CII – iPATE 2.0 (2021)

Computer Based PAN India Examination

Category: GRADUATE ENGINEER (ENTRY LEVEL)

Engineering Discipline: PETROLEUM ENGINEERING

Questions & Answers

(Reviewed, Revised & Published dtd. 26.11.2021)

Paper Structure

Question Nos.	Sections & Topics		Marks
1 to 20	Section I : Cognitive Abilities	• Quantitative Aptitude • Analytical Reasoning • Data Interpretation • English Communication	20
21 to 40	Section II : Professional Abilities	• Project Management • Health, Safety & Risk Management • Environmental Laws • Social Responsibility & Ethics • Finance & Accounts • Legal, 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			

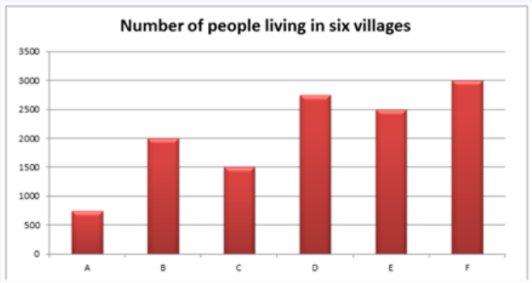
Question No. 11	In the following question choose the word which is the exact OPPOSITE of the given word. STRINGENT			
Answer Options	A)	B)	C)	D)
	Magnanimous	Vehement	General	Lenient
Right Answer	D			

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	D			

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	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. **S1**: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room. **P**: For a committee is not just a mere collection of individuals. **Q**: On him rests much of the responsibility for the success or failure of the committee. **R**: While this is happening, we have an opportunity to get the 'feel' of this committee. **S**: As the meeting opens, he runs briskly through a number of formalities. **S6**: From the moment its members meet, it begins to have a sort nebulous life of its own. The Proper sequence should be:			
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?

Villages	Literate : Illiterate	% of male
A	2 : 3	52
B	11 : 9	65
C	13 : 2	45
D	4 : 1	70
E	1 : 3	39
F	11 : 19	75

Answer Options	A)	B)	C)	D)
	38%	35%	37%	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)	B)	C)	D)
	55%	53%	51%	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)	B)	C)	D)
	320:527	527:330	330:527	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)	B)	C)	D)
	1823	1723	1623	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)	B)	C)	D)
	25.72%	25.76%	24.76%	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 adjucative 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)
	$M^0LT^{-2}K^{-1}mol^{-1}$	$M^0L^2T^{-2}K^{-1}mol^{-1}$	$ML^2T^{-2}K^{-1}mol^{-1}$	$ML^{-2}T^{-2}K^{-1}mol^{-1}$
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:√2	1:√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)	B)	C)	D)
	$W_1>W_2>W_3$	$W_2>W_1>W_3$	$W_1>W_3>W_2$	$W_3>W_1>W_2$
Right Answer	C			

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)	B)	C)	D)
	1:1	1:2	2:1	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 life on the wing is given by			
Answer Options	A)	B)	C)	D)
	$(\rho v^2A)/\sqrt{2}$	$(\rho v^2A)/2$	$2\rho v^2A$	$\sqrt{2}\rho v^2A$
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 $g=10m/s^2$)			
Answer Options	A)	B)	C)	D)
	$400m/s^2$	$300m/s^2$	$200m/s^2$	$100m/s^2$
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)	B)	C)	D)
	1/4	3/4	1/2	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)	B)	C)	D)
	1/x	$1/x^2$	x	x^2
Right Answer	C			

Question No. 51	Natural gas can be obtained from Gas well head as also as from crude oil well head. Natural gas recovered along with crude oil from oil wells is called wet natural gas which has a higher _____ compared to the dry natural gas.			
Answer Options	A)	B)	C)	D)
	calorific value	unsaturated hydrocarbon content	quantity of propane	quantity of butane
Right Answer	A			

