two molecules
Right Answer	A			

Question No. 47	In a test experiment on a model aeroplane in a wind tunnel, the flow speeds on the lower and upper surfaces of the wing are v and $\sqrt{2}v$ respectively. If the density of air is ρ and the surface area of the wing is A , the dynamic lift on the wing is given by			
Answer Options	A) $(\rho v^2 A)/\sqrt{2}$	B) $(\rho v^2 A)/2$	C) $2\rho v^2 A$	D) $\sqrt{2}\rho v^2 A$
Right Answer	B			

Question No. 48	A boy whirls a stone in a horizontal circle 2m above the ground by means of a string 1.25m long. The string breaks and the stone flies off horizontally, striking the ground 10m away. What is the magnitude of the centripetal acceleration during circular motion? (Take $g=10\text{m/s}^2$)			
Answer Options	A) 400m/s^2	B) 300m/s^2	C) 200m/s^2	D) 100m/s^2
Right Answer	C			

Question No. 49	Radium (with Atomic no. = 87, Mass No. = 221) undergoes radioactive decay with a half-life of 4 days. The probability that a Ra nucleus will disintegrate in 8 days is			
Answer Options	A) 1/4	B) 3/4	C) 1/2	D) 1
Right Answer	B			

Question No. 50	A tunnel is dug along the diameter of the earth. An object is held in the tunnel at a distance x from the centre of the earth. The magnitude of the gravitational force on the object is proportional to			
Answer Options	A) $1/x$	B) $1/x^2$	C) x	D) x^2
Right Answer	C			

Question No. 51	How many electrons are required for reduction of one molecule of Nitrogen to NH_4^+ ?			
Answer Options	A)	B)	C)	D)
	2	4	8	16
Right Answer	C			

Question No. 52	Which of the following functional sequence / module is not found in eukaryotic promoters?			
Answer Options	A)	B)	C)	D)
	CAAT box	GC box	TATA box	Pribnow box
Right Answer	D			

Question No. 53	A gene is alternatively spliced, and its exon 1 joined to any one or more of exons produces a functional protein. How many different functional proteins will be produced if the gene has 4 exons?			
Answer Options	A)	B)	C)	D)
	3	7	10	14
Right Answer	B			

Question No. 54	Biochemical oxygen demand measures which of the following?			
Answer Options	A)	B)	C)	D)
	Dissolved oxygen needed by microbes to decompose organic waste	Air pollution	Industrial pollution	Oxygen need to support microorganism growth
Right Answer	A			

Question No. 55	Which of the following poses the greatest risk?			
Answer Options	A)	B)	C)	D)
	Hydroelectric plants	Biogas plants	Thermal power plants	Nuclear plants
Right Answer	B			

Question No. 56	DNA melting temperature (T_m) could be calculated from which of the following formulae?			
Answer Options	A)	B)	C)	D)
	$[2(G + C)] + [4(A + T)]$	$[3(G + C)] + [4(A + T)]$	$[4(G + C)] + [3(A + T)]$	$[4(G + C)] + [2(A + T)]$
Right Answer	D			

Question No. 57	Which of the following is the basis of ELISA?			
Answer Options	A)	B)	C)	D)
	DNA- Protein interaction	Protein-Protein interaction	RNA-Protein interaction	DNA-RNA interaction
Right Answer	B			

Question No. 58	Which of the following restriction endonucleases is not used in gene cloning?			
Answer Options	A)	B)	C)	D)
	Type I	Type II	Type III	Both A and C
Right Answer	D			

Question No. 59	DNase I is generally obtained from cow _____			
Answer Options	A)	B)	C)	D)
	Pancreas	Liver	Intestine	Kidney
Right Answer	A			

Question No. 60	Differentiation in animal cell cultures is promoted by which of the following? I. High Ca^{2+} ions II. Cortisone growth factor III. Nerve growth factors IV. Low cell density			
Answer Options	A)	B)	C)	D)
	I, II, III	II, III, IV	I, III, IV	I, II, III, IV
Right Answer	A			

Question No. 61	Polio vaccine is produced from which of the following?			
Answer Options	A)	B)	C)	D)
	Human diploid cells	Cow kidney	Primate kidney	Chick embryo
Right Answer	C			

Question No. 62	Which of the transfection techniques listed below, can possibly be used for gene therapy?			
Answer Options	A)	B)	C)	D)
	Lipofection	Microinjection	Electroporation	Retroviral infection
Right Answer	D			

Question No. 63	Which of the following media can be used for oocyte incubation, in vitro fertilization and subsequent culture of the zygote? I. Earl's solution II. Modification of Ham's F10 medium III. Modified Whitten's medium IV. Whittingham's T6 medium			
Answer Options	A)	B)	C)	D)
	I, II, III	II, III, IV	I, III, IV	I, II, III, IV
Right Answer	D			

