Module Name : PhD Green Energy Technology-E
Exam Date : 20-Sep-2020 Batch : 12:30-14:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	1	Let u(x,y) be a solution of Laplace's equation on $x^2 + y^2 \leq 1$, If $u(cos\theta, sin\theta) = \begin{cases} sin\theta & for\ 0 \leq \theta \leq \pi \\ 0 & for\ \pi \leq \theta \leq 2\pi \end{cases}$ then u(0,0) equals A1 : $1/\pi$ A2 : $2/\pi$ A3 : $1/(2\pi)$ A4 : (A) $\pi/2$	4.0	1.00
Objective Question				
2	2	For the n-th Legendre polynomial $C_n \frac{d^n y}{dx^n}(x^2-1)^n$ the value of c_n is A1 : $\frac{1}{n!2^n}$ A2 : $\frac{n!}{2^n}$ A3 : $n!\,2^n$ A4 : $2^n n!$	4.0	1.00
Objective Question				
3	3	Assume that 45 percent of the population favors a certain candidate in an election. If a random sample of size 200 is chosen, then the standard deviation of the number of members of the sample sample that favors the candidate is A1 : 6.12 A2 : 5.26 A3 : 8.18 A4 : 7.04	4.0	1.00

Objective Question

4	4	Let the marks obtained in the half yearly and final examinations in a large class have an approximately bivariate normal distribution with the following parameters <table><tr><td></td><td>mean</td><td>Deviation</td></tr><tr><td>Marks (half yearly)</td><td>60</td><td>18</td></tr><tr><td>Marks (final exa)</td><td>55</td><td>20</td></tr></table>Correlation: 0.75 Then estimate the average final examination score of students who were above average on the half yearly examination is A1 : 72 A2 : 70 A3 : 67 A4 : 60	4.0	1.00

Objective Question

5	5	Suppose u(x,y) satisfies Laplace's equation $\nabla^2 u = 0$ in R^2 and u=x on the unit circle. Then, at the origin A1 : u tends to infinity A2 : u attains a finite miimum A3 : u attains a finite maximum A4 : u is equal to zero	4.0	1.00

Objective Question

6	6	The dimension of the vector space of all 3x3 real symmetric matrices is A1 : 3 A2 : 9 A3 : 6 A4 : 4	4.0	1.00

Objective Question

7	7	The eigenvalues of a skew-symmetric matrix are A1 : Negative	4.0	1.00

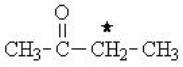
		A2 : Real A3 : Purely imaginary or zero A4 : of absolute value 1		
Objective Question				
8	8	Let G be a cyclic group of order 6. Then the number of elements g ϵ G such that G= is A1 : 5 A2 : 3 A3 : 4 A4 : 2	4.0	1.00
Objective Question				
9	9	The number of elements of order 5 in the symmetric group S_5 is A1 : 5 A2 : 20 A3 : 24 A4 : 12	4.0	1.00
Objective Question				
10	10	For the function f(z)=sin(1/z), z=0 A1 : Removable singularity A2 : Simple pole A3 : Branch point A4 : Essential singularity	4.0	1.00
Objective Question				
11	11	A uniformly continuous function is A1 Measurable	4.0	1.00

		: A2 : Not measurable A3 : Integrable and simple A4 : Measurable and simple		
Objective Question				
12	12	For $0< \Theta <\pi$, the matrix $\begin{bmatrix} cos\theta & -sin\theta \\ sin\theta & cos\theta \end{bmatrix}$ A1 : Has no real eigenvalues A2 : Is orthogonal A3 : Is symmetric A4 : Is skew symmetric	4.0	1.00
Objective Question				
13	13	Let $X = \begin{bmatrix} 2 & 0 & -3 \\ 3 & -1 & -3 \\ 0 & 0 & -1 \end{bmatrix}$. A matrix P such that $P^{-1}XP$ is a diagonal matrix is A1 : $\begin{bmatrix} 1 & 1 & 1 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{bmatrix}$ A2 : $\begin{bmatrix} -1 & 1 & 1 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{bmatrix}$ A3 : $\begin{bmatrix} 1 & -1 & 1 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{bmatrix}$ A4 : $\begin{bmatrix} -1 & -1 & 1 \\ 0 & -1 & 1 \\ 1 & 1 & 0 \end{bmatrix}$	4.0	1.00
Objective Question				
14	14	Given the function $f(x) = x^2e^{-2x}, x > 0$. Then $f(x)$ has the maximum value equal to A1 : e^{-2}	4.0	1.00

