

General Aptitude

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
1	Convert the given sentence into indirect speech: The PM said, 'Prioritize the security patch'.	The PM said that they prioritized the security patch.	The PM said that the security patch be prioritized.	The PM said to prioritize the security patch.	The PM said prioritizing the security patch.
2	Determine the grammatically correct version of the given statement: She is one of those people who always takes criticism personally.	She is one of those people to always takes criticism personally.	She is one of those people who always take criticism personally.	She is one of those person who always take criticism personally.	She is one of those person who always takes criticism personally.
3	Which sentence is passive-aggressive in a professional email?	Let's discuss how to resolve the issue.	As per my last email, the issue remains unresolved.	The issue requires your attention.	Could you please update me on this?
4	What is the closest synonym of the word "adversary" as used in the given sentence? The unexpected storm was an adversary to the hikers' progress up the mountain.	Companion	Threat	Opponent	Guide

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5	<p>In the below question, a part of the sentence is in brackets. Below are given alternatives to the bracketed part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose 'No Improvement' option.</p> <p>Please do not talk about your office work (on the dinner table).</p>	No Improvement	at the dinner table	in the dinner table	around the dinner table
6	<p>In the question below, a sentence is given with one part bracketed. Select the option that provides the correct replacement for the bracketed part. In case of no improvement needed, choose Option D.</p> <p>The roof of the garage has (fallen down).</p>	fallen in	fallen through	fallen off	No Improvement

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7	<p>Aman starts walking from his home facing north. He walks 5 km, then turns right and walks 3 km. He then turns left, walks 4 km, and again turns left to walk 3 km. Finally, he turns right and walks 2 km.</p> <p>How far is Aman from his home and in which direction?</p>	6 km, South	8 km, East	11 km, North	10 km, West

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8	<p>In the following question, some statements are followed by some conclusions. You must consider the given statements true even if they seem at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows the given statements, disregarding commonly known facts.</p> <p>Statements:</p> <ul style="list-style-type: none">1. All phones are boxes.2. Some boxes are big.3. All big are fans. <p>Conclusion:</p> <ul style="list-style-type: none">1. Some fans are phones.2. Some big are phones.3. Some fans are boxes.	Only (1) follows.	Only (2) follows.	Only (3) follows.	Both (2) and (3) follow.

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9	Eight members living under one roof, consists of three generations. Krish is married to Rama. Quasi is the mother of Pranav. Sivi is the sister of Krish. Pranav is the brother of Rama. Krish is the child of Tashi. Sivi is the aunt of Mandy. If Quasi is married to Bhanu, then how Bhanu is related to Mandy?	Grandfather	Father	Brother-in-law	Uncle
10	In an exhibition of science, a certain number of projects are placed in a row. Project M is placed 14th from the left end, and Project K is placed 16th from the right end. There are 13 projects between M and K. How many projects are placed in the exhibition?	16	17	43	Cannot be determined
11	Find the missing number in the given series. 1, 2, 9, ___, 65, 126, 217	28	37	46	19
12	Which of the following is a key characteristic of a transformational leader?	They establish clear incentives and consequences to guide team performance.	They ensure consistent operations through well-defined structures and authority.	They maintain a predictable environment by preserving established organizational norms.	They foster creativity and motivate individuals to achieve beyond standard goals.
13	The social construction of leadership suggests that leadership is _____.	An innate trait that only certain individuals possess	A fixed set of behaviours defined by corporate policies	A dynamic process shaped by interactions and perceptions within a group	It is determined by a leader's formal authority

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14	Anam is the newly appointed leader of a software development team tasked with a highly complex and unstructured project with tight deadlines. The team members are relatively new to working together and have varying levels of technical expertise. Which of the following leadership approaches would be most effective in this situation?	Focus on building strong interpersonal relationships and fostering a supportive team environment	Implement a structured approach with clear task assignments and close monitoring	Empower the team by delegating significant autonomy and encouraging collaborative problem-solving	Prioritize the leader's expert technical knowledge and provide direct solutions to technical challenges
15	How does transformational leadership differ from transactional leadership?	Transformational leaders focus on short-term goals, while transactional leaders focus on long-term vision	Transformational leaders rely on contingent rewards, while transactional leaders avoid structured incentives	Transformational leaders inspire and motivate through vision, while transactional leaders focus on exchanges (rewards/punishments)	Transformational leaders avoid emotional connections, while transactional leaders build strong relationships
16	What is the keyboard shortcut to insert a manual line break in MS Excel?	Ctrl + Shift	Alt + Enter	Ctrl + Enter	Alt + Shift
17	A cybercriminal sends you an email with a link to a website that looks identical to your bank's. The website asks you to enter your login credentials. What type of attack is this?	Phishing attack	Malware attack	DDoS attack	Viruses

General Aptitude

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
18	In MS PowerPoint presentations, the design regulate the layout and formatting for the slide. These are commonly known as _____.	Blueprints	Placeholders	Templates	Design Plates
19	What is the maximum zoom percentage in MS PowerPoint?	400	300	200	100
20	Match the MS Word shortcuts with their purpose and choose the correct option.	A → 3, B → 1, C → 4, D → 2	A → 1, B → 4, C → 3, D → 2	A → 3, B → 4, C → 1, D → 2	A → 2, B → 3, C → 1, D → 4

Column A (Shortcut)	Column B (Purpose)
A. Ctrl + Shift + N	1. Open Thesaurus
B. Alt + Shift + D	2. Apply superscript
C. Shift + F7	3. Apply Normal style
D. Ctrl + Shift + Plus sign	4. Insert current date

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4								
1	Which extinguisher is typically not used in petrol pumps and chemical plants due to its ineffectiveness on flammable liquids?	Dry powder	Water	CO ₂	Foam								
2	Which of the following gases poses the highest risk in case of high-pressure storage due to its wide flammability range?	Nitrogen	Methane	Carbon dioxide	Hydrogen								
3	Which one of the following is a passive fire protection measure?	Deluge system	Fire-retardant coating	Fire alarm system	Sprinkler system								
4	Match the following:	1-b, 2-a, 3-c	1-c, 2-a, 3-b	1-c, 2-b, 3-a	1-b, 2-c, 3-a								
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5	Which environmental factor has the greatest effect on the evaporative cooling process?	Air temperature	Relative humidity	Wind speed	Solar radiation								
6	From the following identify the symptoms of heat stroke: 1. High body Temperature 2. Flushed, dry skin 3. Profuse sweating 4. Confusion or unconsciousness	Only 4	1,2 and 3	1, 2 and 4	1, 2, 3 and 4								

