

CII – iPATE 1.0 (2020)

Computer Based PAN India Examination

Category: GRADUATE ENGINEER (ENTRY LEVEL)

Engineering Discipline: PRODUCTION ENGINEERING

Questions & Answers

(Reviewed, Revised & Published dtd. 20.01.2021)

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	Neha goes for a walk between 4 am and 5 am. After coming back, she found that the hour hand and the minute hand of her watch had exchanged their positions. How much time(approx.) did she spend on her walk?			
Answer Options	A)	B)	C)	D)
	55 min	55:38 min	55:54 min	55:46 min
Right Answer	B			

Question No. 2	4 red, 6 green and 5 white flowers are in a bag. 3 flowers are taken together. What is the probability of getting 1 white and 2 green flowers?			
Answer Options	A)	B)	C)	D)
	1/5	15/91	3/91	3/11
Right Answer	B			

Question No. 3	Tony, Monu and James completed a work together in 36 days and received a total payment of Rs. 54000. Tony took half of the total money, Monu took one third and James took remaining. In how many days, Tony and James would have finished the work if Monu was not working?			
Answer Options	A)	B)	C)	D)
	72 days	54 days	96 days	64 days
Right Answer	B			

Question No. 4	A shopkeeper purchased 15 kg of variety A rice at Rs. X per kg and 10 kg of variety B rice at Rs. (X + 5) per kg. The shopkeeper sold the whole quantity of variety A rice at 10% profit and that of variety B rice at 20% profit. The total selling price of variety A rice was Rs. 30 more than that of variety B rice. Had the two varieties been mixed and sold at an overall profit of 20%, what would have been the selling price (per kg)?			
Answer Options	A)	B)	C)	D)
	Rs. 26.40	Rs. 23.20	Rs. 24.20	Rs. 25.00
Right Answer	A			

Question No. 5	A club has 256 members of whom 144 can play football, 123 can play tennis, and 132 can play cricket. Moreover, 58 members can play both football and tennis, 25 can play both cricket and tennis, while 63 can play both football and cricket. If every member can play at least one game, then the number of members who can play only tennis is			
Answer Options	A)	B)	C)	D)
	32	43	38	45
Right Answer	B			

Question No. 6	Fill up the following series: 5, 25, 7, _____, 9, 19			
Answer Options	A)	B)	C)	D)
	23	22	25	32
Right Answer	B			

Question No. 7	<p>The question is followed by three statements I, II, and III. Read the question and the statements carefully and choose your answer according to which set of the statement(s) is/are sufficient to answer the question.</p> <p>What is the area of the rectangle?</p> <p>I. The ratio of length to breadth of the rectangle is 35 : 12. II. The perimeter of the rectangle is 188 cm. III. The length of diagonal of the rectangle is 74 cm</p>			
Answer Options	A)	B)	C)	D)
	I and II only	I and III only	(I and II) or (II and III)	Any two of the three
Right Answer	D			

Question No. 8	<p>The question below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and give answer:</p> <p>What is the sum of the age of Ram and Mohan?</p> <p>Statement I : The age of Ram is 6 years more than the age of Mohan. Statement II : 40% of the age of Mohan is equal to 30% of the age of Ram. Statement III : The ratio between half of the age of Ram and one third of the age of Mohan is 2 : 1.</p>			
Answer Options	A)	B)	C)	D)
	Either statement III alone or statements I and II together are sufficient.	Only statement III is sufficient	Only statement I and II are sufficient	Only statement I, II, and III are sufficient
Right Answer	C			

Question No. 9	<p>Mohan is the Son of Arun's Father's sister. Prakash is the son of Reva, who is the mother of Vikas and Grandmother of Arun. Pranab is the father of Neela and the grandfather of Mohan. Reva is the wife of Pranab. How is the wife of Vikas related to the neela?</p>			
Answer Options	A)	B)	C)	D)
	Sister	Sister - In - Law	Niece	None of The Above
Right Answer	B			

Question No. 10	<p>In the following question, there is a certain relationship between two given words on one side of:: and one word is given on another side of:: while another word is to be found from the given alternatives having the same relationship with this word as the words of the given pair bear. Choose the correct alternative.</p> <p>_____ : trail :: grain : grail</p>			
Answer Options	A)	B)	C)	D)
	train	path	wheat	holy
Right Answer	A			