Question No. 52	In chemical and petroleum industries, different types of gases need to handled - toxic gas, sour gas, sweet gas, casing head gas, acid gas etc. Sour gas is			
Answer Options	A)	B)	C)	D)
	Chlorine gas	Hydrogen Chloride gas	Natural gas of sour taste due to presence of Carbon Di Oxide and mercaptan in it	Natural gas with presence of another gas whose smell is of rotten egg
Right Answer	D			

Question No. 53	What is the function of Oil Field Heater Treater?			
Answer Options	A)	B)	C)	D)
	Heating & treating crude oil to get all the components of crude oil like Gasoline, Kerosene, Diesel etc	Heating & treating crude oil to remove all the heavies	Heating & treating crude oil to separate water	Heating & treating crude oil to separate all lighter gases
Right Answer	C			

Question No. 54	If the API gravity of a one sample of crude oil is 50, what is the specific gravity of the liquid?			
Answer Options	A)	B)	C)	D)
	0.7796	1.283	0.6867	1.456
Right Answer	A			

Question No. 55	In India, different gases are used as fuel e.g. LPG, LNG, CNG etc. LNG & CNG are predominantly Methane whereas LPG is mainly a mixture of			
Answer Options	A)	B)	C)	D)
	high boiling olefins & naphthenes	butane with small % of pentane	Propane & ethane	propane & butane
Right Answer	D			

Question No. 56	What is the average molecular weight of a gas (from one gas wellhead) whose composition (volume %) is: Methane: 80%; H_2: 10%; and CO_2: 10%			
Answer Options	A)	B)	C)	D)
	17.4	16	18	19.2
Right Answer	A			

Question No. 57	Two reservoirs are connected by 2 pipes of the same length laid in parallel. The diameters of the pipe are 10 cm and 30 cm respectively. If the discharge through 10 cm diameter pipe is 0.01 m^3/ sec, what will be the discharge (m3/ sec) through 30 cm pipe? Assume that f is the same for both pipes.			
Answer Options	A)	B)	C)	D)
	0.256	0.156	0.056	0.166
Right Answer	B			

Question No. 58	There are two important terms Octane number and Cetane number (of fuel) which are very significant for running motor engines. Which of the following has the highest octane number?			
Answer Options	A)	B)	C)	D)
	i-paraffins	Naphthenes	Olefins	Aromatics
Right Answer	D			

Question No. 59	What is slug flow?			
Answer Options	A)	B)	C)	D)
	A flow pattern in which very high quantities of sand has entered the well and mix with the fluids to form a slurry.	A stable flow pattern with gas flowing above the liquid phase.	A flow system which suddenly stops at a time of shut down.	An unstable flow pattern in which the liquid part of a multiphase mix fully fills the pipe cross section.
Right Answer	D			

Question No. 60	There are different units for measuring Oil & gas flow. For measuring gas flow, units used are MMSCFD, MMSCMD etc. For measuring crude oil flow, units used are standard barrel (bbl), gallons etc. How many gallons are equal to 1 standard barrel (bbl)?			
Answer Options	A)	B)	C)	D)
	159	42	5.8	6
Right Answer	B			

Question No. 61	In offshore drilling, a Semi-Submersible Rig is a drilling rig that is used to drill wells in water depths inaccessible to jack-up rigs. At what water depth Semi-submersible drilling rigs are used?			
Answer Options	A)	B)	C)	D)
	20,000 ft	1,200 ft	10,000 ft	32,000 ft
Right Answer	C			

Question No. 62	During drilling, sometimes pressure of an oil or gas well overcomes the hydrostatic pressure exerted on it by the drilling fluid. Which term suits the situation?			
Answer Options	A)	B)	C)	D)
	a kick	an outflow	a spew out	a wash out
Right Answer	A			

Question No. 63	In a typical lay barge what is the normal rate of pipe laying (say for a 24 inch line)?			
Answer Options	A)	B)	C)	D)
	10 km per day	30 km / day	2 km per day	0.5 km per day
Right Answer	C			

