

National Employability Assessment Test and Industry Readiness Program

for Diploma Engineers and Professionals | Winter – 2022

Discipline: Mechanical Engineering

Computer Based PAN India Examination held on 18.03.2023

Questions & Answers

(Published dtd. 29.03.2023)

PAPER STRUCTURE

Question Nos.	Sections & Topics		Marks
1 to 40	Section I : General Aptitude	<ul style="list-style-type: none">Quantitative AptitudeLogical ReasoningData InterpretationEnglish Communication	40
41 to 60	Section II : Basic Concepts	<ul style="list-style-type: none">General PhysicsGeneral ChemistryMechanicsEngineering Drawing	20
61 to 100	Section III : Technical Aptitude	<ul style="list-style-type: none">Mechanical Engineering	40
TOTAL			100

NOTE:

- Exam Duration: 3 Hours
- Total 100 no. of Questions of 1 Mark each with Negative Marking of ¼ Mark for every wrong answer
- Questions (Section wise) and respective Answer Options shuffled at Candidates' terminal

Question No. 1	In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?			
Answer Options	A)	B)	C)	D)
	7	6.75	6.25	6.5
Right Option	C			

Question No. 2	Today is Monday. After 61 days, it will be:			
Answer Options	A)	B)	C)	D)
	Thursday	Saturday	Tuesday	Wednesday
Right Option	B			

Question No. 3	3 pumps working 8 hours a day, can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?			
Answer Options	A)	B)	C)	D)
	9	10	12	11
Right Option	C			

Question No. 4	A man standing at a point P is watching the top of a tower, which makes an angle of elevation of 30° with the man's eye. The man walks some distance towards the tower to watch its top and the angle of the elevation becomes 60° . What is the distance between the base of the tower and the point P?			
Answer Options	A)	B)	C)	D)
	Data inadequate	8 units	12 units	43 units
Right Option	A			

Question No. 5	Find the largest 4-digit number, which gives the remainder 7 and 13 when divided by 11 and 17?			
Answer Options	A)	B)	C)	D)
	9900	9907	9807	None of these
Right Option	B			

Question No. 6	In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?			
Answer Options	A)	B)	C)	D)
	30%	100%	250%	70%
Right Option	D			

Question No. 7	A candidate who gets 20% marks fails by 10 marks but another candidate who gets 42% marks gets 12% more than the passing marks. Find the maximum marks.			
Answer Options	A)	B)	C)	D)
	75	68	37	100
Right Option	D			

Question No. 8	A sum of Rs. 12,500 amounts to Rs. 15,500 in 4 years at the rate of simple interest. What is the rate of interest?			
Answer Options	A)	B)	C)	D)
	6%	4%	5%	3%
Right Option	A			

Question No. 9	A train travelling at 48 kmph completely crosses another train having half its length and travelling in opposite direction at 42 kmph, in 12 seconds. It also passes a railway platform in 45 seconds. The length of the platform is			
Answer Options	A)	B)	C)	D)
	560 m	450 m	400 m	600 m
Right Option	C			

Question No. 10	In a shower, 5 cm of rain falls. The volume of water that falls on 1.5 hectares of ground is:			
Answer Options	A)	B)	C)	D)
	750 cu. m	75 cu. m	75000 cu. m	7500 cu. m
Right Option	A			

Question No. 11	A good way to figure out the relationship in a given question is to make up a sentence that describes the relationship between the first two words. Then, try to use the same sentence to find out which of the answer choices completes the same relationship with the third word. Cup is to coffee as bowl is to			
Answer Options	A)	B)	C)	D)
	Food	Spoon	Soup	Dish
Right Option	C			

Question No. 12	A student got twice as many sums wrong as he got right. If he attempted 48 sums in all, how many did he solve correctly?			
Answer Options	A)	B)	C)	D)
	12	16	18	24
Right Option	B			