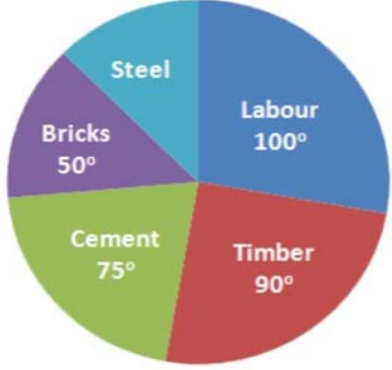
Question No. 11	Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.			
	A: Only natural dyes are used in Kalamkari and it involves several steps. B: There are two distinctive styles of Kalamkari in India. C: They are the Sri kalahasti style and 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.			
Answer Options	A) CBDA	B) DABC	C) ACBD	D) DCBA
Right Answer	B			

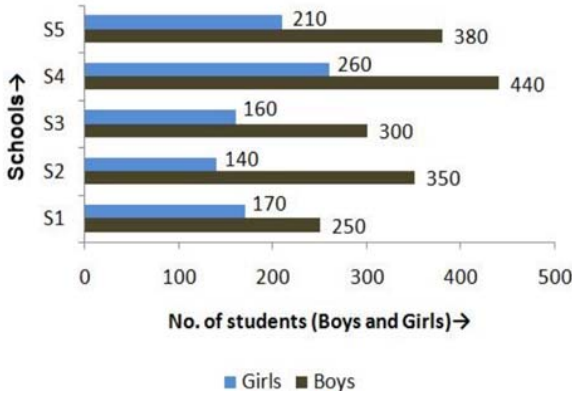
Question No. 12	What is the antonym of MOROSE			
Answer Options	A) overawed	B) agitated	C) cherubic	D) cheerful
Right Answer	D			

Question No. 13	What is the synonym of ERRONEOUS			
Answer Options	A) Enormous	B) Wrong	C) Erased	D) Weak
Right Answer	B			

Question No. 14	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) (1) criticizing, (2) prompting, (3) sincere	B) (1) extolling, (2) advising, (3) rational	C) (1) invoking, (2) arguing, (3) fanciful	D) (1) extolling, (2) prompting, (3) fanciful
Right Answer	D			

Question No. 15	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) (1) safeguarded, (2) kindness, (3) egged on	B) (1) escorted, (2) affinity, (3) toned down	C) (1) abandoned, (2) bitterness, (3) pumped up	D) (1) escorted, (2) bitterness, (3) toned down
Right Answer	D			

<p>Question No. 16</p>	<p>The pie chart shows the total expense of Rs 450000 to construct a house.</p> <p>The cost of steel is</p> 			
<p>Answer Options</p>	<p>A) Rs 55000</p>	<p>B) Rs 56250</p>	<p>C) Rs 60000</p>	<p>D) Rs 62500</p>
<p>Right Answer</p>	<p>B</p>			

<p>Question No. 17</p>	<p>The following bar graph shows the number of boys and girls of class X of 5 different schools.</p> <p>Find the difference between the number of boys and girls of schools S2 and S3 together</p> 			
<p>Answer Options</p>	<p>A) 300</p>	<p>B) 350</p>	<p>C) 400</p>	<p>D) 450</p>
<p>Right Answer</p>	<p>B</p>			

Question No. 18	Study the tables carefully and answer the question that follow: Number of candidates (in lakhs) appearing in an entrance examination from six different states and the ratio of male candidates and female candidates in the same																																	
	The number of male candidates from Andhra Pradesh and Haryana together is what percent of the total number of female candidates from Bihar?																																	
	<table border="1"> <thead> <tr> <th rowspan="2">State</th> <th rowspan="2">Number of candidates</th> <th colspan="2">Ratio</th> </tr> <tr> <th>Male</th> <th>Female</th> </tr> </thead> <tbody> <tr> <td>Andhra Pradesh</td> <td>1.85</td> <td>3</td> <td>2</td> </tr> <tr> <td>Assam</td> <td>2.73</td> <td>7</td> <td>5</td> </tr> <tr> <td>Telangana</td> <td>1.25</td> <td>7</td> <td>3</td> </tr> <tr> <td>Odisha</td> <td>3.14</td> <td>5</td> <td>3</td> </tr> <tr> <td>Haryana</td> <td>1.08</td> <td>4</td> <td>5</td> </tr> <tr> <td>Bihar</td> <td>2.27</td> <td>1</td> <td>3</td> </tr> </tbody> </table>				State	Number of candidates	Ratio		Male	Female	Andhra Pradesh	1.85	3	2	Assam	2.73	7	5	Telangana	1.25	7	3	Odisha	3.14	5	3	Haryana	1.08	4	5	Bihar	2.27	1	3
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Odisha	3.14	5	3																															
Haryana	1.08	4	5																															
Bihar	2.27	1	3																															
Answer Options	A) 98.41%	B) 48.45%	C) 95.49%	D) 93.39%																														
Right Answer	D																																	
NOTE	Question was displayed incorrectly at candidates' terminals. Hence '1' mark has been given to all candidates, who attempted or not.																																	