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
7	A fixed guard is most suitable for _____.	Machines with repetitive and predictable operations	Maintenance work zones	Machines with highly variable sizes of input materials	High-speed conveyor belts with changing loads
8	What is the ideal posture for lifting heavy objects?	Bend forward from the waist	Keep legs straight and back rounded	Squat down using legs and keep back straight	Twist the body while lifting
9	The immediate effect of exposure to high levels of hydrogen sulphide gas is _____.	Skin rash	Temporary blindness	Respiratory paralysis and potential death	Liver damage
10	Which of the following NDT methods is most suitable for detecting surface cracks in non-magnetic metals like aluminium?	Magnetic Particle Testing	Liquid/Dye Penetrant Testing	Ultrasonic Testing	Radiographic Testing
11	What is the primary purpose of a Safety Operating Procedure (SOP) in a plant?	To delegate operational responsibilities among various plant departments	To provide technical training	To ensure uniform and safe execution of operations	To ensure consistent documentation practices across departments
12	Which Tag colour is used for warning of "potential hazards" in the industry as per the IS 2095?	RED	WHITE	YELLOW	BLUE

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
13	What distinguishes a permit-to-work (PTW) system from regular safety protocols?	PTW is a formal written authorization for hazardous and non-routine tasks	PTW is a formal written authorization for hazardous/routine tasks	PTW is a formal written authorization for special tasks	PTW is mandated only for confined spaces
14	In the context of incident investigation, what is the "Domino Theory" used for?	Determining cost of loss	Establishing liability in civil courts	To model the chain of events leading to an accident or incident	Predicting market trends after an accident
15	A factory with 400 workers reported 8 lost-time injuries in a year. The total man-hours worked was 8,00,000. What is the Frequency Rate (FR) of accidents as per IS 3786?	8	4	10	16
16	Which of the following is a reportable accident as per IS 3786:1983?	Minor scratch treated with first aid	Slip without injury	Injury causing more than 48 hours' absence from work	Temporary deafness for a few minutes
17	The maximum permissible quantity of Class A petroleum product that may be stored without a license for private use (non-transportation) is _____.	30 litres	50 litres	100 litres	500 litres

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4										
18	Match the following explosives to its corresponding Class based on Explosives Rules 2008:	1-c, 2-b, 3-d, 4-a	1-b, 2-c, 3-d, 4-a	1-d, 2-c, 3-a, 4-b	1-c, 2-d, 3-a, 4-b										
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19	Which clause in ISO 45001 specifically deals with risk and opportunity assessment?	Clause 4	Clause 6	Clause 8	Clause 9										
20	Which model focuses on management system failures as the primary root of accidents?	Human Error Model	Frank Bird's Loss Causation Model	Heinrich's Theory	Swiss Cheese Model										
21	What is the primary goal of disaster mitigation?	Forecasting disasters precisely	Reducing the impact of disasters on life and property	Increasing the intensity of warning signals	Limiting access to disaster-prone areas										

Occupational Safety and Health

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22	What chemical was released that led to the explosion in Flixborough disaster?	Methane	Ammonia	Methyl Isocyanate	Cyclohexane
23	Which of the following is NOT typically considered a valid Independent protection layer (IPL) in LOPA?	Pressure relief valve	Operator response to an alarm	SIS (Safety Instrumented System)	Physical containment
24	What is covered under UN Class 3 of dangerous goods?	Flammable liquids	Gases	Toxic substances	Radioactive materials
25	Which type of pig is typically used to separate different batches of fluids in a pipeline?	Foam pig	Cup pig	Brush pig	Calliper pig
26	What is the base colour for pipelines carrying water? (excluding firefighting)	Green	Red	Yellow	Blue
27	In safety signage, which background colour is used to indicate that wearing personal protective equipment (PPE) is mandatory?	Red	Yellow	Blue	Green
28	Among the following, which is not the step of JSA?	select Job	break Job into sequence	identify ways to speed up the job	identify hazards and control measures

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
29	As per IS 5572, which location given below comes under Zone 2 of the hazardous area classification?	Area with floating roof tanks of imperfectly fitting peripheral seals	Areas where the piping system is without valves, fittings, flanges	Areas in the immediate vicinity of vents and filling hatches	Area where the flammable vapours can be conducted through pipes, or ducts
30	Which of the following is an example of an inherently safer design strategy?	Use of high-pressure equipment	Substitution with less hazardous materials	Installation of multiple safety relief valves	Use of a large inventory of hazardous materials
31	As per Noise Pollution Rules 2000, the permissible noise levels in Residential areas are _____ dBA at daytime and _____ dBA at night-time.	90,85	75, 55	75,70	50,40
32	What is the purpose of a Deadman switch on a portable power tool?	To prevent accidental startup	To increase the tool's speed	To adjust the tool's settings	To hold the workpiece in place
33	Heinrich's Theory (or Domino Model) suggests that for every major accident, there are how many minor accidents and near misses combined?	1 minor accident and 2 near misses	1 minor accident and 29 near misses	29 minor accidents and 300 near misses	100 minor accidents and 100 near misses
34	What was the main cause of the Flixborough disaster (1974) in the UK?	Delayed maintenance of gas detectors	Malfunction of safety alarms	Improper modification of a reactor pipeline	Gas leak due to corroded pipelines