		A2 : e^{-1} A3 : 1 A4 : $(2e)^{-1}$		
Objective Question				
15	15	Which of the following matrices is NOT diagonalizable? A1 : $\begin{bmatrix}1 & 1\\1 & 2\end{bmatrix}$ A2 : $\begin{bmatrix}1 & 0\\3 & 2\end{bmatrix}$ A3 : $\begin{bmatrix}0 & -1\\1 & 0\end{bmatrix}$ A4 : $\begin{bmatrix}1 & 1\\0 & 1\end{bmatrix}$	4.0	1.00
Objective Question				
16	16	Let M be a skew symmetric, orthogonal real matrix. The only possible eigenvalues are A1 : -1,1 A2 : –i, i A3 : 0,1 A4 : 1, i	4.0	1.00
Objective Question				
17	17	$\int_0^{\pi}\int_x^{\pi}\int_0^2 \frac{\sin y}{y}\,dzdydx$ is A1 : -2 A2 : 2 A3 : -4 A4 : 4	4.0	1.00
Objective Question				

18	18	In a skew symmetric matrix the diagonal elements are A1 : 1 A2 : 0 A3 : Different from each other A4 : i	4.0	1.00
Objective Question				
19	19	If two vectors in an inner product space are orthogonal and contains unit vectors it is called A1 : Orthonormal system A2 : Commutative system A3 : Linear system A4 : Conjugate system	4.0	1.00
Objective Question				
20	20	Let M be a square matrix of order 2 such that rank of M is 1. Then M is A1 : Diagonalizable and nonsingular A2 : Diagonalizable and nilpotent A3 : Neither diagonalizable nor nilpotent A4 : Either diagonalizable or nilpotent but not both	4.0	1.00
Objective Question				
21	21	Which one of the alkali metal ions in aqueous solution has maximum ionic mobility? A1 : K^+ A2 : Rb^+ A3 : Li^+ A4 : Na^+	4.0	1.00

Objective Question				
22	22	The shape of $XeOF_4$ is A1 : Octahedral A2 : Pyramidal A3 : Square pyramidal A4 : Tetrahedral	4.0	1.00
Objective Question				
23	23	According to Joule-Thomson expansion A1 : dS=0 A2 : dH=0 A3 : dE=0 A4 : dG=0	4.0	1.00
Objective Question				
24	24	Identify the species with atom in +6 oxidation state for the following A1 : MnO_4^- A2 : $Cr(CN)_6^{3-}$ A3 : CrO_2Cl_2 A4 : NiF_6^{2-}	4.0	1.00
Objective Question				
25	25	Germanium is an example of a/an A1 : n-type semiconductor A2 : p-type semiconductor A3 : intrinsic semiconductor	4.0	1.00

		A4 : None of these		
Objective Question				
26	26	Which of the following oxides is amphoteric in character? A1 : CaO A2 : CO_2 A3 : SiO_2 A4 : SnO_2	4.0	1.00
Objective Question				
27	27	Radioactive isotopes that have an excessive neutron-proton ratio generally exhibit which one of the following A1 : Alpha emission A2 : Beta emission A3 : Positron capture A4 : k-capture	4.0	1.00
Objective Question				
28	28	What is the multiplicity expected in the proton NMR spectrum for the hydrogen atoms marked by a "star" in the following compound?  A1 : Quartet A2 : Triplet A3 : Doublet A4 : Singlet	4.0	1.00
Objective Question				
29	29	Which of the following compound has one chiral carbon atom? A1 : D-exythrose	4.0	1.00

		A2 : D-threose A3 : Glyceraldehyde A4 : All of these		
Objective Question				
30	30	HBr reacts with CH_2 =CH – OCH3 under anhydrous conditions at room temperature to give A1 : CH_3CHO and CH_3Br A2 : $BrCH_2CHO$ and CH_3OH A3 : $BrCH_2 – CH_2 – OCH_3$ A4 : $H_3C – CHBr – OCH_3$	4.0	1.00
Objective Question				
31	31	Increased concentration of CO_2 in atmosphere is responsible for A1 : Nutrification A2 : Lack of photosynthesis A3 : Greenhouse effect A4 : Death of aquatic life	4.0	1.00
Objective Question				
32	32	Which of the following is a photochemical pollutant? A1 : Aldehyde A2 : Ketone A3 : Peroxyacetylnitrate A4 : All of these	4.0	1.00
Objective Question				
33	33	The zero point energy of an electron is equal to? A1	4.0	1.00