Question No. 19	Read the following information carefully and answer the given question.			
	i. Rajesh, Raju and Pijush are intelligent. ii. Rajesh, Shib and Hari are hard-working. iii. Shib, Pijush and Hari are honest. iv. Rajesh, Raju and Hari are ambitious.			
	Which of the following person is neither honest nor hard-working but is ambitious?			
Answer Options	A) Shib	B) Pijush	C) Raju	D) Hari
Right Answer	C			


Question No. 20	Read the following information carefully and answer the following question.			
	'A + B' means 'A is the father of B'; 'A - B' means 'A is the wife of B'; 'A x B' means 'A is the brother of B'; 'A ÷ B' means 'A is the daughter of B'.			
	If $P \div R + S + Q$, which of the following is true?			
Answer Options	A) P is the daughter of Q	B) Q is the aunt of P	C) P is the aunt of Q	D) P is the mother of Q
Right Answer	C			

Question No. 21	A management point in a Work Breakdown Structure (WBS) used to consolidate and process work package data and forward the result to the project management is called _____			
Answer Options	A)	B)	C)	D)
	Control account	Chart of the account	Control limit	Account limit
Right Answer	A			
NOTE	Question was displayed incorrectly at candidates' terminals. Hence '1' mark has been given to all candidates, who attempted or not.			

Question No. 22	Various activities of a project are shown on a Bar Chart by _____			
Answer Options	A)	B)	C)	D)
	Vertical line	Horizontal line	Dots	Crosses
Right Answer	B			

Question No. 23	The difference between the time avail to do a job and time required to do the job is known as _____			
Answer Options	A)	B)	C)	D)
	Event	Float	Duration	Constraints
Right Answer	B			

Question No. 24	Gantt Chart is commonly used for _____			
Answer Options	A)	B)	C)	D)
	Routing	Scheduling	Follow up	Inspection and quality control
Right Answer	B			

Question No. 25	The following symbol is used when something in your workplace is 			
Answer Options	A)	B)	C)	D)
	Chemical Weapon	Biohazard	Toxic Substance	Radiation Danger
Right Answer	B			

Question No. 26	What is the leading cause of death on construction sites?			
Answer Options	A)	B)	C)	D)
	Struck by object	Falls	Caught-in or -between	Electrocutions Hazardous Materials
Right Answer	B			

Question No. 27	What violations are most commonly cited by OSHA?			
Answer Options	A)	B)	C)	D)
	Hazard communications	Scaffolding	Fall protection	Respiratory protection
Right Answer	C			

Question No. 28	_____ is best suited to extinguishing oil or flammable liquid fire			
Answer Options	A)	B)	C)	D)
	Soda acid	Vaporizing liquid	Foam	Dry chemical
Right Answer	C			

Question No. 29	Out of the 37 countries, which country still not ratified the second commitment known as the Doha amendment to the Kyoto Protocol?			
Answer Options	A)	B)	C)	D)
	USA	Canada	Norway	Ukraine
Right Answer	A			

Question No. 30	The Ministry also serves as the nodal agency in the country for the which of these organisations?			
Answer Options	A)	B)	C)	D)
	United Nations Environment Programme (UNEP)	South Asia Co-operative Environment Programme (SACEP)	International Centre for Integrated Mountain Development (ICIMOD)	All of the above
Right Answer	D			

Question No. 31	There are many benefits to implementing an EMS. These include a potential for			
Answer Options	A)	B)	C)	D)
	Reduction in waste production	The avoidance in use, and costly disposal of, other hazardous or potentially polluting materials	A planned approach to compliance with regulations and the consequential reduced risk of prosecutions and fines.	All of the above
Right Answer	D			

Question No. 32	Which of the following does not contribute to the development of a manager's standard of ethics?			
Answer Options	A)	B)	C)	D)
	competitor behaviours	society's norms and values	individual life experiences	environmental situations
Right Answer	A			