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
35	In the context of emergency planning, the term "all clear" signifies _____.	That workers should evacuate immediately	That an emergency is about to occur	That emergency equipment is fully charged	That the threat has passed and normal operations can resume safely
36	Which of the following Non-Destructive Testing (NDT) methods is primarily used to measure the thickness of a material without affecting its surface?	Thermography	Eddy Current Testing	Radiography	Ultrasonic Testing
37	The Carpal Tunnel Syndrome (CTS) is caused by _____.	High-frequency noise exposure	Repetitive hand movements and poor wrist positioning	Working in extreme temperatures	Lack of sleep and rest
38	The catastrophic explosion at Mexico City LPG tank farm (1984) primarily involved failure due to _____.	Poor fencing around the plant	Lack of thermal radiation protection and domino effect	Overfilled underground pipelines	Poor quality gas cylinders
39	Which instrument is typically NOT considered a layer of protection in LOPA unless it has independent effectiveness?	Process control system (PCS)	Pressure Relief Valve (PRV)	Independent High Integrity Protection System (IPS)	Safety Instrumented System (SIS)

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
40	In a pigging operation, the "pig" primarily functions to _____.	Increase the flow rate	Clean and inspect the pipeline internally	Insulate the pipeline	Increase internal pipeline pressure
41	The Fatal Accident Frequency Rate (FAFR) is defined as _____.	Number of fatal accidents per 1,000 workers	(No. of all injuries / Total production units)	(No. of near misses $\times 100$) / man-days	(No. of fatal accidents $\times 1,000,000$) / Total man-hours worked
42	Which of the following respiratory protection devices would be used in an area with unknown hazardous gas concentration and oxygen-deficient atmosphere?	Air-purifying respirator (APR)	Dust mask	Particulate respirator	Self-contained breathing apparatus (SCBA)
43	The gas cylinder license issued can be renewed to a maximum period of _____ years.	2	5	8	10
44	Calculate the cooling water requirement for a floating roof tank storing petroleum product. Data: diameter = 80 m and height = 15 m.	3600π	12240π	6000π	1200π

Occupational Safety and Health

Q. No.	Question	Option 1	Option 2	Option 3	Option 4										
45	What is the primary purpose of OISD Standard-118?	To specify test methods for pipeline integrity	To provide layout guidelines for oil and gas installations	To define environmental norms for LPG plants	To outline maintenance schedules for rotating equipment										
46	Match the following:	1-c, 2-b, 3-a, 4-b	1-d, 2-c, 3-b, 4-a	1-b, 2-c, 3-d, 4-a	1-b, 2-d, 3-c, 4-a										
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47	Which authority is responsible for enforcing the Gas Cylinder Rules in India?	CPCB	DPIIT	PESO	MoEF										
48	Which OISD standard deals with the classification of hazardous areas for electrical installations?	OISD-105	OISD-117	OISD-113	OISD-141										

Occupational Safety and Health

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49	For a tank under fire, if the required foam solution is 63,600 L, and the proportioning ratio is 3%, what is the foam concentrate required?	1272 L	1908 L	2000 L	2100 L
50	As per The Gas Cylinder Rules, how many toxic gas cylinders does not require licence for possession?	5	25	100	200

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Oil and Gas

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1	During the safe handover of hydrocarbon processing equipment for maintenance, after primary valve closures and depressurization, what physical device is typically inserted between flanges to ensure positive mechanical isolation?	Gasket	Valve	Blind/spade	Tag
2	What specific electrical hazard is mitigated by implementing proper grounding and bonding procedures when transferring flammable liquids between containers or tanks?	Electrical shock from equipment malfunction	Overheating of electrical wiring	Ignition caused by static electricity discharge	Interference with electronic instruments
3	A large, fixed-roof storage tank containing gasoline is exposed to direct sunlight on a hot day. The liquid warms up, causing vapours to expand inside the tank. What component allows these vapours to escape safely, preventing pressure buildup?	Drain valve	Sample point	Pressure/Vacuum Vent	Level indicator
4	Before performing hot work (like welding or cutting) inside a large storage tank that previously held crude oil, what is the primary purpose of purging the tank atmosphere with nitrogen?	To cool the internal surfaces	To increase the tank pressure	To displace oxygen and flammable vapours	To remove liquid sludge from the bottom

Oil and Gas

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
5	Before commissioning the vessel with LPG that has been exposed to ambient air, technicians must perform a specific procedure to avoid formation of flammable mixture, the process is called _____.	Inerting	Venting	Draining	Padding
6	Which of the following is considered an active fire protection system?	Fire door	Fire sprinkler	Fire wall	Intumescent coating
7	A maintenance crew accidentally spills a significant amount of gasoline in an open yard area. The fuel collects into a shallow pool and ignites due to a nearby spark. For extinguishing a fire involving pooled flammable liquids (like gasoline), which agent is generally more effective than water alone?	Carbon Dioxide (CO ₂)	Dry Chemical Powder (DCP)	Aqueous Film Forming Foam (AFFF)	Halon substitute gas

Oil and Gas

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
8	A rupture occurs in a large, outdoor pipeline carrying pressurized propane (LPG). The released propane forms a large vapor cloud that drifts towards an ignition source several hundred meters away. Upon ignition, a very rapid combustion wave travels back through the cloud towards the source. What specific type of event best describes this rapid combustion of the dispersed vapor cloud?	BLEVE	Pool Fire	UVCE	Deflagration inside the pipe
9	Which of the following hazards is specifically associated with water ingress in a refinery process?	Hydrogen embrittlement	Thermal runaway	Corrosion and equipment failure	Electrostatic discharge
10	Which procedure ensures safe transfer of control and equipment condition between operations and maintenance personnel in the oil and gas industry?	Cold work permit	Handing over protocol (HOP)	Lockout-tagout (LOTO)	Job Safety Analysis (JSA)
11	Which of the following is NOT a standard method of relieving excess pressure in a chemical storage tank?	Vent valve	Safety relief valve	Rupture disk	Float valve