Question No. 13	Choose the statement that is best supported by the information given in the question passage. In the 1966 Supreme Court decision <i>Miranda v. Arizona</i> , the court held that before the police can obtain statements from a person subjected to an interrogation, the person must be given a Miranda warning. This warning means that a person must be told that he or she has the right to remain silent during the police interrogation. Violation of this right means that any statement that the person makes is not admissible in a court hearing. This paragraph best supports the statement that			
Answer Options	A)	B)	C)	D)
	The police may no longer interrogate persons suspected of a crime unless a lawyer is present.	A Miranda warning must be given before a police interrogation can begin.	Police who do not warn persons of their Miranda rights are guilty of a crime.	The 1966 Supreme Court decision in <i>Miranda</i> should be reversed
Right Option	B			

Question No. 14	Here are some words translated from an artificial language. godabim means kidney stones romzbim means kidney beans romzbako means wax beans Which word could mean "wax statue"?			
Answer Options	A)	B)	C)	D)
	Godaromz	Lazbim	Romzpeo	Wasibako
Right Option	D			

Question No. 15	If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?			
Answer Options	A)	B)	C)	D)
	Sister	Nephew	Cannot be determined	Brother
Right Option	C			

Question No. 16	Choose the word which is different from the rest.			
Answer Options	A)	B)	C)	D)
	Mandible	Sternum	Ulna	Pinna
Right Option	D			

Question No. 17	<p>In each question below is given a statement followed by three courses of action numbered I, II and III. You have to assume everything in the statement to be true, then decide which of the three given suggested courses of action logically follows for pursuing.</p> <p>Statement: Besides looks and appearances, it is also important to develop oneself from within.</p> <p>Courses of Action:</p> <p>I. One should not pay attention to fashion. II. One should pay attention to fashion. III. Books on self-development should be encouraged.</p>			
Answer Options	A)	B)	C)	D)
	Only II follows	Only III follows	Only I and III follow	Only I follows
Right Option	B			

Question No. 18	Arrange the words given below in a meaningful sequence. 1. Index 2. Contents 3. Title 4. Chapters 5. Introduction			
Answer Options	A)	B)	C)	D)
	3, 2, 5, 1, 4	3, 2, 5, 4, 1	2, 3, 4, 5, 1	5, 1, 4, 2, 3
Right Option	B			

Question No. 19	3, 10, 101, ?			
Answer Options	A)	B)	C)	D)
	10202	10201	10101	11012
Right Option	A			

Question No. 20	A disease always has			
Answer Options	A)	B)	C)	D)
	Cause	Cure	Patient	Germ
Right Option	A			

Question No. 21	<p>Question nos. 21 to 25:</p> <p>Splash.Inc produces fabric sold in rolls of 35 metres (units) for the wholesale textile market. The production manager at Splash.Inc has produced the following table to illustrate how the unit cost of their bestselling product falls as production increases. Total costs are derived by adding fixed costs and variable costs; the fixed costs used in the calculations total \$3m.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Scenario</th> <th>Total cost \$</th> <th>Unit cost \$</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>\$4,500,000</td> <td>\$18.00</td> </tr> <tr> <td>B</td> <td>\$5,400,000</td> <td>\$17.46</td> </tr> <tr> <td>C</td> <td>\$6,477,000</td> <td>\$16.94</td> </tr> <tr> <td>D</td> <td>\$7,776,000</td> <td>\$16.43</td> </tr> </tbody> </table> <p>How much are the variable costs in scenario B?</p>				Scenario	Total cost \$	Unit cost \$	A	\$4,500,000	\$18.00	B	\$5,400,000	\$17.46	C	\$6,477,000	\$16.94	D	\$7,776,000	\$16.43
Scenario	Total cost \$	Unit cost \$																	
A	\$4,500,000	\$18.00																	
B	\$5,400,000	\$17.46																	
C	\$6,477,000	\$16.94																	
D	\$7,776,000	\$16.43																	
Answer Options	A)	B)	C)	D)															
	\$2,400,000	\$1,500,000	\$750,000	Cannot tell															
Right Option	A																		

Question No. 22	How many units are produced in scenario A?			
Answer Options	A)	B)	C)	D)
	2,500,000	250,000	1,250,000	225,000
Right Option	B			

Question No. 23	How many more units are produced in scenario C compared to scenario A?			
Answer Options	A)	B)	C)	D)
	131,000	132,349	139,274	136,998
Right Option	B			

Question No. 24	By what percentage did the total unit cost in scenario A increase in order to realize the unit cost reduction between scenarios A and B?			
Answer Options	A)	B)	C)	D)
	117%	120%	121%	119%
Right Option	B			