Question No. 33	Which is the approach to corporate planning?			
Answer Options	A)	B)	C)	D)
	Customers and workers satisfaction	Planning skills	Optimising	All of the above
Right Answer	D			

Question No. 34	Which one of the following is not principle business ethics?			
Answer Options	A)	B)	C)	D)
	Principle of universality	Principle of humanity	Principle of autonomy	Principle of dissatisfaction
Right Answer	D			

Question No. 35	Which of the following is a definition for variable costs?			
Answer Options	A)	B)	C)	D)
	Costs that remain the same whatever the level of output	Costs that contain a fixed and variable element	Costs that vary directly with the number of units produced	Costs that will remain fixed as output increases until the activity reaches a level where the costs have to increase sharply
Right Answer	C			

Question No. 36	Which of the following is a definition of break-even point?			
Answer Options	A)	B)	C)	D)
	The difference between the selling price of a product and the variable costs incurred in producing that product	The fixed plus variable costs of the business	The situation where neither a profit nor a loss is made	The situation where a profit is made
Right Answer	C			

Question No. 37	Which of the following is not a benefit of budgeting?			
Answer Options	A)	B)	C)	D)
	It promotes study, research, and a focus on the future	It is a source of motivation	It will prevent net losses from occurring	It is a mean of coordinating business activities
Right Answer	C			

Question No. 38	What is the obligation of the peaceful settlement of dispute?			
Answer Options	A)	B)	C)	D)
	It is an obligation of result i.e. States are under a strict obligation to resolve the disputes at the earliest	It is an obligation of conduct i.e. States have an obligation to try to resolve the disputes via peaceful mean. That does not entail an obligation to resolve the dispute	It is an intention to act immediately as per norms of International Law and all States have a legal interest to safeguard its application in any dispute	It is an obligation which concerns solely International courts and tribunal.
Right Answer	B			

Question No. 39	What is the primary function of the Law of Tort?			
Answer Options	A)	B)	C)	D)
	Punishment of a wrong motivator	Clarification of the human rights of the parties	Compensating the claimant	Spreading of losses throughout the parties
Right Answer	C			

Question No. 40	FIDIC published a completely new suite of contracts in various coloured books which contain different conditions. What condition is mentioned in Red Book?			
Answer Options	A)	B)	C)	D)
	Conditions of contract for Construction project.	Conditions of contract for EPC/ Turnkey project.	Conditions of contract for Plant & Design.	Conditions of contract for DBO (Design, Build & Operate) project.
Right Answer	A			
NOTE	Question was displayed incorrectly at candidates' terminals. Hence '1' mark has been given to all candidates, who attempted or not.			

Question No. 41	The center of mass of the system consisting of Earth, the Sun, and the planet Mars is:			
Answer Options	A)	B)	C)	D)
	Closer to Earth than to either of the other bodies	Closer to the Sun than to either of the other bodies	Closer to Mars than to either of the other bodies	At the geometric center of the triangle formed by the three bodies
Right Answer	B			

Question No. 42	At the same instant that a 0.50-kg ball is dropped from 25m above Earth, a second ball, with a mass of 0.25 kg, is thrown straight upward from Earth's surface with an initial speed of 15m/s. They move along nearby lines and pass without colliding. At the end of 2 sec the magnitude of the acceleration of the center of mass of the two-ball system is:			
Answer Options	A)	B)	C)	D)
	0.25g	0.50g	0.75g	g
Right Answer	D			

Question No. 43	The rainbow seen after a rain shower is caused by:			
Answer Options	A)	B)	C)	D)
	diffraction	interference	refraction	polarization
Right Answer	C			

Question No. 44	When light travels from medium X to medium Y as shown:			
Answer Options	A)	B)	C)	D)
	both the speed and the frequency decrease	both the speed and the frequency increase	both the speed and the wavelength decrease	both the speed and the wavelength increase
Right Answer	C			
NOTE	Question was displayed incorrectly at candidates' terminals. Hence '1' mark has been given to all candidates, who attempted or not.			