Oil and Gas

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
12	Which of the following is a mandatory component of a fire protection system at an LPG bottling plant as per OISD standards?	CO ₂ Flooding System	Fire hydrant and sprinkler system	Dry chemical extinguishers only	Halon-based fixed flooding system
13	As per PESO guidelines and OISD-STD-169, which safety practice is not recommended during the preventive maintenance of an LPG carousel?	Isolating power and pneumatic lines before maintenance	Using spark-producing tools in the maintenance area	Draining any residual LPG from pipelines before starting work	Conducting leak tests after maintenance
14	Which class of fire involves flammable liquids such as petrol and diesel?	Class A	Class B	Class C	Class D
15	Which of the following is a key difference between active and passive fire protection systems?	Active systems are installed during construction only	Passive systems require human intervention	Active systems include sprinklers; passive systems include fire-resistant walls	Passive systems are more effective in extinguishing fires

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Oil and Gas

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16	Which of the following hazards is most associated with flammable liquid storage tanks?	Electrical shock	Radiation leakage	BLEVE (Boiling Liquid Expanding Vapor Explosion)	Overheating of insulation
17	What is the purpose of the management of change element in the PSM program?	to oversee employee involvement in program	to ensure Mechanical integrity of equipment	to analyse incidents and accidents	to manage modifications to processes that could impact safety
18	Which of the following is not considered in an area classification study?	Sources of release of flammable gas or vapour	catastrophic failures like vessel or line rupture	Hazard Identification process like HAZOP	operation of process equipment
19	Classification of flammable liquids into three classes for storage is based on _____.	pour point	flash point	ignition temp	viscosity

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Oil and Gas

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20	The following is not a method to control static electricity _____.	Earthing of tanks	Limit the flow velocity till the fill point is submerged in fluid	Agitation with jet nozzle instead of high speed mechanical mixers	Avoid high velocity or splash filling
21	What is not a part of the foundation block of PSM system?	commitment to process safety	understand Hazards & Risk	Efficient utilisation of Assets	Managing Risk
22	Under the central motor vehicle rules, HAZCHEM code on vehicle 3YE indicate _____.	use foam only, can be violently Reactive , consider evacuation as a first priority	use dry agent only, can be violently Reactive , consider evacuation as a first priority	use Fog only, can be Reactive ,	use dry agent only, explosion possibility, consider evacuation as a first priority
23	Select the one with the lowest autoignition temperature _____.	CNG	LPG	gasoline	asphalt
24	Air blowing of Hydrocarbon line cannot be done in the following case _____.	Pipeline in LPG service	Pipeline in Lube service at 45 degC with Lube oil flash <120 deg C	Pipeline in gasoline service	Pipeline with asphalt at 210 deg C ne in asphalt service
25	What is the primary focus of asset management and maintenance strategies?	Establishing a PSM system	Managing the condition and performance of equipment	Controlling process safety Hazards	Maintaining safe shift Handover

Oil and Gas

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26	What is meant by the term 'explosive limit'?	The maximum temperature at which a substance can combust	The amount of fuel stored in a container before it explodes	The minimum ignition energy required to ignite a gas	The range of fuel concentrations in air that can result in an explosion
27	What is Zone 2 of hazardous area classification as per the Petroleum Rules?	Flammable mixture continuously present	Flammable mixture likely to be present under normal operating condition	Flammable mixture likely to be present under abnormal condition	None of these
28	Which critical safety controls to be remembered during running of engine?	maximum safe speed cannot be exceeded	radiator fan covers not in place	location and availability of emergency stop switch known	controls for limiting switch is in order
29	What is the rating of the ELCB to be ensured in power receptacle of Electric arc welding machine?	30 mA	60 mA	20 mA	50 mA
30	POL tank lorry loading area in terminal, falls under which zone of electrical area classification?	Zone A	Zone O	Zone 1	Zone B

Environment

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
1	According to Water Act 1974 _____ includes any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any [industry, operation or process, or treatment and disposal system], other than domestic sewage.	Trade effluent	Sewage effluent	Industrial effluent	Process effluent
2	Which of the following fund is established under Public Liability Insurance Act, 1991 to provide immediate relief to victims of accidents involving hazardous substances?	Environmental Recurring Fund	Environmental Protection Fund	Environmental Relief Fund	Accident Protection Fund
3	Water cess is levied for the following four purposes. Arrange them in the increasing order of water cess. 1. Domestic purpose 2. Processing where water gets polluted and are not easily biodegradable. 3. Processing where water gets polluted and the pollutants are bio degradable. 4. Industrial cooling plants.	1, 4, 3, 2	1,2,3,4	4,3,1,2	1,3,4,2
4	Arrange the elements of ISO 14001 in the correct sequence. 1. Planning 2. Environmental Policy 3. Management review 4. Implementation and operation 5. Checking and corrective action.	2, 1, 5, 4, 3	2, 1, 4, 5, 3	1, 2, 4, 5, 3	2, 1, 4, 3, 5
5	In _____ units the dirty gases are made to pass through beds of activated carbon thereby removing pollutants.	adsorption	absorption	combustion	incinerators
6	Which of the following process is used for pretreatment purposes such as coagulation, disinfection etc?	Sludge thickening	Elutriation	Chemical conditioning	Dewatering

Environment

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7	What is the treatment and disposal method for bio medical waste collected in Red coloured bin?	Landfilling	Autoclaving	Deep burying	Discharge into sewer
8	Depletion of ozone in the stratosphere is due to increasing release of _____ due to human activities.	methane	carbon dioxide	chlorofluorocarbons	nitrogen
9	ISO 50001 is based on the _____ continual improvement framework and incorporates energy management into everyday organizational practices.	Plan-Do-Check-Act	Plan-Check-Do Act	Plan-Do-Act-Check	Plan-Act-Do-Check
10	Which of the following method is considered to be one of the most cost effective technology for removing Total Suspended Solids from the industrial effluent?	Cooling	Dissolved air flotation system	Equalisation	Heating
11	Water Cess Act was enacted in the year _____. _____.	1977	1978	1974	1988
12	What is the general standard for the discharge of Suspended solids (mg/l) in public sewers?	100	300	600	500