		: $h^2/2\ ma^2$ A2 : $h^2/4ma^2$ A3 : $h^2/8ma^2$ A4 : $h^2/16ma^2$		
Objective Question				
34	34	Symmetry operations of the four C^2 axes perpendicular to the principal axis belong to the same class in the point group(s) A1 : D_4 A2 : D_{4d} A3 : D_{4h} A4 : $D_{4h}$and D_{4d}	4.0	1.00
Objective Question				
35	35	Fe_3O_4 and Co_3O_4 are metal oxides having spinel structure. Consider their CFSEs, the correct statement regarding their structure is A1 : Both have normal spinel structure A2 : Both have inverse spinel structure A3 : Fe_3O_4 has normal and Co_3O_4 has inverse spinel structure A4 : Fe_3O_4 has inverse and Co_3O_4 has normal spinel structure	4.0	1.00
Objective Question				
36	36	The compound which obeys 18-electron rule is A1 : $Mn(CO)_3$ A2 : $Fe(CO)_4$ A3 : $V(CO)_6$ A4 : $Cr(CO)_6$	4.0	1.00
Objective Question				

37	37	^{1}H NMR spectrum of [18]-annulene shows A1 : Only one peak at d 7.2 (18H) A2 : Only one peak at d 5.0 (18H) A3 : Two peaks at d 9.0 (12H) and d -3.0 (6H) A4 : Two peaks at d 9.0 (9H) and d -3.0 (12H)	4.0	1.00
Objective Question				
38	38	The nanoparticles from iron and palladium are used to produce A1 : Magnets A2 : Magnetic lens A3 : Magneto meters A4 : Magnetic storage devices	4.0	1.00
Objective Question				
39	39	Which of the following are peritectic systems A1 : Pt-Ag A2 : Ni-Re A3 : Ni-Re, Fe-Ge, Sn-Sb A4 : Pt-Ag, Ni-Re, Fe-Ge, Sn-Sb	4.0	1.00
Objective Question				
40	40	When a conductance cell was filled with a 0.02 M KCl, which has a specific conductance of $2.8*10^{-3}$ S mol^{-1}, its resistance was 82.40 S at 25 ^{o}C. The cell constant is A1 : 2.307 cm^{-1} A2 : 0.2307 cm^{-1} A3 : 0.2821 cm^{-1} A4 2.821 cm^{-1}	4.0	1.00

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Objective Question				
41	41	A vector field which can be expressed as negative gradient of a scalar field is called A1 : Lamellar field A2 : Non-Lamellar field A3 : Non-conservative field A4 : Conservative filed	4.0	1.00
Objective Question				
42	42	A vector is solenoidal if A1 : Gradient is zero A2 : Divergence is non-zero A3 : Gradient is non-zero A4 : Divergence is zero	4.0	1.00
Objective Question				
43	43	The eigenvalue of the matrix $A = \begin{bmatrix} cos\theta & -sin\theta \\ sin\theta & cos\theta \end{bmatrix}$ is A1 : $e^{\pm i\theta}$ A2 : $e^{\pm 2i\theta}$ A3 : $e^{\pm 3i\theta}$ A4 : none of these	4.0	1.00
Objective Question				
44	44	The independent solution of the equation $\frac{d^2y}{dx^2} - 3\frac{dy}{dx} + 2y = 0$ is A1 : e^{2x} and e^{-x} A2 : e^{2x} and e^{x}	4.0	1.00

		A3 : $1/x$ and x^2 A4 : Sin2x and cos x		
Objective Question				
45	45	If a co-ordinate corresponding to a rotation is cyclic, rotation of the system about given axis remains invariant then the following quantity is conserved A1 : Linear momentum A2 : Angular momentum A3 : Kinetic Energy A4 : Potential energy	4.0	1.00
Objective Question				
46	46	On the annihilation of a particle and its anti-particle, the energy released is E, then mass of each particle is A1 : E/c^{2x} A2 : $E/(2c)$ A3 : $E/(2c^2)$ A4 : E/c	4.0	1.00
Objective Question				
47	47	Possible longitudinal normal modes of the linear symmetric triatomic molecule are A1 : Two A2 : Three A3 : Four A4 : None of these	4.0	1.00
Objective Question				
48	48	The electric intensity at a point varies as r^{-1} for A1 : Point charge	4.0	1.00