Question No. 45	An object rests on a horizontal frictionless surface. A horizontal force of magnitude F is applied. This force produces an acceleration:			
Answer Options	A)	B)	C)	D)
	only if F is larger than the weight of the object	only while the object suddenly changes from rest to motion	always	only if the inertia of the object decreases
Right Answer	C			

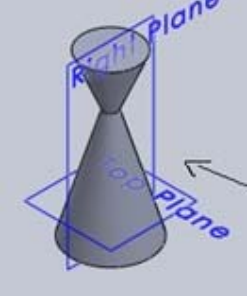

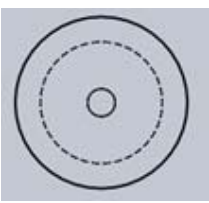
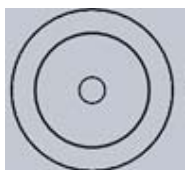
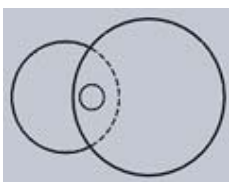
Question No. 46	Which statement is incorrect?			
Answer Options	A)	B)	C)	D)
	All the metals are good conductor of electricity.	All the metals are good conductor of heat	All the metals form positive ions	All the metals form acidic oxides
Right Answer	D			

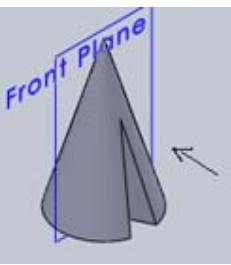
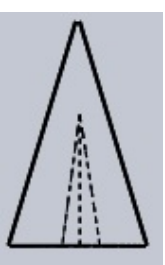
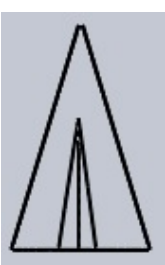

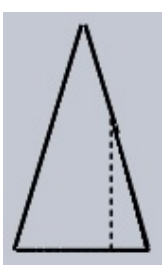
Question No. 47	Based on the first law of thermodynamics, which one of the following is correct?			
Answer Options	A)	B)	C)	D)
	For an isothermal process, $q = +w$	For an isochoric process, $\Delta U = -q$	For an adiabatic process, $\Delta U = -w$	For a cyclic process, $q = -w$
Right Answer	D			

Question No. 48	Among the electrolytes Na_2SO_4 , CaCl_2 , $\text{Al}_2(\text{SO}_4)_3$ and NH_4Cl , the most effective coagulating agent for Sb_2S_3 sol is			
Answer Options	A)	B)	C)	D)
	Na_2SO_4	CaCl_2	$\text{Al}_2(\text{SO}_4)_3$	NH_4Cl
Right Answer	C			

Question No. 49	Of the following which one is classified as polyester polymer?			
Answer Options	A)	B)	C)	D)
	Nylon-66	Terylene	Backelite	Melamine
Right Answer	B			

Question No. 50	In order to increase the volume of a gas by 10%, the pressure of the gas should be			
Answer Options	A)	B)	C)	D)
	increased by 10%	increased by 1%	decreased by 10%	decreased by 1%
Right Answer	C			

<p>Question No. 51</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 Answer</p>	<p>C</p>			

<p>Question No. 52</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 Answer</p>	<p>B</p>			

Question No. 53	Curve of any shape can be drawn in perspective by enclosing it in a _____			
Answer Options	A)	B)	C)	D)
	rectangle	cube	cylinder	square
Right Answer	A			

Question No. 54	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)
	straight line, prism	curve, prism	straight line, cone	curve, cone
Right Answer	B			

Question No. 55	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)
	straight line, curve, curve	straight line, straight line, curve	straight line, curve, straight line	curve, curve, curve
Right Answer	A			

Question No. 56	ASME Stands for?			
Answer Options	A)	B)	C)	D)
	American Society of Mechanical Engineers	American Science of Mechanical Engineers	American Scientists of Mechanical Engineers	American Strength of Mechanical Engineers
Right Answer	A			

Question No. 57	Malleable Metals are that metals			
Answer Options	A)	B)	C)	D)
	which can be Beaten into sheet	which can be Pulled out into wire	which cannot be Beaten into sheet	which cannot be Pulled out into wire
Right Answer	A			

Question No. 58	What is purpose of fly wheel?			
Answer Options	A)	B)	C)	D)
	Flywheel is a device to control the variation in speed during each cycle of an engine.	Fly wheel keep the speed of engine within prescribed limit during each cycle.	Both option A & B	Neither option A nor B
Right Answer	C			

Question No. 59	In fly wheel maximum fluctuation speed is called as			
Answer Options	A)	B)	C)	D)
	The difference between the maximum and minimum speed during a cycle is called as maximum fluctuation speed	The ratio of average and minimum speed during a cycle is called as maximum fluctuation speed	The ratio of maximum and minimum speed during a cycle is called as maximum fluctuation speed	There is no concept of maximum fluctuation, it is only fluctuation.
Right Answer	A			