Environment

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13	<p>Match the acts given in List 1 with the objectives given in List 2</p> <table border="1"> <thead> <tr> <th>List 1</th><th>List 2</th></tr> </thead> <tbody> <tr> <td>1. Environment Protection Act 1986</td><td>a. To provide for public insurance for the purpose of providing immediate relief to the persons affected by accident while handling any hazardous substance.</td></tr> <tr> <td>2. The Manufacture, Storage, and Import of Hazardous Chemical Rules, 1989.</td><td>b. For setting standards of emission or discharge of environmental pollutants.</td></tr> <tr> <td>3. Management and Handling of Hazardous Waste, 1989</td><td>c. To set up an Authority to inspect, once a year, the industrial activity connected with hazardous chemicals and isolated storage facilities.</td></tr> <tr> <td>4. The Public Liability Insurance Act 1991</td><td>d. To control generation, collection, treatment, import, storage and handling of hazardous waste.</td></tr> </tbody> </table>	List 1	List 2	1. Environment Protection Act 1986	a. To provide for public insurance for the purpose of providing immediate relief to the persons affected by accident while handling any hazardous substance.	2. The Manufacture, Storage, and Import of Hazardous Chemical Rules, 1989.	b. For setting standards of emission or discharge of environmental pollutants.	3. Management and Handling of Hazardous Waste, 1989	c. To set up an Authority to inspect, once a year, the industrial activity connected with hazardous chemicals and isolated storage facilities.	4. The Public Liability Insurance Act 1991	d. To control generation, collection, treatment, import, storage and handling of hazardous waste.	1-c, 2-b, 3-d,4-a	1-a, 2-c, 3-c,4-d	1-b, 2-c, 3-d,4-a	1-b, 2-c, 3-a,4-d
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4. The Public Liability Insurance Act 1991	d. To control generation, collection, treatment, import, storage and handling of hazardous waste.														
14	Which of the following is a process for identifying and assessing the various environmental impacts associated with a particular product or services?	Learn Adopt Assessment	Environmental Impact assessment	Life Cycle Assessment	Strategic Environmental Assessment										
15	Identify the qualitative pollutant from the given options?	Carbon dioxide	Nitrogen dioxide	Fungicides	Carbon monoxide										
16	How can the top management demonstrate leadership and commitment with respect to Environmental Management system?	By ensuring the integration of the environmental management system requirements into the organization's business processes.	By providing a framework for setting environmental objectives.	By ensuring that the environmental management system conforms to the requirements of this International Standard.	By committing to fulfil its compliance obligations.										

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Environment

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
17	What is the maximum permissible annual concentration of Particulate matter (size $<10\mu\text{m}$) in industrial and residential areas?	40 $\mu\text{g}/\text{m}^3$	60 $\mu\text{g}/\text{m}^3$	80 $\mu\text{g}/\text{m}^3$	70 $\mu\text{g}/\text{m}^3$
18	The _____ provides international guidelines to control the transboundary movement of hazardous waste between different countries.	Basel Convention	Montreal Protocol	Kyoto Protocol	Paris Agreement
19	Under which category does the ecologically sensitive and important areas such as National Parks belong to as per Coastal Regulation Zone?	CRZ-I	CRZ-II	CRZ-III	CRZ-IV
20	As per GRI G4 guidelines which of the following is the third step in preparing a sustainability report?	Obtain an overview	Prepare to disclose general standard disclosures	Prepare to disclose specific standard disclosures	Choose the preferred "In Accordance option"

Answer Key

General Aptitude: -

Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Correct Option	3	2	2	3	2	1	3	3	1	3	1	4	3	2	3	2	1	3	1	3

Occupational Safety and Health: -

Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Correct Option	2	4	2	4	2	3	1	3	3	2	3	3	1	3	3	3	1	4	2	2

Q. No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Correct Option	2	4	2	1	2	1	3	3	4	2	2	1	3	3	4	4	2	2	1	2

Q. No.	41	42	43	44	45	46	47	48	49	50
Correct Option	4	4	4	1	2	4	3	3	2	1

Oil & Gas: -

Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Correct Option	3	3	3	3	1	2	3	3	3	2	4	2	2	2	3

Q. No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Correct Option	3	4	2	2	3	3	1	4	2	2	4	3	1	1	3

Environment: -

Q. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Correct Option	1	3	1	2	1	3	2	3	1	2	1	3	3	3	3	1	2	1	1	2

General Aptitude

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
1	In the following sentence, substitute the italicized part with the correct option. Radha was dressed with a green and red saree.	was dressed up	was dressed in	was dressed of	No improvement
2	Fill in the blanks with appropriate options. _____ lecture made it difficult for the students to stay	irrelevant	recusant	monotonous	Arduous
3	Choose the word that best expresses the meaning opposite of the italicized word. It was fortuitous that I met Paul in that birthday party.	unlucky	abominable	distressing	fortunate
4	Fill in the blanks with appropriate options. Raju _____ very polite at the moment, because he wants to make a good impression in front of his colleagues.	is being	has been	has been behaving	was being
5	John starts from a point A and walks 8 km North, then turns left and walks 10 km, then turns left and walks 14 km up to the point B. What is the direction of John?	North	South	East	West
6	In a certain code language, if 'PLAYER' is written as QNDCJX, how 'DANCER' will be written in the same language?	ECOFJX	ECQFKX	ECQGKX	ECQGJX
7	J is sitting next to K and L is next to M. M is not sitting with N. N is on the extreme left of the bench and L is in 2nd position from right. J is on the right hand side of K and N. J and L are sitting next to each other. Who is sitting exactly in the middle?	N	K	J	M

8	Find the missing number in the given series. 1, 2, 9, ___, 65, 126, 217	28	37	46	19
9	Which of the following has characteristics of transactional leadership?	Believes success arises from leaders and staff working together	Seeks to involve staff in decision making process	Seeks to ensure staff understand issues facing the organization	Takes the view that rewards and punishment motivate staff
10	According to contingency theory, the ideal leader _____	Shapes the leadership style depending on the situation.	Provides clear instructions to the followers so that they know what they are doing.	Knows what their strengths are and makes the most out of them.	Spends time with their followers and therefore listens and responds to their needs.
11	Choose the three situational criteria identified in the fielder model.	Job requirements, position power and leadership ability	Charisma, influence and leader-member relations	Leader-member relations, task structure and position power	Task structure, leadership ability and group activity
12	Which of the following best describes leaders in high power distance cultures?	Making decisions without input from employees.	Subordinates can challenge their leaders.	Seeking welfare of the organization.	Employees can address the leader by his name.
13	Who is a transactional leader?	Inspires people and has strong interactions with them.	Does deals with people in order to get them to do things the leader wants.	Someone who is involved in the organizational change.	A leader who inspires the workers to new levels by offering them a vision of a better future.