		A2 : Spherically symmetric charge distribution A3 : A plane infinite sheet A4 : A line charge of infinite length		
Objective Question				
49	49	In electromagnetic wave the phase difference between the electric and magnetic field vectors are A1 : 0 A2 : π A3 : π/2 A4 : π/4	4.0	1.00
Objective Question				
50	50	A free electron is placed in the path of a plane electromagnetic wave . The electron will start moving A1 : Along the electric field A2 : Along the magnetic field A3 : Along the direction of propagation of the wave A4 : In the plane containing the magnetic field and the direction of propagation	4.0	1.00
Objective Question				
51	51	Nusselt number is A1 : Dimensionless pressure drop for internal flow through ducts A2 : Ratio of buoyant to inertia forces A3 : Ratio of convection heat transfer to conduction A4 : Signifies the velocity gradient at the surface	4.0	1.00
Objective Question				
52	52	The minimum heat transfer area for a given situation is A1 Parallel flow	4.0	1.00

		: A2 : Counter flow A3 : Cross flow A4 : Shell and tube		
Objective Question				
53	53	The kVAr rating required for improving the power factor of a load operating at 627 kW and 0.72 power factor to 0.95 is _____ A1 : 398 A2 : 144 A3 : 428 A4 : 660	4.0	1.00
Objective Question				
54	54	Materials which lack permanent magnetic dipoles are known as A1 : Paramagnetic A2 : Diamagnetic A3 : Ferromagnetic A4 : Ferrimagnetic	4.0	1.00
Objective Question				
55	55	Ratio of inertial force to surface tension is known as A1 : Match number A2 : Froude number A3 : Reynold’s number A4 : Weber’s number	4.0	1.00
Objective Question				

56	56	One ton of refrigeration is equal to the refrigeration effect corresponding to melting of 100 kg of ice A1 : in 1 hour A2 : in 1 minute A3 : in 24 hours A4 : in 12 hours	4.0	1.00
Objective Question				
57	57	In vapour compression cycle, the condition of refrigerant is saturated liquid A1 : After passing through the condenser A2 : Before passing through the condenser A3 : Before entering the expansion valve A4 : Before entering the compressor	4.0	1.00
Objective Question				
58	58	The maximum demand of a consumer is 2 kW and the corresponding daily energy consumption is 30 units. What is the corresponding load factor? A1 : 25% A2 : 50% A3 : 62.5% A4 : 75%	4.0	1.00
Objective Question				
59	59	As viscosity of fluid increases the boundary layer thickness will A1 : Increase A2 : Decrease A3 : Will increase at medium values and then decrease A4 : Will not change	4.0	1.00

Objective Question				
60	60	If the distribution voltage is raised form 11 kV to 33 kV, the line power loss would be lower by a factor A1 : 1/3 A2 : 1/9 A3 : 3 A4 : 9	4.0	1.00
Objective Question				
61	61	In a given fin configuration increase in conductivity will A1 : Decrease the total heat flow A2 : Will affect only the temperature gradient A3 : Increase the heat flow A4 : Heat flow is influenced only by the base temperature and sectional area	4.0	1.00
Objective Question				
62	62	The starting current of an induction motor is 5 times the full-load current while the full load slip is 4%. What is the ratio of starting torque to full-load torque? A1 : 0.6 A2 : 0.8 A3 : 1.0 A4 : 9	4.0	1.00
Objective Question				
63	63	The refrigerating efficiency, that is, the ratio of actual COP to reversible COP of a refrigeration cycle is 0.8, the condenser and evaporator temperatures are 51,^{o}C and -30^{o}C respectively. If cooling capacity of the plant is 2.4 kW then what is the work requirement? A1 : 1.00 kW A2 : 1.33 kW	4.0	1.00