Question No. 60	Follower during its travel may have one of the following motions:			
Answer Options	A)	B)	C)	D)
	1) Uniform velocity 2) Simple harmonic motion 3) Uniform acceleration and retardation and 4) Cycloidal motion	1) Uniform velocity 2) Simple harmonic motion 3) Uniform acceleration and retardation and	1) Uniform velocity 2) Simple harmonic motion	1) Uniform velocity 2) Uniform acceleration and retardation
Right Answer	A			

Question No. 61	A particle weighing 4 kg moves in a horizontal plan and attached to affixed point on the table by a string 1 metre long. Find the tension in the string, if the particle is making 300 revolution per minute.			
Answer Options	A)	B)	C)	D)
	402.4 Kg	300.7 Kg	500.6 Kg	404.2 Kg
Right Answer	A			

Question No. 62	What is the formula of Tensile strain			
Answer Options	A)	B)	C)	D)
	Tensile strain = Increase in length / Original length	Tensile strain = $l / \text{Original length}$	Tensile strain = Load / Area	Tensile strain = $l / \text{Original Area}$
Right Answer	A			

Question No. 63	A wooden tie is 75 mm wide, 150 mm deep and 1.50 meter long. It is subjected to an axial pull of 45000N. The Stretch of the member is found to be 0.6380 mm. Find the young's modulus for the material.			
Answer Options	A)	B)	C)	D)
	9405.1 N/mm ²	9400.1 N/mm ²	8405.1 N/mm ²	9415.1 N/mm ²
Right Answer	A			

Question No. 64	When the absorptivity of a body varies with the wavelength of radiation wave, the body is known as			
Answer Options	A)	B)	C)	D)
	Black body	Gray body	Coloured body	Orange body
Right Answer	C			

Question No. 65	Convection is defined as a process of heat transfer by			
Answer Options	A)	B)	C)	D)
	Action of heat conduction	Combine action of heat conduction and mixing motion	Action of mixing air motion of atmosphere	Action of change in environment
Right Answer	B			

Question No. 66	Kirchoff's law is valid only if			
Answer Options	A)	B)	C)	D)
	the wave length of incident radiation and wave length of emitting radiation are same.	property of surface is suitable for radiation	property of surface is suitable for emission with proper wave length	property of surface is suitable for emission and radiation
Right Answer	A			

Question No. 67	When substance is called as phase?			
Answer Options	A)	B)	C)	D)
	When the quantity of matter contained within a system is uniform through both in chemical composition and physical nature	When the quantity of matter contained within a system is uniform in chemical composition	When the quantity of matter contained within a system is uniform as physical nature	Option B and Option C
Right Answer	A			

Question No. 68	What is theory of bending?			
Answer Options	A)	B)	C)	D)
	The strain intensity in any fibre is proportional is the distance of the fiber from the neutral layer.	The stress intensity in any fibre is proportional is the distance of the fiber from the neutral layer.	The stress intensity in any fibre is proportional is the distance of the fiber from the upper neutral layer.	The strain intensity in any fibre is proportional is the distance of the fiber from the lower neutral layer.
Right Answer	B			

Question No. 69	When the metals become hard and strong during working and more and more stress is necessary for further deformation this means			
Answer Options	A)	B)	C)	D)
	Strain hardening	Stress Hardening	Plastic deformation	Red hardening
Right Answer	A			

Question No. 70	What is Proportional Stress?			
Answer Options	A)	B)	C)	D)
	It is the highest value of the stress up to which stress is proportional to strain.	It is the highest value of stress up to which deformation is elastic	It is the highest value of stress up to which deformation is temporary.	It is the highest value of stress that material sustained without fracture.
Right Answer	A			

Question No. 71	What is ferrite?			
Answer Options	A)	B)	C)	D)
	Ferrite is an interstitial solid solution of carbon in low temperature BCC alpha Iron	Ferrite is an interstitial liquid solution of carbon in low temperature BCC alpha Iron	Ferrite is an interstitial liquid solution of Aluminium in low temperature BCC alpha Iron	Ferrite is an interstitial liquid solution of carbon in low temperature HCC alpha Iron
Right Answer	A			