14	In which type of leadership does the superior enjoy more	Consultative Leadership	Autocratic Leadership	Free Rein	None of these
15	Which set of terms given below is associated with the SMART acronym related to MBO?	Specific, Management, Assignable, Relevant	Specific, Measurable, Achievable, Relevant	Synchronized, Matching, Attainable, Relevant	Supportive, Manageable, Achievable, Relevant
16	In MS PowerPoint presentations, the design regulate the layout and formatting for the slide. These are commonly known as.	Blueprints	Placeholders	Templates	Design Plates
17	What is the maximum zoom percentage in MS PowerPoint?	400	300	200	100
18	Which of these refers to the PowerPoint view used for displaying only the text (tile and bullets)?	Slide sorter show	slide view	outline view	notes page view
19	Formula in Excel starts with -----	*	/	?	=
20	Which of the following is a shortcut in excel to go to	ALT+M	ALT+N	ALT+W	ALT+H
21	Which of the following cybercrime involved a significant ransomware attack that disrupted the operations of a major U.S fuel pipeline in 2021?	WannaCry attack	Colonial attack	NotPetya attack	Equifax data breach

General Safety

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
1	<p>Arrange the steps involved in the hierarchy of hazard controls in order:</p> <ol style="list-style-type: none"> 1. Administrative controls 2. Substitution 3. Engineering controls 4. PPE 5. Elimination 	5,1,2,3,4	4,3,1,2,5	4,1,2,3,5	5,2,3,1,4
2	<p>The LD50 of four different compounds (A, B, C, and D) are 1000 ppm, 100 ppm, 500 ppm, and 2000 ppm, respectively. Which of these compounds is more toxic?</p>	A	B	C	D
3	<p>Men are at work in a room with an ambient temperature of 33 degrees Celsius. Calculate the WBGT index there if the wet bulb temperature and globe temperature readings are 30 degrees Celsius and 31 degrees Celsius, respectively.</p>	30.5	30	30.8	30.3
4	<p>Which is the IS code for industrial lighting?</p>	IS 6665	IS 4142	IS 2189	IS 6271

5	Which of the following is an engineering control method for reducing noise exposure?	Earplugs	Enclosures or barriers	Employee training and education	Job rotation
6	Which anthropometric measurement is crucial for designing office chairs? 1. Popliteal height 2. Body height 3. Sitting height	Only 2	Only 3	Only 2 and 3	1, 2, and 3
7	Which among the following statements about the Total Loss Control (TLC) technique is wrong ?	Reviewing claim data is one of the steps in TLC	TLC minimizes interruptions of services provided to the public	TLC provides more insurance claims to the workers	TLC minimizes the frequency and severity of accidents
8	As per the Factories Act, an internal examination of the pressure vessel needs to be conducted once a _____.	12 months	6 months	18 months	24 months
9	Which among the following is not an example of Hot work?	Welding	Grinding	Brazing	Painting

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10	The lost-time injury incidence rate is calculated by the formula _____.	No. of lost-time injuries*1000/average number of persons employed	No. of lost-time injuries*1000/average number of persons injured	No. of lost-time injuries with total disablement*1000/average number of people employed	No. of lost-time injuries with total disablement*1000/average number of persons injured								
11	Which among the following has the least chance of being considered a work injury?	Loss of a toe finger	Amputation through the shoulder joint	Absolute deafness	Hypertensive disease								
12	Which country did the Seveso disaster occur in?	France	Germany	Italy	Spain								
13	Match the following disasters with the compounds resulting in the disaster:	1-c, 2-b, 3-a	1-b, 2-a, 3-c	1-c, 2-a, 3-b	1-a, 2-c, 3-b								
	<table border="1"> <thead> <tr> <th>List I</th> <th>List II</th> </tr> </thead> <tbody> <tr> <td>1. Seveso Disaster</td> <td>a. Methyl Isocyanate</td> </tr> <tr> <td>2. Bhopal Gas Tragedy</td> <td>b. Dioxin</td> </tr> <tr> <td>3. Flixborough disaster</td> <td>c. Cyclohexane</td> </tr> </tbody> </table>	List I	List II	1. Seveso Disaster	a. Methyl Isocyanate	2. Bhopal Gas Tragedy	b. Dioxin	3. Flixborough disaster	c. Cyclohexane				
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14	<p>Which among the following is/are the objective(s) of the National Policy on Safety, Health and Environment at Workplace?</p> <ol style="list-style-type: none"> 1. Continuous improvement of workers lifestyle and giving incentives 2. Continuous reduction in the incidence of work related injuries, fatalities, diseases, disasters and loss of national assets 3. Continually increasing community expectation of workplace health and safety standards 4. Continuous enhancement of community awareness regarding safety, health and environment at workplace related areas 	Only 2, 3 and 4	1, 2, 3 and 4	Only 1 and 2	Only 3 and 4
15	<p>Arrange the steps of Training Needs Assessment (TNA) in its order:</p> <ol style="list-style-type: none"> 1. Data Collection 2. Implementation Strategy 3. Analysis Phase 4. Identifying Goals 5. Developing Solution 	4-1-3-5-2	3-5-1-4-2	2-3-5-1-4	1-4-3-5-2
16	<p>As per IS 2379, the ground colour used for the pipelines carrying water is _____.</p>	Sky blue	Canary Yellow	Sea Green	Dark Violet