Question No. 25	Which suggested answer would provide the best estimate of the unit cost if variable costs were \$750,000?			
Answer Options	A)	B)	C)	D)
	$\$18 \times 97\% = \text{new unit price}$	$\text{New unit cost} \times 97\% = \18	$\$28 \times 103\% = \text{new unit price}$	$\text{New unit cost} \times 103\% = \18
Right Option	B			

Question No. 26	Question nos. 26 to 30:					
	This following table is related to profit and loss and some values are missing. All the discounts are on the M.P. and the profit are on C.P.					
	Article	Cost Price (Rs.)	Profit (%)	Marked Price (Rs.)	Discount (%)	Selling Price (Rs.)
	Jeans	2280	---	2720	---	---
	Shirt	---	30%	---	---	---
	T-shirt	---	---	2875	14%	---
	Suit	2200	---	---	---	2640
	Saree	---	20%	3800	---	---
	If the discount % and profit % of the Suit is same. Find out the M.P. of Suit?					
Answer Options	A)		B)		C)	
	Rs. 2800		Rs. 2200		Rs. 3300	
Right Option	C					

Question No. 27	If the M.P. of jeans is Rs. 140 more than the C.P. of Shirt and the difference between M.P. and S.P. of Shirt is Rs. 780. Find the discount % of Shirt?			
Answer Options	A)		B)	
	17.56%		18.86%	
Answer Options	C)		D)	
	19.76%		20.46%	
Right Option	B			

Question No. 28	C.P. of Suit is how much percentage less than the M.P. of Jeans?			
Answer Options	A)		B)	
	19.10%		18.60%	
Answer Options	C)		D)	
	21.20%		18.40%	
Right Option	A			

Question No. 29	The ratio of discount % and profit % of the T-shirt is 7:5. Find CP. of T-shirt? (approximately)			
Answer Options	A)		B)	
	Rs. 2552		Rs. 2248	
Answer Options	C)		D)	
	Rs. 2398		Rs. 2285	
Right Option	B			

Question No. 30	If the ratio of the C.P. of the Jeans and Saree is 4:5, find out the discount % of Saree?			
Answer Options	A)	B)	C)	D)
	15%	10%	12%	20%
Right Option	B			

Question No. 31	<p>Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.</p> <p>A: Only natural dyes are used in Kalamkari and it involves several steps. B: There are two distinctive styles of Kalamkari in India. C: They are the Sri kalahasti style and the Machlipatnam style. D: Kalamkari is a type of hand-painted or block-printed cotton textile, produced in the Indian States of Andhra Pradesh and Telangana.</p>			
Answer Options	A)	B)	C)	D)
	DCBA	CBDA	ACBD	DABC
Right Option	D			

Question No. 32	What is the antonym of MOROSE			
Answer Options	A)	B)	C)	D)
	Overawed	Cherubic	Cheerful	Agitated
Right Option	C			

Question No. 33	What is the synonym of ERRONEOUS			
Answer Options	A)	B)	C)	D)
	Erased	Wrong	Weak	Enormous
Right Option	B			

Question No. 34	A frustrated old man, Bandi Thakur was never tired of (1)_____ the exploits of his ancestors, with a little (2) _____ he would lapse into a reminiscent mood, push back the loosely tied turban from his close-cropped grizzled hair and start a familiar story, improvising (3)_____ details which, to the mirth of his audience, always kept changing with every recounting.			
Answer Options	A)	B)	C)	D)
	(1) extolling, (2) advising, (3) rational	(1) extolling, (2) prompting, (3) fanciful	(1) criticizing, (2) prompting, (3) sincere	(1) invoking, (2) arguing, (3) fanciful
Right Option	B			

Question No. 35	Even my goalies and the policemen, who have arrested me or (1) _____ me as a prisoner from place to place have been kind to me, and much of the (2) _____ of conflict and the sting of goal-life has been (3) _____ because of this human touch.			
Answer Options	A)	B)	C)	D)
	(1) escorted, (2) affinity, (3) toned down	(1) abandoned, (2) bitterness, (3) pumped up	(1) safeguarded, (2) kindness, (3) egged on	(1) escorted, (2) bitterness, (3) toned down
Right Option	D			