Question No. 64	Assertion (A): The chief hazard from biological entities present in wastes is disease spread. Reason (R): The waste may be directly contaminate food or water, or it may facilitate pathogen transmission mediated by vectors.			
Answer Options	A)	B)	C)	D)
	Only A is correct	Only R is correct	Both A and R are correct, but R does not explain A	Both A and R are correct and R sufficiently explains A
Right Answer	D			

Question No. 65	Chemical wastes may be classified into which of the following? I. Biodegradable II. Recalcitrant III. Nonbiodegradable			
Answer Options	A)	B)	C)	D)
	I, II	II, III	I, III	I, II, III
Right Answer	D			

Question No. 66	Recalcitrant xenobiotic compounds can be grouped into which of the following types? I. Halocarbons II. Synthetic polymers III. Alkylbenzyl sulphonates IV. Polychlorinated biphenyls V. Polysaccharides			
Answer Options	A)	B)	C)	D)
	I, II, III, IV	II, III, IV, V	I, II, IV, V	I, III, IV, V
Right Answer	A			

Question No. 67	Which of the following gases contributes the maximum to the green-house effect?			
Answer Options	A)	B)	C)	D)
	CO ₂	CFC	CH ₄	N ₂ O
Right Answer	A			

Question No. 68	Column A lists some products while column B lists the plants from where they are produced. Match the columns and select the correct option. Column A: a. Biodiesel, b. Kaffir beer, c. Tofu and tempeh, d. Gari, e. PUFA Column B: 1. Soybean, 2. Flaxseed, 3. Copaifera lansgdorfii, 4. Cassava, 5. Sorghum			
Answer Options	A)	B)	C)	D)
	a3, b5, c1, d4, e2	a4, b5, c2, d3, e1	a2, b4, c1, d5, e3	a5, b3, c2, d1, e4
Right Answer	A			

Question No. 69	Which of the following enzymes is used to prevent 'chill-haze' of beer?			
Answer Options	A)	B)	C)	D)
	Papain	Neutral proteases	Cellulases	α-amylase
Right Answer	A			

Question No. 70	In cheese ripening, which of the following generates the strongest bitter flavour?			
Answer Options	A)	B)	C)	D)
	Small peptides	Medium-sized peptides	Large peptides	Both A and C
Right Answer	B			

Question No. 71	Splicing yields which of the following?			
Answer Options	A)	B)	C)	D)
	mRNA	rRNA	tRNA	All of them
Right Answer	A			

Question No. 72	Teminism refers to which of the following?			
Answer Options	A)	B)	C)	D)
	Polymerization	Translation	Transcription	Reverse transcription
Right Answer	D			

Question No. 73	Which of the following is natural genetic engineer?			
Answer Options	A)	B)	C)	D)
	Bacillus amyloliquefaciens	Penicillium purpurogenum	Escherichia coli	Agrobacterium tumefaciens
Right Answer	D			

Question No. 74	Which of the following is a stress hormone?			
Answer Options	A)	B)	C)	D)
	Cytokinin	ABA	GA3	Ethylene
Right Answer	B			

Question No. 75	Which of the following is called molecular scissor?			
Answer Options	A)	B)	C)	D)
	Restriction Endonuclease	DNA Polymerase	DNA Gyrase	DNA Ligase
Right Answer	A			

Question No. 76	Most of the PCR products have which of the following types of ends?			
Answer Options	A)	B)	C)	D)
	Blunt	Cohesive	Either A) or B)	Single nucleotide overhang
Right Answer	D			

Question No. 77	Phosphodiester bond of nucleic acid involves which of the following?			
Answer Options	A)	B)	C)	D)
	1' C and 3' C	3' C and 2' C	5' C and 3' C	5' C and 1' C
Right Answer	C			

Question No. 78	Which of the following is called molecular adhesive?			
Answer Options	A)	B)	C)	D)
	DNA Gyrase	DNA Polymerase	Restriction Endonuclease	DNA Ligase
Right Answer	D			

Question No. 79	Which of the following features are present in cDNA library? I. Introns are present II. Non-transcribed regions are present III. Single gene sequence represents single clone IV. Tissue specific different libraries			
Answer Options	A)	B)	C)	D)
	I, II	III, IV	I, III	II, IV
Right Answer	B			

Question No. 80	Vector circularization is prevented by the use of which of the following?			
Answer Options	A)	B)	C)	D)
	λ exonuclease	S1 nuclease	Alkaline phosphatase	Polynucleotide kinase
Right Answer	C			