Question No. 72	Regarding recrystallization which option is correct one			
Answer Options	A)	B)	C)	D)
	If the annealing temperature is gradually lowered, a point is reached at which worked hardened metal begin to soften and weaken rapidly.	If the annealing temperature is gradually raised, a point is reached at which worked hardened metal begin to soften and weaken rapidly.	If the annealing temperature is gradually lowered, a point is reached at which worked hardened metal begin to hardened and weaken rapidly.	If the annealing temperature is gradually raised, a point is reached at which worked hardened metal begin to hardened and weaken slowly.
Right Answer	B			

Question No. 73	Extrusion is			
Answer Options	A)	B)	C)	D)
	a cold working process	a hot working process	a mix operation of cold and hot working process	a process worked in controlled atmosphere
Right Answer	B			

Question No. 74	Deep drawing is			
Answer Options	A)	B)	C)	D)
	a cold working process	a hot working process	a mix operation of cold and hot working process	a process worked in controlled atmosphere
Right Answer	A			

Question No. 75	What is Cold working?			
Answer Options	A)	B)	C)	D)
	is define as solid deformation at temperature below recrystallization temperature	is define as plastic deformation at temperature above recrystallization temperature	is define as plastic deformation at temperature below recrystallization temperature	is define as solid deformation at temperature above recrystallization temperature
Right Answer	C			

Question No. 76	What is hot working?			
Answer Options	A)	B)	C)	D)
	is define as solid deformation at temperature below recrystallization temperature	is define as plastic deformation at temperature below recrystallization temperature	is define as plastic deformation at temperature above recrystallization temperature	is define as solid deformation at temperature above recrystallization temperature
Right Answer	C			

Question No. 77	Cold working produces the effect as			
Answer Options	A)	B)	C)	D)
	Strength and hardness are decrease but ductility is increase.	Ductility and hardness are decrease but strengths increase.	Strength and ductility are decrease also hardness is decrease.	Strength and hardness are increase but ductility is decreased.
Right Answer	D			

Question No. 78	What is polymorphism?			
Answer Options	A)	B)	C)	D)
	Different substance, depending on the condition, may crystallizes in different form is polymorphism	One and the same substance, depending on the condition, may crystallizes in different form is polymorphism	The substance possessing properties of metal element are called as polymorphism.	Option A and C both are correct
Right Answer	B			

Question No. 79	Ceramic materials have a high modulus of elasticity in range of			
Answer Options	A)	B)	C)	D)
	7×10^{10} to 42×10^{10} N/m ²	7×10^{10} to 52×10^{10} N/m ²	7×10^{10} to 62×10^{10} N/m ²	7×10^{10} to 72×10^{10} N/m ²
Right Answer	A			

Question No. 80	Piezoelectric ceramic effect found in ceramic like			
Answer Options	A)	B)	C)	D)
	CaTiO ₃ ,SiO ₃ ,PbZrO ₂	BaTiO ₃ ,SiO ₂ ,PbZrO ₃	CaTiO ₂ ,SiO ₃ ,PbCrO ₂	BaTiO ₂ ,SiO ₃ ,PbCrO ₂
Right Answer	B			

Question No. 81	What is Sintering?			
Answer Options	A)	B)	C)	D)
	Sintering is a process of mixing of agglomerate of small particles into bulk materials.	Sintering is a process of heating in order to agglomerate small particles into bulk materials.	Sintering is a process of making the metals into small particles	Sintering is a process of cooling in order to agglomerate small particles into bulk materials.
Right Answer	B			

Question No. 82	Cast iron are the alloys of iron and carbon containing carbon % more than			
Answer Options	A)	B)	C)	D)
	0.02	0.0222	0.019	0.0232
Right Answer	A			

Question No. 83	The essential difference between a plain carbon steel and cast iron is			
Answer Options	A)	B)	C)	D)
	Cast iron undergoes the eutectoid reaction during solidification and steel do not exhibits,	Cast iron undergoes the eutectic reaction during solidification and steel do not exhibits,	Cast iron undergoes the eutectoid reaction during liquification and steel do not exhibit,	Cast iron undergoes the eutectic reaction during liquification and steel do not exhibit,
Right Answer	B			

Question No. 84	White cast iron is brittle because			
Answer Options	A)	B)	C)	D)
	large amount of cementite is present which is brittle.	large amount of graphite flakes are present which is brittle.	large amount of graphite flakes and cementite are present which is brittle.	large amount of graphite flakes are present which is not brittle.
Right Answer	A			