Question No. 36	Attracted by the serenity of the evening, a friend and I lately went to one of the public walks near the city. Here we (1) _____ together for some time. Then my friend, stopping suddenly, (2) _____ by the elbow, and led me out of the public walk. I could perceive by the quickness of this (3) _____, and by his frequently looking behind, that he was attempting to avoid somebody who followed.			
Answer Options	A)	B)	C)	D)
	(1) sauntered, (2) trapped, (3) pace	(1) vamoosed, (2) relinquished, (3) hands	(1) sauntered, (2) caught, (3) gallop	(1) dance, (2) caught, (3) gallop
Right Option	C			

Question No. 37	It was not surprising that my own countrymen should treat me so, for I had gained a (1) _____ of notoriety and popularity among them. Even for Englishmen I was individual and not merely one of the (2) _____ and, I imagine the fact that I had received my education in England, brought me (3) _____			
Answer Options	A)	B)	C)	D)
	(1) measure, (2) dispersal, (3) at a remote position	(1) weight, (2) collection, (3) in juxtaposition with them	(1) ration, (2) mass, (3) nearer to them	(1) measure, (2) mass, (3) nearer to them
Right Option	D			

Question No. 38	Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order. A: A man on a bike had to ride on the pavement. B: When he tried to plunge onto the road, a car hit him. C: As the bus inched through the evening life, the traffic grew. D: There was no space on the road any more.			
Answer Options	A)	B)	C)	D)
	CDAB	CBAD	ADBC	DBCA
Right Option	A			

Question No. 39	Select the Antonym of OFFHAND			
Answer Options	A)	B)	C)	D)
	Appropriate	Premeditated	Universal	Accurate
Right Option	B			

Question No. 40	What is the synonym of SEIZE			
Answer Options	A)	B)	C)	D)
	Grasp	Length	Start	Release
Right Option	A			

Question No. 41	A pond of clear water appears less deep than it really is. This is due to			
Answer Options	A)	B)	C)	D)
	Dispersion	Refraction	The transparency of water	Reflection
Right Option	B			

Question No. 42	Friction can be reduced by changing from			
Answer Options	A)	B)	C)	D)
	Potential energy to kinetic energy	Sliding to rolling	Dynamic to static	Rolling to sliding
Right Option	B			

Question No. 43	Identify the vector quantity from the following			
Answer Options	A)	B)	C)	D)
	Angular momentum	Heat	Time	Work
Right Option	A			

Question No. 44	Intensity of sound at a point is _____ its distance from the source.			
Answer Options	A)	B)	C)	D)
	Directly proportional to square of	Inversely proportional to	Directly proportional to	Inversely proportional to square of
Right Option	D			

Question No. 45	Mercury is commonly used as a thermometric fluid rather than water because			
Answer Options	A)	B)	C)	D)
	Specific heat of mercury is more than water	Density of mercury is more than the water	Mercury has greater visibility than water	Specific heat of mercury is less than water
Right Option	C			

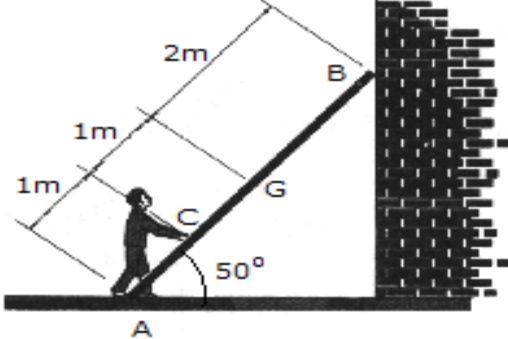
Question No. 46	Lime is sometimes applied to soil in order to			
Answer Options	A)	B)	C)	D)
	Make the soil more porous	Increase the alkalinity of the soil	Restore nitrates to the soil	Increase the acidity of the soil
Right Option	B			