Question No. 64	FPSO project is better than Offshore Platform for the reason (s)			
Answer Options	A)	B)	C)	D)
	Abandonment costs are less than for fixed platforms	FPSOs can evade harsh weather	FPSOs can move from field to field	All the options
Right Answer	D			

Question No. 65	Selection of offshore platform depends on many factors. On which of the following factors this selection does not depend?			
Answer Options	A)	B)	C)	D)
	Sea bed condition	Best case weather forecast	Water depth	Reservoir fluid properties
Right Answer	B			

Question No. 66	A lot of elements and minerals may be present in petroleum depending on the oil & gas field location. The main elements present are:			
Answer Options	A)	B)	C)	D)
	C: Approx 84 %; O_2, N_2 & S : Approx 14%; H_2 & others : Approx 2% ;	C: Approx 84 %; H_2 : Approx 14%; O_2, N_2, S & others: Approx 2%	H_2: Approx 84 %; O_2, N_2 & S : Approx 14%; C & others: Approx 2%	H_2: Approx 84 %; C : Approx 14%; O_2, N_2, S & others: Approx 2%
Right Answer	B			

Question No. 67	Petroleum formation from organic sources depends on various factors. On which of the following it does not depend?			
Answer Options	A)	B)	C)	D)
	Bacterial action	Heat	Pressure	pH of the soil
Right Answer	D			

Question No. 68	An oil lease is currently producing at a rate of 450 STB/D. The rate has been declining at a constant percentage of 30% per year (loss ratio = 0.3). If the economic limit on production is 60 STB/D, the remaining productive life (months) for the lease would be most nearly:			
Answer Options	A)	B)	C)	D)
	5.6	29	83	68
Right Answer	D			

Question No. 69	During oil and gas well testing, a lot of problems are faced by the operating people. Among these which is not a common problem?			
Answer Options	A)	B)	C)	D)
	Gas expansion - hydrate problem	Erosion	Corrosion	None
Right Answer	C			

Question No. 70	There are a lot of methods used for Well Test Analysis. Among the following which method is not used?			
Answer Options	A)	B)	C)	D)
	Pressure draw down tests	Pressure build up tests	Drill stem and wire line formation	Well logging test
Right Answer	D			

Question No. 71	Which one is the production testing equipment?			
Answer Options	A)	B)	C)	D)
	Test separator	Production separator	Portable tool to measure the flow	None
Right Answer	A			

Question No. 72	Oil and gas well testing has different purposes. Among which the best suitable purpose is:			
Answer Options	A)	B)	C)	D)
	to measure its production capabilities during high production demand	to measure its production capabilities under specific temperature & pressure of the reservoir	to measure its production capabilities under specific conditions of reservoir, especially during winter season	to measure its production capabilities under specific conditions of reservoir and bottom hole flowing pressures
Right Answer	D			

Question No. 73	One typical gas flow measurement unit is written as MMscf/D. What is the full form of this unit?			
Answer Options	A)	B)	C)	D)
	Multi Million standard cumulative flow per day	Million standard cubic feet per day	Million standard cumulative flow per day	Multi Million standard cubic feet per day
Right Answer	B			

Question No. 74	During climbing / descending a ladder, there should be maintained minimum points of contacts at all times. These are:			
Answer Options	A)	B)	C)	D)
	Four	At least two	At least three	One
Right Answer	C			

Question No. 75	A repairing / maintenance workman climbed a street light post to change a faulty light, but he didn't use any PPE during climbing and working at height. You are the area councillor and you have reached the spot. Changing light is required as the spot becomes dark during night time without the light. Which option of activity you will insist now?			
Answer Options	A)	B)	C)	D)
	Change the light / rectify the fault as the repairing man has already climbed the post	Don't allow the job without PPE	Allow this job to complete, but warn him to use appropriate PPE next time	Climb down, use appropriate PPE and then climb up & finish the job
Right Answer	D			