Question No. 85	Grey cast iron is brittle because			
Answer Options	A)	B)	C)	D)
	large amount of cementite is present which act as stress raiser	it contains graphite flakes which act as stress raisers	large amount of graphite flakes and cementite are present which is brittle.	large amount of graphite flakes is present which is not brittle.
Right Answer	B			

Question No. 86	Which option is correct about soldering and brazing?			
Answer Options	A)	B)	C)	D)
	Soldering and brazing joint cannot be separated like welding.	Soldering and brazing joint can be separated like welding	Soldering and brazing joint can be separated.	Soldering can but brazing joint cannot be separated like welding.
Right Answer	C			

Question No. 87	Lap joint, Tee joint and Corner Joint are			
Answer Options	A)	B)	C)	D)
	Fillet weld	Slot weld	Plug weld	Lap weld
Right Answer	A			

Question No. 88	What is Go Limit?			
Answer Options	A)	B)	C)	D)
	It refers to upper limit of a shaft and lower limit of a hole.	It refers to lower limit of a shaft and upper limit of a hole.	It refers to lower limit of a shaft and lower limit of a hole.	It refers to upper limit of a shaft and upper limit of a hole.
Right Answer	A			

Question No. 89	What is clearance?			
Answer Options	A)	B)	C)	D)
	This is different between the sizes of hole and shaft, after assembly, when this difference is positive	This is different between the sizes of hole and shaft, after assembly, when this difference is negative	This is different between the sizes of hole and shaft, before assembly, when this difference is positive	This is different between the sizes of hole and shaft, before assembly, when this difference is negative
Right Answer	C			

Question No. 90	What % of data fall within +/- 3 sigma?			
Answer Options	A)	B)	C)	D)
	0.9973	0.7399	0.9937	0.997
Right Answer	A			

Question No. 91	Straight of any surface is measured by instrument			
Answer Options	A)	B)	C)	D)
	Sprit level and Auto-Collimator	Sprit level	Auto-Collimator	Level indicator
Right Answer	A			

Question No. 92	V- Blocks are use in workshop for			
Answer Options	A)	B)	C)	D)
	Checking roundness of cylindrical workpiece only.	Checking roundness of cylindrical workpiece and marking centers accurately.	Marking centers accurately.	None of The Above
Right Answer	B			

Question No. 93	What is dedendum in case of external thread?			
Answer Options	A)	B)	C)	D)
	This is the radial distance between the pitch and major cylinder.	There is no dedendum in case of external thread	This is the radial distance between the pitch and minor cylinder.	Dedendum is nothing but angular depth of thread
Right Answer	C			

Question No. 94	In pareto diagram which vertical axis represents Data?			
Answer Options	A)	B)	C)	D)
	Right side	Left side	Lorenz curve	Frequency
Right Answer	B			

Question No. 95	Who gave the 14 points for Quality improvement to the top management?			
Answer Options	A)	B)	C)	D)
	Dr. WE Deming	Dr. J M Juran	Dr.Genichi Taguchi	Prof P C Mahalanobis
Right Answer	A			

Question No. 96	Use of P Chart			
Answer Options	A)	B)	C)	D)
	Whenever subgroup size is variable, control chart for fraction defective - P chart use	Whenever subgroup size is constant, control chart for fraction defective - P chart use	Whenever subgroup size is constant, control chart for fraction defects - P chart use	Whenever subgroup size is variable, control chart for fraction defects - P chart use
Right Answer	A			

Question No. 97	Category of Cost of quality			
Answer Options	A)	B)	C)	D)
	Appraisal cost External Failure cost	Appraisal cost Prevention cost Internal failure cost External failure cost	Prevention cost Internal failure cost	Appraisal cost Rework Cost Internal failure cost External Failure cost
Right Answer	B			

Question No. 98	For Six Sigma which methodology is used			
Answer Options	A)	B)	C)	D)
	PDCA	DMAIC	Project Management	PDMC
Right Answer	B			

Question No. 99	Six sigma quality performance means			
Answer Options	A)	B)	C)	D)
	3.4 defects per million opportunity	3.5 defects per million opportunity	2.4 defects per million opportunity	6.0 defects per million opportunity
Right Answer	A			

Question No. 100	Who originated the zero-defect concept?			
Answer Options	A)	B)	C)	D)
	Philip B Crosby	Dr.J M Juran	Dr.Genichi Taguchi	Prof P C Mahalanobis
Right Answer	A			