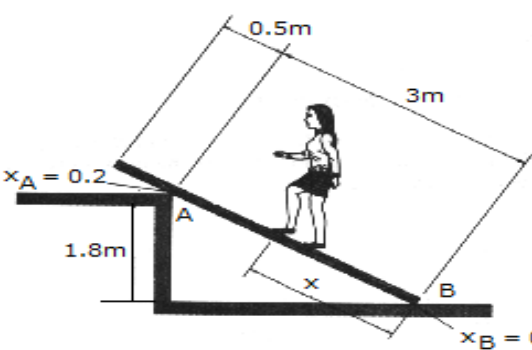
Question No. 47	Photo-oxidation is			
Answer Options	A)	B)	C)	D)
	Photo respiration	Photolysis	Light and oxygen induced breakdown	All of the above
Right Option	D			

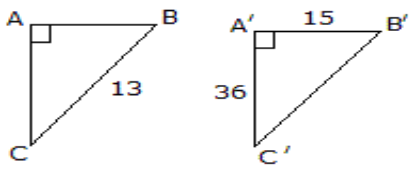
Question No. 48	The exhaled air contains			
Answer Options	A)	B)	C)	D)
	Carbon dioxide only	A mixture of carbon dioxide and nitrogen	A mixture which has more carbon dioxide than oxygen	A mixture of carbon dioxide, nitrogen and oxygen in which nitrogen has the highest percentage
Right Option	D			

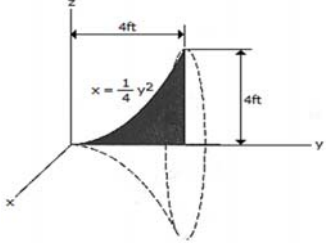
Question No. 49	The ionization energy of hydrogen atom in the ground state is x KJ. The energy required for an electron to jump from 2nd orbit to 3rd orbit is			
Answer Options	A)	B)	C)	D)
	$5x$	$7.2x$	$x/6$	$5x/36$
Right Option	D			

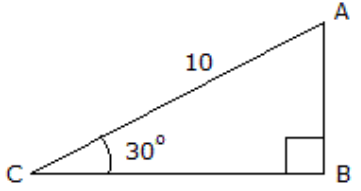
Question No. 50	The oldest rocks in the earth's crust were once molten, and came from deep inside the earth. The molten rock, called magma, spewed out in volcanic eruptions during the earth's early life and solidified into hard rock's called			
Answer Options	A)	B)	C)	D)
	Sedimentary rocks	Basalt	Granite	Igneous rocks
Right Option	D			

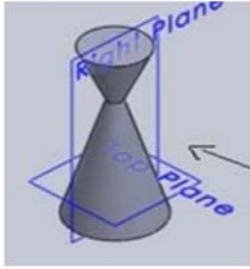
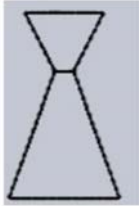
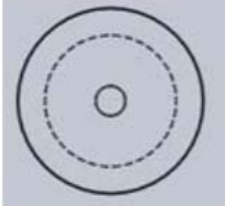
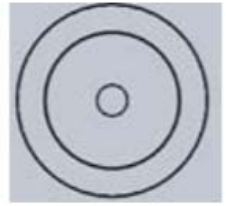
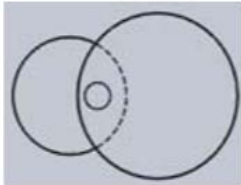
<p>Question No. 51</p>	 <p>A 17-kg ladder has a center of mass at G. If the coefficients of friction at A and B are $\mu_A = 0.3$ and $\mu_B = 0.2$, respectively, determine the smallest horizontal force that the man must exert of the ladder at point C in order to push the ladder forward.</p>			
<p>Answer Options</p>	<p>A) $F = 204 \text{ N}$</p>	<p>B) $F = 166.8 \text{ N}$</p>	<p>C) $F = 120.2 \text{ N}$</p>	<p>D) $F = 288 \text{ N}$</p>
<p>Right Option</p>	<p>A</p>			