Question No. 76	In petroleum industry, there are different types of chemical related health hazards. Among the following hazards, exception of this type is:			
Answer Options	A)	B)	C)	D)
	Toxicity	Reactivity	Corrosivity	Carcinogenicity
Right Answer	B			

Question No. 77	Ammonia is a very useful chemical for fertilizer industry. But it also brings immediate danger to life and health when it is present at the following level or greater. What is this value?			
Answer Options	A)	B)	C)	D)
	1000 ppm	30 ppm	300 ppm	10 ppm
Right Answer	C			

Question No. 78	In industrial safety matters, OSHA has a lot of guidelines. As per OSHA, ladder height should be maximum:			
Answer Options	A)	B)	C)	D)
	10 feet	12 feet	15 feet	20 feet
Right Answer	D			

Question No. 79	What is the best answer to differentiate incident from accident?			
Answer Options	A)	B)	C)	D)
	Incident does not result in an injury or illness but accident does.	Incident does not result any property damage.	Incident is planned but accident is unplanned	Incident is narrowly avoided accident
Right Answer	A			

Question No. 80	Why is the Kyoto Protocol important? Opt the best answer			
Answer Options	A)	B)	C)	D)
	for reductions of all types of industrial effluents	for reductions of Carbon Dioxide emission into atmosphere	for reductions of emission of Sulfur Dioxide into atmosphere	for reductions in greenhouse-gas emissions
Right Answer	D			

Question No. 81	The OSHA definition of noise is the exposure with the sound level on the average of 8-hours. This is the sound level at:			
Answer Options	A)	B)	C)	D)
	80 dB	84 dB	83 dB	85 dB
Right Answer	D			

Question No. 82	Which country is NOT currently a member of OPEC?			
Answer Options	A)	B)	C)	D)
	Angola	Nigeria	Saudi Arabia	Brazil
Right Answer	D			

Question No. 83	Carbon dioxide flooding is under which category of EOR?			
Answer Options	A)	B)	C)	D)
	Chemical	Thermal	Miscible	None of the option
Right Answer	C			

Question No. 84	At which temperature in situ combustion (ISC) process in EOR technique takes places? Write most correct answer			
Answer Options	A)	B)	C)	D)
	> 700^0C	> 400^0C	> 500^0C	> 100^0C
Right Answer	A			

Question No. 85	How much fractional quantity of original oil-in-place (OOIP) can be recovered through EOR technique?			
Answer Options	A)	B)	C)	D)
	one third of OOIP	two third of OOIP	partial amount of two third of OOIP	Total oil (OOIP) can be recovered
Right Answer	C			

Question No. 86	In Refinery, there are two main columns --- Atmospheric distillation and Vacuum distillation. Vacuum distillation column is operated under vacuum about _____ mm Hg absolute.			
Answer Options	A)	B)	C)	D)
	250 to 350	450 to 503	30 to 80	1 to 5
Right Answer	C			

Question No. 87	The engineers, who work to optimize production of oil and gas via proper well placement, production levels and enhanced oil recovery techniques, are called / designated as			
Answer Options	A)	B)	C)	D)
	Production Engineer	Drilling Engineer	Subsurface Engineer	Reservoir Engineer
Right Answer	D			

Question No. 88	Waxy crudes are treated with different chemical additives. The process is aimed to _____			
Answer Options	A)	B)	C)	D)
	remove wax	depress its pour point	precipitate wax	dissolve wax
Right Answer	B			

Question No. 89	In India, recently a lot of refineries came up. The name of the refinery at Bhatinda with the name of the state are _____			
Answer Options	A)	B)	C)	D)
	Guru Nanak refinery; Punjab	Guru Gobind Singh refinery; Uttar Pradesh	Guru Gobind Singh refinery; Haryana	HPCL-Mittal Energy Ltd; Punjab
Right Answer	D			