		A3 : 1.25 kW A4 : 2.08 kW		
Objective Question				
64	64	The power input to a 415 V, 50 Hz, 6 pole 3-phase induction motor running at 975 rpm is 40 kW. The stator losses are 1 kW and friction and windage losses are total 2 kW. What is the efficiency of the motor? A1 : 92.5% A2 : 92% A3 : 90% A4 : 88%	4.0	1.00
Objective Question				
65	65	If the enthalpy drop in the moving blades and fixed blades of a steam turbine is 10 KJ/kg and 15 KJ/kg respectively then what is the degree of reaction? A1 : 67% A2 : 60% A3 : 40% A4 : 33%	4.0	1.00
Objective Question				
66	66	Fin effectiveness will be increased more by A1 : Having higher value of convection coefficient A2 : Higher sectional area A3 : Higher thermal conductivity A4 : Longer circumference	4.0	1.00
Objective Question				
67	67	The overall heat transfer coefficient is the A1 : Sum of resistances	4.0	1.00

		A2 : Sum of conductance A3 : Sum of convection coefficients A4 : Resistance due to wall material		
Objective Question				
68	68	Which one dimensional number relates the thermal boundary layer and hydrodynamic boundary layer A1 : Rayleigh number A2 : Peclet number A3 : Grashof number A4 : Prandtl number	4.0	1.00
Objective Question				
69	69	Higher COP can be achieved with _____. A1 : Lower evaporator temperature and higher condenser temperature A2 : Higher evaporator temperature and lower condenser temperature A3 : Higher evaporator temperature and higher condenser temperature A4 : Lower evaporator temperature and lower condenser temperature	4.0	1.00
Objective Question				
70	70	For heavy dust conditions, which type of fan is ideally suited? A1 : Radial fan A2 : Backward inclined fan A3 : Forward curved fan A4 : Axial fans	4.0	1.00
Objective Question				
71	71	In photosynthesis of C4 plants, which of the following statement is incorrect: A1	4.0	1.00

		: Increases Rubisco's biding ability to CO_2 A2 : Carbon-assimilation takes place in mesophyll cells as four-carbon compound A3 : Does not follow Calvin cycle A4 : Decreases photorespiration		
Objective Question				
72	72	Photosynthesis is A1 : Oxidative, exergonic, catabolic A2 : Reductive, exergonic, anabolic A3 : Redox-reaction, endergonic, anabolic A4 : Reductive, endergonic, catabolic	4.0	1.00
Objective Question				
73	73	How many Calvin cycle can generate one molecule of glucose A1 : One cycle A2 : Two cycles A3 : Four cycles A4 : Six cycles	4.0	1.00
Objective Question				
74	74	The first acceptor of electron from excited Chlorophyl molecule of photosystem-II is A1 : Ferredoxin A2 : Quinone A3 : Cytochrome A4 : Iron-sulphur protein	4.0	1.00
Objective Question				
75	75	The energy releasing process in which substrate is oxidised without an external electron acceptor is called	4.0	1.00

		A1 : Aerobic respiration A2 : Glycolysis A3 : Fermentation A4 : Photorespiration		
Objective Question				
76	76	Cryptochrome is the pigment that absorbs A1 : Red light A2 : green light A3 : blue light A4 : yellow light	4.0	1.00
Objective Question				
77	77	The correct equation for the reduction of nicotinamide adenine dinucleotide phosphate(NADP+) is A1 : $NADP^{+}+2H^{+}\rightarrow NADPH^{+}+H^{+}$ A2 : $NADP^{+}+H^{+}+e^{-}\rightarrow NADPH$ A3 : $NADP^{+}+H^{+}+2e^{-}\rightarrow NADPH$ A4 : $NADP^{+}+2H^{+}+2e^{-}\rightarrow NADPH_{2}$	4.0	1.00
Objective Question				
78	78	Which of the following amino acids is considered both ketogenic and glucogenic? A1 : Aspartate A2 : Alanine A3 : Proline A4 : Tyrosine	4.0	1.00

Objective Question				
79	79	Which of the following condition is true about food chain? A1 : Provide more energy for next trophic level A2 : Provides food for succeeding organisms A3 : Consume energy from next trophic level A4 : Do not pass energy to next trophic level	4.0	1.00
Objective Question				
80	80	What is the fundamental difference between matter and energy? A1 : Matter is cycled through ecosystem;energy is not A2 : Energy is cycled through ecosystems;matter is not A3 : Energy can be converted into matter;matter cannot be converted into energy A4 : Matter can be converted into energy ;energy cannot be converted into matter	4.0	1.00
Objective Question				
81	81	The photochemical reaction occurs in A1 : The plasma membrane of green plants A2 : The membrane of lysosomes A3 : The outer membrane of chloroplasts A4 : The tylakoid membrane	4.0	1.00
Objective Question				
82	82	The reactions of the Krebs cycle A1 : Take place in the cytosol of eukaryotic cells A2 : Generate ATP directly by substrate phosphorylation A3 : Are important for the metabolism of carbohydrates but not other molecules A4 Both A and B	4.0	1.00