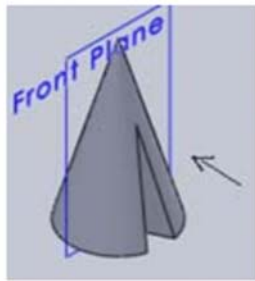

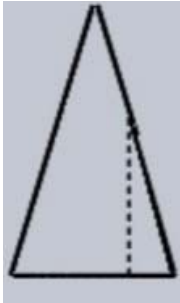

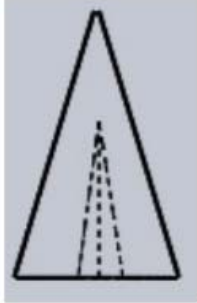
<p>Question No. 52</p>	 <p>A uniform beam has a mass of 18 kg and rests on two surfaces at points A and B. Determine the maximum distance x to which the girl can slowly walk up the beam before it begins to slip. The girl has a mass of 50 kg and walks up the beam with a constant velocity.</p>			
<p>Answer Options</p>	<p>A) $x = 0.678 \text{ m}$</p>	<p>B) $x = 0.712 \text{ m}$</p>	<p>C) $x = 0.508 \text{ m}$</p>	<p>D) $x = 1.005 \text{ m}$</p>
<p>Right Option</p>	<p>D</p>			

Question No. 53	 <p>Determine the length of side AB if the angle ABC is similar to the angle A'B'C':</p>			
Answer Options	A)	B)	C)	D)
	AB = 4	AB = 5	AB = 5.42	AB = 3
Right Option	B			

Question No. 54	 <p>Locate the center of gravity of the homogeneous "bell-shaped" volume formed by revolving the shaded area about the y axis.</p>			
Answer Options	A)	B)	C)	D)
	$\bar{y} = 3.33$ ft	$\bar{y} = 2.80$ ft	$\bar{y} = 3.20$ ft	$\bar{y} = 3.00$ ft
Right Option	A			

Question No. 55	 <p>Using the basic trigonometric functions, determine the length of side AB of the right triangle.</p>			
Answer Options	A)	B)	C)	D)
	h = 8.66	h = 11.55	h = 5.77	h = 5
Right Option	D			

<p>Question No. 56</p>	<p>Identify the top view for the below-given cone.</p> 			
<p>Answer Options</p>	<p>A)</p> 	<p>B)</p> 	<p>C)</p> 	<p>D)</p> 
<p>Right Option</p>	<p>C</p>			

<p>Question No. 57</p>	<p>Identify the front view of the following cone.</p> 			
<p>Answer Options</p>	<p>A)</p> 	<p>B)</p> 	<p>C)</p> 	<p>D)</p> 
<p>Right Option</p>	<p>A</p>			

Question No. 58	Curve of any shape can be drawn in perspective by enclosing it in a _____			
Answer Options	A)	B)	C)	D)
	Rectangle	Square	Cube	Cylinder
Right Option	A			

Question No. 59	A prism and cone got intersected at 90 degrees the line of intersection will be _____ and parallel to axis of _____			
Answer Options	A)	B)	C)	D)
	curve, cone	curve, prism	straight line, prism	straight line, cone
Right Option	B			

Question No. 60	The plane surfaces intersect in a _____ the line of intersection between two curved surfaces is _____ and between a plane surface and curved surfaces is a _____			
Answer Options	A)	B)	C)	D)
	curve, curve, curve	straight line, curve, straight line	straight line, curve, curve	straight line, straight line, curve
Right Option	C			

Question No. 61	Gas turbine as compared to steam turbine			
Answer Options	A)	B)	C)	D)
	Requires less space for installation	Has compressor and combustion chamber	Has less efficiency	All of these
Right Answer	D			

Question No. 62	High air-fuel ratio in gas turbines			
Answer Options	A)	B)	C)	D)
	Do not damage turbine blades	Reduces exhaust temperature	Increases power output	Improves thermal efficiency
Right Answer	B			

Question No. 63	In a jet propulsion			
Answer Options	A)	B)	C)	D)
	The propulsive matter is ejected from within the propelled body	The propulsive matter is caused to flow around the propelled body	Its functioning does not depend upon presence of air	None of the above
Right Answer	B			

Question No. 64	Only rocket engines can be propelled to space because			
Answer Options	A)	B)	C)	D)
	They can generate very high thrust	These engines can work on several fuels	They have high propulsion efficiency	They are not air-breathing engines
Right Answer	D			

Question No. 65	The inlet pressure is always _____ the discharge pressure.			
Answer Options	A)	B)	C)	D)
	Less than	May be equal	Equal to	More than
Right Answer	A			