Question No. 81	Protruding ends can be converted into blunt ends by use of which of the following?			
Answer Options	A)	B)	C)	D)
	Klenow fragment of <i>E. coli</i> DNA polymerase I	Polynucleotide kinase	Both A) and B)	S1 nuclease
Right Answer	A			

Question No. 82	To make artificial seed which of the following is used?			
Answer Options	A)	B)	C)	D)
	Gelrite	Sodium alginate	Perlite	Cocopeat
Right Answer	B			

Question No. 83	A sequence complementary to 20 bp long primer, used in PCR, may be expected to occur at which of the following bp interval in genomic DNA?			
Answer Options	A)	B)	C)	D)
	4^4	20^4	4^{20}	20^{20}
Right Answer	C			

Question No. 84	Match the columns A and B and select the correct option. Column A: a. Natural auxin, b. Abscissic acid, c. Ethylene, d. Synthetic auxin Column B: 1. Ethrel, 2. IBA, 3. Dormin, 4. IAA			
Answer Options	A) a4, b3, c1, d2	B) a3, b1, c4, d2	C) a4, b2, c3, d1	D) a3, b4, c2, d1
Right Answer	A			

Question No. 85	Cryopreservation is based on which of the following?			
Answer Options	A) Liquid oxygen	B) Liquid carbon dioxide	C) Liquid nitrogen	D) Liquid helium
Right Answer	C			

Question No. 86	Light chain antibody consists of approximately how many amino acids?			
Answer Options	A) 220	B) 320	C) 420	D) 120
Right Answer	A			

Question No. 87	Anther culture yields which of the following?			
Answer Options	A) Disomic plant	B) Haploid plant	C) Trisomic plant	D) Polyploid plant
Right Answer	B			

Question No. 88	The <i>barnase</i> and <i>barstar</i> genes were isolated from which of the following?			
Answer Options	A) <i>Bacillus thuringiensis</i>	B) <i>Bacillus subtilis</i>	C) <i>Bacillus clausii</i>	D) <i>Bacillus amyloliquefaciens</i>
Right Answer	D			

Question No. 89	Which of the following enzymes is obtained from animal pancreas?			
Answer Options	A) Lipase	B) Rennet	C) Trypsin	D) All of them
Right Answer	D			

Question No. 90	PUFA is obtained from which of the following plants?			
Answer Options	A) Soybean	B) Cassava	C) Linseed	D) Sorghum
Right Answer	C			

Question No. 91	Among the following which one is most commonly found in aerobic digestion systems?			
Answer Options	A)	B)	C)	D)
	Algae	Bacteria	Fungi	Protozoa
Right Answer	B			

Question No. 92	Which of the following use largest quantity of enzymes?			
Answer Options	A)	B)	C)	D)
	Alcohol production	Detergents	Leather industry	Textile industry
Right Answer	B			

Question No. 93	Which of the following is correct about serine protease?			
Answer Options	A)	B)	C)	D)
	They help in removal of dirt	They are used in cheese making	They are used in meat processing	They are used in confectioneries
Right Answer	A			

Question No. 94	Which of the following bacteria is used in bioleaching from copper ore?			
Answer Options	A)	B)	C)	D)
	Lactobacillus bulgaricus	Methylophilus methylotrophus	Thiobacillus ferrooxidans	Penicillium purpurogenum
Right Answer	C			

Question No. 95	Alcoholic fermentation is carried by yeast known as _____			
Answer Options	A)	B)	C)	D)
	Lactobacillus	Bacillus	Saccharomyces cerevisiae	Escherichia coli
Right Answer	C			

Question No. 96	The function of the centrosome is			
Answer Options	A)	B)	C)	D)
	Formation of spindle fibres	Osmoregulation	Secretion	Protein synthesis
Right Answer	A			

Question No. 97	Which cell organelle is involved in apoptosis?			
Answer Options	A)	B)	C)	D)
	Lysosome	ER	Golgi	Mitochondria
Right Answer	D			

Question No. 98	Phosphatidylserine residues in the plasma membrane are located at			
Answer Options	A)	B)	C)	D)
	Inner leaflet of the plasma membrane	The outer leaflet of the plasma membrane	Evenly distributed in the inner and outer leaflet	None of the above
Right Answer	A			

Question No. 99	Distribution of intrinsic proteins in the plasma membrane is			
Answer Options	A)	B)	C)	D)
	Random	Symmetrical	Asymmetrical	None of the above
Right Answer	C			

Question No. 100	Which of them contains all the information required to fold the polypeptide chain in its 3-D structure?			
Answer Options	A)	B)	C)	D)
	RNA	Histone protein	Amino acid sequences	DNA sequences
Right Answer	D			