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17	What is the fire load of 100 kg of paper kept in a 20 sq. m. room? Given that the calorific value of paper is 3732 kcal/kg.	373200	18660	37320	74640
18	Which of the following is an example of an inherently safer design strategy?	Use of high-pressure equipment	Substitution with less hazardous materials	Installation of multiple safety relief valves	Use of a large inventory of hazardous materials
19	Which among the following statements is wrong about an explosive hazardous substance capable of high energy release but hard to initiate?	The heat of decomposition is greater than 0.7 kcal/g	The reaction can or cannot be exothermic	The substance is sensitive to impacts	The substance is insensitive to impacts
20	Which among the following techniques helps to standardize the operation for easy monitoring, controlling, comfort, safety, and simultaneously ensuring more productivity and profit?	One Point Lessons	Safety Kaizen	Tool Box Talks	None of these
21	Which of the following is NOT a benefit of implementing a behaviour-based safety program?	Increased employee engagement in safety	Reduced injury rates	Improved safety culture	Elimination of all workplace hazards

22	Which among the following is a major advantage of using Management Information System (MIS) in Safety, Health and Environment?	MIS facilitates the tracking of safety metrics and performance indicators	MIS facilitates quick access to critical information during emergencies	MIS facilitates organizations to identify potential hazards	All of these
23	As per Frank Bird's 1969 theory, out of the total 641 events, only _____ may result in minor injuries and _____ in major injuries.	100, 10	30, 1	50, 5	75, 25
24	Which of these is NOT a key principle of Heinrich's Theory?	Preventing minor injuries prevents major ones	Unsafe acts are the primary cause of injuries	Management has direct control over safety	Adequate safety training is essential
25	How many clauses are there in ISO 45001?	9	10	8	11
26	Identify the elements of the '5S' system? 1. Support 2. Sort 3. Sustain 4. Standardize 5. Shine	2, 3, 4 and 5	1, 2, 3 and 4	Only 2, 3, and 4	Only 2 and 3

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27	_____ is a painful condition that occurs when the median nerve in the wrist is compressed.	Lumbago	Thoracic pain	Myofascial pain syndrome	Carpal tunnel syndrome
28	Out of the following tests on equipment, which are all non-destructive testing methods? 1. Radiography 2. Tensile testing 3. Dye penetrant 4. Ultrasound	Only 1 and 4	1, 2, and 4	1, 3, and 4	Only 1
29	Which of the following statements about JSA is WRONG ?	JSA is a proactive approach to identifying and mitigating workplace hazards	JSA can be used to develop safe work procedures and train employees	JSA needs to be conducted only for new or non-routine tasks	JSA is a qualitative technique

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30	<p>As per IS 18001, if an event that is very unlikely to happen and that is slightly harmful in nature occurs, the associated risk is _____.</p>	Trivial Risk	Moderate Risk	Tolerable Risk	Substantial Risk
31	<p>Which of the following statements is INCORRECT with respect to the storage of petroleum products as per the Petroleum Rules 2002 ?</p>	<p>Containers for petroleum Class A shall be constructed of tinned, galvanized or externally rustproofed sheet iron or steel</p>	<p>Normally the maximum capacity of a container storing Class A petroleum is 300 liters</p>	<p>Containers for petroleum Class B or petroleum Class C shall be constructed of steel or iron</p>	<p>An air space of not less than 3% of its capacity shall be kept in each container for petroleum Class A and B.</p>
32	<p>As per the Explosive Rules, 2008, Those explosives, which have a mass explosion risk and major missile effect, are categorized as _____.</p>	Category ZZ	Category Z	Category Y	Category X

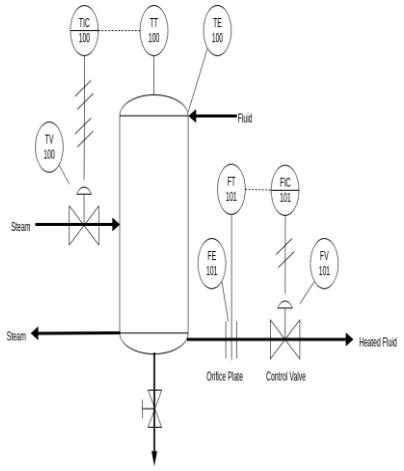
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33	<p>As per The Regulation 79 of The CEA Regulations 2023, the underground power cable meant for use exceeding 33 kV shall be laid with a minimum underground depth of _____ m and a minimum separation distance of _____ m with underground telecommunication cable.</p>	1.2, 0.3	1.2, 0.6	1, 0.5	1.6, 0.5
34	<p>Which of the following is NOT a requirement as per ISO 45001?</p>	Consultation and participation of workers	Documented information management	Compliance with legal and other requirements	Periodic external audits by an accredited certification body
35	<p>An equipment consists of three modules with constant failure rates of 0.002, 0.003 and 0.005. What is the mean time to failure of the equipment?</p>	1033 operating hours	200 operating hours	500 operating hours	100 operating hours

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36	Which of the following is a common anthropometric measurement?	Body mass index (BMI)	Heart rate	Blood pressure	Respiration rate
37	Which of the following is the correct order of airflow during inhalation?	Nose/mouth → pharynx → larynx → trachea → bronchi → bronchioles → alveoli	Nose/mouth → trachea → larynx → bronchi → bronchioles → alveoli → pharynx	Nose/mouth → pharynx → trachea → bronchi → alveoli → bronchioles → larynx	Nose/mouth → larynx → pharynx → trachea → bronchioles → bronchi → alveoli
38	What is the purpose of a safety interlock?	To prevent machine operation if a guard is open	To override safety features in an emergency	To adjust machine settings	To clean and maintain the machine
39	What is the purpose of a Deadman switch on a portable power tool?	To prevent accidental startup	To increase the tool's speed	To adjust the tool's settings	To hold the workpiece in place

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40	Which among the following are factors affecting SIL levels?	Consequence of failure	Probability of failure	Both consequence and probability of failure	None of these
41	Which among the following interpretations is wrong about the P & ID given image?	<p>There is a temperature control system for the vessel</p> 	<p>The temperature indicator control sends electrical signals to the temperature valve</p>	<p>Flow control system is also there for the vessel</p>	Flow indicator control is an instrument mounted on main panel