Question No. 66	The maximum combustion pressure in gas turbine is _____ as compared to I.C. engine.			
Answer Options	A)	B)	C)	D)
	May be less	May not be more	Less	More
Right Answer	C			

Question No. 67	A good refrigerant should have			
Answer Options	A)	B)	C)	D)
	Low C.O.P. and low freezing point	High operating pressures and low freezing point	High specific volume and high latent heat of vaporisation	high latent heat of vaporisation and low freezing point
Right Answer	D			

Question No. 68	A perfect black body is one which			
Answer Options	A)	B)	C)	D)
	Is black in colour	Transmits the heat radiations	Reflects all the heat radiations	Absorbs heat radiations of all wave lengths falling on it
Right Answer	D			

Question No. 69	A refrigeration system			
Answer Options	A)	B)	C)	D)
	Removes heat from a low temperature body and delivers it to a high temperature body	Removes heat from a high temperature body and delivers it to a low temperature body	Rejects energy to a low temperature body	None of the above
Right Answer	A			

Question No. 70	During a refrigeration cycle, heat is rejected by the refrigerant in a			
Answer Options	A)	B)	C)	D)
	Evaporator	Compressor	Condenser	Expansion Valve
Right Answer	C			

Question No. 71	Free convection flow depends on			
Answer Options	A)	B)	C)	D)
	Density	Coefficient of viscosity	gravitational force	All of these
Right Answer	D			

Question No. 72	If a gas is to be liquified, its temperature must be			
Answer Options	A)	B)	C)	D)
	Increased to a value above its critical temperature	Reduced to a value below its critical temperature	Equal to critical temperature	None of the above
Right Answer	C			

Question No. 73	In a refrigerating machine, heat rejected is _____ heat absorbed.			
Answer Options	A)	B)	C)	D)
	May be equal to	Equal to	Less than	Greater than
Right Answer	D			

Question No. 74	The amount of radiation mainly depends upon the			
Answer Options	A)	B)	C)	D)
	Nature of the body	Temperature of the body	Type of surface of the body	All of these
Right Answer	D			

Question No. 75	The conditioned air supplied to the room must have the capacity to take up			
Answer Options	A)	B)	C)	D)
	Room sensible heat load only	Room latent heat load only	Both room sensible heat and latent heat loads	None of the above
Right Answer	C			

Question No. 76	The critical pressure of a liquid is the pressure			
Answer Options	A)	B)	C)	D)
	Above which a liquid will remain a liquid	Below which a liquid will always be in vapour form	Above which a liquid will always convert into a vapour	Above which a liquid will explode
Right Answer	A			

Question No. 77	The formation of frost on cooling coils in a refrigerator			
Answer Options	A)	B)	C)	D)
	Increases power consumption	Reduces power consumption	Increases heat transfer	Improves C.O.P. of the system
Right Answer	A			

Question No. 78	The heat transfer takes place according to			
Answer Options	A)	B)	C)	D)
	Kirchhoff's law	First law of thermodynamics	Second law of thermodynamics	Zeroth law of thermodynamics
Right Answer	C			

Question No. 79	The minimum temperature to which water can be cooled in a cooling tower is			
Answer Options	A)	B)	C)	D)
	Wet bulb temperature of air	Dew point temperature of air	Dry bulb temperature of air	Ambient air temperature
Right Answer	A			

Question No. 80	The process, generally used in winter air-conditioning to warm and humidity the air, is called			
Answer Options	A)	B)	C)	D)
	Dehumidification	Heating and Humidification	Humidification	Cooling and Dehumidification
Right Answer	B			

Question No. 81	Which of the following refrigerant has the maximum ozone depletion potential in the stratosphere?			
Answer Options	A)	B)	C)	D)
	Flourine	Carbon dioxide	Sulphur dioxide	Ammonia
Right Answer	A			

Question No. 82	Which of the following statement is wrong?			
Answer Options	A)	B)	C)	D)
	The amount of heat flow through a body is dependent upon the material of the body.	The heat transfer in liquid and gases takes place according to convection.	Logarithmic mean temperature difference is not equal to the arithmetic mean temperature difference.	The thermal conductivity of solid metals increases with rise in temperature.
Right Answer	D			