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Objective Question				
83	83	DDT has been banned as a pesticide worldwide because of its A1 : High toxicity of mammals A2 : High degree of persistent in the environment A3 : Low toxicity to insects A4 : High solubility in water .	4.0	1.00
Objective Question				
84	84	Nutrients and fertilizers can be washed into rivers/water bodies by the rain. This can cause A1 : Bioaccumulation A2 : Eutrophication A3 : Biodegradation A4 : Spontaneous combustion	4.0	1.00
Objective Question				
85	85	Vermicomposting is the result A1 : Earthworms A2 : Actinomycetes A3 : Both (a) and (b) A4 : None of these	4.0	1.00
Objective Question				
86	86	Which method can be employed for disposal of human anatomical and animal wastes? A1 : Secure Landfills A2 : Disinfection and landfills A3 : Incineration	4.0	1.00

		A4 : None of these		
Objective Question				
87	87	Biodiesel is produced from oils or fats using A1 : Fermentation A2 : Transesterification A3 : Distillation A4 : None of these	4.0	1.00
Objective Question				
88	88	In fluid mosaic model of plasma membrane A1 : Upper layer is non polar and hydrophilic A2 : Polar layer is hydrophobic A3 : Phospholipid from bimolecular layer in middle part A4 : Proteins form middle layer	4.0	1.00
Objective Question				
89	89	Select the correct matched pair from the following A1 : Smooth ER – synthesis of lipids A2 : Rough ER - synthesis of glycogen A3 : Rough ER – Oxidation of fatty acids A4 : Sooth ER – Oxidation of phospholipids	4.0	1.00
Objective Question				
90	90	A major functional difference between the succinyl CoA-synthetase of plant and animal cell mitochondria is that it A1 : Does not produce ATP in plant cell. A2 : Does not produce GTP in plant cell.	4.0	1.00

		A3 : Produces ATP in plants and GTP in animals. A4 : Produces GTP in plants and ATP in animals.		
Objective Question				
91	91	Blot clot is mainly due to A1 : Fibrin + Corpuscles A2 : Haparin + Corpuscles A3 : Plasma + Thrombocytes A4 : Plasma + RBC	4.0	1.00
Objective Question				
92	92	Intracellular junctions which helps in exchange of substance is A1 : Tight junction A2 : Gap junction A3 : Interdigitation A4 : Desmosomes	4.0	1.00
Objective Question				
93	93	Plasma membrane of a cell is A1 : Permeable A2 : Selectively permeable A3 : Semi-permeable A4 : Impermeable	4.0	1.00
Objective Question				
94	94	Mitochondrial DNA is A1 : Naked A2 Circular	4.0	1.00

		: A3 : Double stranded A4 : None of these		
Objective Question				
95	95	Aerobic respiration is performed by A1 : Mitochondria A2 : Chloroplast A3 : Ribosomes A4 : Golgi body	4.0	1.00
Objective Question				
96	96	Which of the statement regarding mitochondrial membrane is not correct? A1 : The outer membrane resembles a sieve A2 : The outer membrane is permeable to all kinds of molecule A3 : The enzyme of electron transfer chain is embedded in outer membrane A4 : The inner membrane is highly convoluted and has infoldings.	4.0	1.00
Objective Question				
97	97	Nitrifying bacteria A1 : Oxidise ammonia to nitrate A2 : Convert free nitrogen to nitrogen compound A3 : Covert protein to ammonia A4 : Reduce nitrate to free nitrogen	4.0	1.00
Objective Question				
98	98	Conversion of pyruvic acid into ethyl alcohol is mediated by A1 : Phosphotase	4.0	1.00

		A2 : Dehydrogenase A3 : Decarboxylase and dehydrogenase A4 : Catalase		
Objective Question				
99	99	Respiration occurs in A1 : All living cells both in light and dark A2 : Non green cells only in light A3 : Non green cells both in light and dark A4 : All living cells in light only	4.0	1.00
Objective Question				
100	100	Energy releasing process in which substrate is oxidised without an external electron acceptor is known as A1 : Aerobic respiration A2 : Glycolysis A3 : Fermentation A4 : Photorespiration	4.0	1.00