Question No. 90	For deposits of hydrocarbons, particularly petroleum and natural gas, in the Earth, hydrocarbon exploration (or oil and gas exploration) is the search activity executed by _____ Write the best suitable answer / answers)			
Answer Options	A)	B)	C)	D)
	Drilling Engineer	Chemical Engineers	Petroleum geologists and geophysicists	Petroleum mining Engineers
Right Answer	C			

Question No. 91	In Petroleum industry, there are different categories of crude oil. _____ base crude oil is also called asphaltic crude.			
Answer Options	A)	B)	C)	D)
	Paraffinic	Aromatic	Mixed	Naphthenic
Right Answer	D			

Question No. 92	Four different types of hydrocarbon molecules appear in crude oil. The relative percentage of each are:			
Answer Options	A)	B)	C)	D)
	Paraffins: approx 30%; Naphthenes: approx 49%; Aromatics: 15%; Asphaltics: 6%	Paraffins: approx 49%; Naphthenes: approx 30%; Aromatics: 15%; Asphaltics: 6%	Paraffins: approx 30%; Naphthenes : approx 15%; Aromatics : 49% ; Asphaltics: 6%	Paraffins: approx 49%; Naphthenes : approx 30%; Aromatics : 6% ; Asphaltics: 15%
Right Answer	A			

Question No. 93	Strong initiatives had been taken on developing Indian Petroleum industry post-independence. Where was oil discovered for the first time in India?			
Answer Options	A)	B)	C)	D)
	Silchar field	Bongaigon field	Numaligarh field	Digboi field
Right Answer	D			

Question No. 94	Drilling mud is an important term associated with drilling. A chemical compound (a mineral) frequently used to increase weight or density of the drilling mud is			
Answer Options	A)	B)	C)	D)
	Calcium sulphate ($CaSO_4$)	Magnesium sulphate ($Mg\ SO_4$)	Zinc Sulphate ($Zn\ SO_4$)	Barium sulphate ($BaSO_4$)
Right Answer	D			

Question No. 95	"Bull heading" is an important process associated with drilling. It is			
Answer Options	A)	B)	C)	D)
	It is a process by which crude oil is pumped into the annulus from the surface	It is a process by which gas is forced back into a formation by pumping into the annulus from the surface	It is a process by which water is injected into a formation by pumping into the annulus from the surface	A process using a special bull heading instrument fitted at the Well head
Right Answer	B			

Question No. 96	A process of deviating a well bore to head in the desired direction			
Answer Options	A)	B)	C)	D)
	directional drilling	angle drilling	Bi-directional drilling	multi directional drilling
Right Answer	A			

Question No. 97	The pressure at the crest of a gas filled reservoir is abnormal. What is the reason for this abnormal pressure?			
Answer Options	A)	B)	C)	D)
	The pressure at the crest is abnormal due to the overburden pressure.	The pressure at the crest is abnormal due to the artesian effect.	The pressure at the crest is abnormal due to the difference in density between the gas and the normal formation fluids.	The pressure at the crest is abnormal due to the difference in pressure at the base of the reservoir and at the top of the reservoir
Right Answer	C			

Question No. 98	In the Petroleum industry around the world, different types of crude oil are produced. Crude oil produced by Indian oil fields are predominantly _____ in nature.			
Answer Options	A)	B)	C)	D)
	paraffinic	asphaltic	naphthenic	mixed base
Right Answer	B			

Question No. 99	What is hydraulic fracturing?			
Answer Options	A)	B)	C)	D)
	It is a technique for pumping water, chemicals and sand with high pressure into drilled well	It is a technique for cracking rocks using hydraulic method	It is a hydraulic method of modern drilling technique of any new well	It is an advanced method of horizontal drilling
Right Answer	A			

Question No. 100	Compositional modelling to predict recovery is generally not applicable for:			
Answer Options	A)	B)	C)	D)
	Gas condensate recovery estimation	Volatile oil recovery estimation	Carbon dioxide flooding effectiveness	polymer flood oil recovery
Right Answer	D			