Question No. 83	Cast iron is a			
Answer Options	A)	B)	C)	D)
	Malleable Material	Brittle Material	Ductile Material	Tough Material
Right Answer	B			

Question No. 84	Shock resisting steels should have			
Answer Options	A)	B)	C)	D)
	Toughness	Low hardness	Low wear resistance	Low tensile strength
Right Answer	A			

Question No. 85	The hardness is the property of a material due to which it			
Answer Options	A)	B)	C)	D)
	Can be drawn into wires	Can be rolled or hammered into thin sheets	Breaks with little permanent distortion	Can cut another metal
Right Answer	D			

Question No. 86	A cycle consisting of one constant pressure, one constant volume and two isentropic processes is known as			
Answer Options	A)	B)	C)	D)
	Stirling cycle	Carnot cycle	Otto cycle	Diesel cycle
Right Answer	D			

Question No. 87	An adiabatic process is one in which			
Answer Options	A)	B)	C)	D)
	No heat enters or leaves the gas	The temperature of the gas changes	The change in internal energy is equal to the mechanical workdone	All of the above
Right Answer	D			

Question No. 88	The efficiency and work ratio of a simple gas turbine cycle are			
Answer Options	A)	B)	C)	D)
	Very low	Low	Very high	High
Right Answer	A			

Question No. 89	Work-done in a free expansion process is			
Answer Options	A)	B)	C)	D)
	Positive	Zero	Minimum	Maximum
Right Answer	B			

Question No. 90	In a reciprocating air compressor, the compression work per kg of air			
Answer Options	A)	B)	C)	D)
	Increases as clearance volume increases	Increases as clearance volume decreases	Decreases as clearance volume increases	Is independent of clearance volume
Right Answer	D			

Question No. 91	The critical radius is the insulation radius at which the resistance to heat flow is			
Answer Options	A)	B)	C)	D)
	Maximum	Minimum	Zero	None of these
Right Answer	B			

Question No. 92	The curved lines on a psychrometric chart indicates			
Answer Options	A)	B)	C)	D)
	Dry bulb temperature	Relative humidity	Wet bulb temperature	Dew point temperature
Right Answer	B			

Question No. 93	Malleable cast iron is produced			
Answer Options	A)	B)	C)	D)
	By adding magnesium to molten cast iron	By quick cooling of molten cast iron	From white cast iron by annealing process	None of these
Right Answer	C			

Question No. 94	Smelting is the process of			
Answer Options	A)	B)	C)	D)
	Removing the impurities like clay, sand etc. from the iron ore by washing with water	Expelling moisture, carbon dioxide, sulphur and arsenic from the iron ore by heating in shallow kilns	Reducing the ore with carbon in the presence of a flux	All of the above
Right Answer	C			

Question No. 95	The ability of a material to absorb energy in the plastic range is called			
Answer Options	A)	B)	C)	D)
	Creep	Resilience	Toughness	Fatigue Strength
Right Answer	B			

Question No. 96	An isothermal process is governed by			
Answer Options	A)	B)	C)	D)
	Boyle's law	Gay-Lussac law	Avogadro's law	Charles' law
Right Answer	A			

Question No. 97	The behaviour of a perfect gas, undergoing any change in the variables which control physical properties, is governed by			
Answer Options	A)	B)	C)	D)
	Boyle's law	Charles' law	Gay-Lussac law	All of these
Right Answer	D			

Question No. 98	The pressure exerted by an ideal gas is _____ of the kinetic energy of all the molecules contained in a unit volume of gas.			
Answer Options	A)	B)	C)	D)
	One-half	One-third	Two-third	Three-fourth
Right Answer	C			

Question No. 99	The processes occurring in open system which permit the transfer of mass to and from the system, are known as			
Answer Options	A)	B)	C)	D)
	Flow processes	Non-flow processes	Adiabatic processes	None of these
Right Answer	A			

Question No. 100	When coal is strongly heated continuously for 42 to 48 hours in the absence of air in a closed vessel, the process is known as _____ of fuel.			
Answer Options	A)	B)	C)	D)
	May be Atomisation	Atomisation	Carbonisation	May be Carbonisation
Right Answer	C			