42	Which technique is commonly used for maintenance work to prevent the formation of an explosive atmosphere in a confined space ?	Venting	Explosion suppression	Flame arrestor	Purging and inerting
43	What is the primary purpose of conducting a pre-start review during a plant safety inspection?	Identify potential hazards before equipment is operated	Evaluate employee performance	Test emergency response procedures	Check compliance with regulations
44	Which of the following is NOT a key component of an effective Management Oversight and Risk Tree method?	Established policies and procedures	Regular monitoring and reporting	Corrective action plans	Frequent changes in personnel

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45	_____ is a Hazard Class 3 material.	Corrosive material	Infectious substance	Flammable Liquid	Radioactive material
46	In which method of hazard analysis a series of questions are asked?	HAZOP study	Checklist	What -if analysis	Failure mode & effect analysis
47	The written emergency information carried by the driver of all vehicles carrying hazardous substances is known as _____.	HAZCHEM	TREMCARD	Emergency Information Panel	None of the above
48	As per IS 17889, how many sections are provided in MSDS?	8	9	10	16
49	As per IS 17893, the original copy of work permit shall be kept by the issuer for a period of at least _____ days from the closure of permit.	15	20	30	365
50	Which color background on the hazard label signifies a substance that is water reactive according to UN Committee of Experts on the Transport of Dangerous Goods?	Orange	Red	Blue	Yellow
51	As per IS 9457, the shape of warning sign is _____.	Circular	Square	Triangular	Rectangular

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Oil & Gas Safety

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
1	What potential hazards are associated with tank cleaning in the context of crude oil storage?	Exposure to Heat	Risk of oxygen deficiency	Exposure to noise	Radiation hazard
2	How are potential hazards identified and recorded for each node in a HAZOP study?	Through detailed interviews with facility operators	Using Guidewords and Parameters systematically	By conducting random safety audits	By conducting random safety inspections
3	At what concentration of hydrogen sulphide (H2S) does immediate loss of consciousness and respiratory distress occur, based on Indian standard 15200?	150-200 ppm	300-400 ppm	>1,000 ppm	>1,200 ppm
4	What is the ground colour of acetylene cylinder as per IS4379:2021?	Red	Blue	Maroon	Orange
5	How should pressure relief valves be set when multiple valves are used in parallel?	All valves should be set at the maximum allowable working pressure (MAWP)	One valve should be set at or below the MAWP, and others can be set up to 10% over the MAWP	One valve should be set at or below the MAWP, and others can be set up to 5% over the MAWP	All valves should be set at 5% over the MAWP
6	What does Location Specific Individual Risk (LSIR) measure in the context of the LPG Bottling Plant?	The total number of hazards present in the plant area.	The risk exposure of personnel continuously present in a specific area for the entire year.	The probability of specific events occurring in the plant.	The overall safety culture of the plant.

7	At what temperature is LNG (liquefied natural gas) typically produced for safe long-distance transportation?	-20 °C	-80 °C	-100 °C	-162 °C
8	Which safety equipment is required for barges or flats transporting petroleum in bulk as per Petroleum Rules 2016?	Two fire extinguishers and a covered sand box with 0.10 cubic meters of sand	A white flag and a non-metallic hammer	Four fire extinguishers and a covered sand box with 0.20 cubic meters of sand	Six fire extinguishers and a covered sand box with 0.40 cubic meters of sand
9	When does combustion terminate?	When all the combustible substance has been consumed	When equilibrium is achieved between the total heat energies of the reactants and products	When the pressure of the mixture reaches a point that doesn't allow combustion	When the ignition temperature decreases below a combustion temperature
10	Which gas mixture can be produced when attempting to control heating by spraying or injecting water onto hot carbon?	Oxygen and nitrogen	Carbon dioxide and nitrogen	Carbon monoxide and hydrogen	Methane and oxygen
11	Which method of fire extinguishment involves removing the fuel from the fire?	Smothering the fire	Cooling the fire	Interrupting the chemical chain reaction	Starving the fire
12	Which type of sprinkler system is designed to supply water to all sprinkler heads simultaneously upon activation?	Wet pipe	Dry pipe	Pre-action	Deluge

13	What are the key components of sprinkler and water spray systems?	Small water storage tanks and firefighting trucks	Low-pressure hoses and manual pumps	Reservoir, pump, distribution pipes, sprinklers/distributors, and a detector system	Water droplets and foam extinguishers
14	As per MSIHC Rules, which of the chemical comes under "flammable liquids" ?	Liquids having a flash point 50°C	Liquids having a flash point 23 °C	Liquids having a flash point 60.5 °C	Liquids with a flashpoint above 100 °C
15	Which ministry is responsible for coordinating activities related to chemical disasters in India?	Ministry of Civil Aviation	Ministry of Chemical and Fertilizers	Ministry of Environment, Forest and Climate Change	Ministry of Home Affairs
16	Who chairs the National Crisis Management Committee (NCMC)?	Secretary, Ministry of Home Affairs	Director of Intelligence Bureau	Cabinet Secretary	Prime Minister
17	Which of the following statements about pyrophoric substance is true?	They are not dangerous when stored properly	They can be controlled easily	They are highly reactive and can ignite spontaneously in air	They are only used in laboratory settings
18	As per OISD 214, the scrapper pig test for LPG pipelines need to be conducted once in every _____.	year	5 years	6 months	2 years

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19	The cooling water rate requirement for a floating roof tank as per OISD 116 is _____.	@3 lpm/sq. m of tank shell area	@5 lpm/sq. m of tank shell area	@10.2 lpm/sq. m of tank shell area	@12 lpm/sq. m of tank shell area
20	Calculate the cooling water requirement for a cone roof tank of diameter 50 m and height 10 m.	5100π	1500π	2500π	1875π
21	Which of the following is NOT listed as a degradation mechanism affecting aging assets and equipment in the oil and gas industry?	Corrosion-related mechanisms	Obsolescence of equipment	Rapid burn degradation mechanisms	Erosion, wear, fatigue, or cracking mechanisms
22	The question below consists of two statements 1 and 2, on Hydrogen sulphide toxicity. Read them and choose the correct option for selecting the correct answer: Statement 1: Hydrogen sulphide toxicity is easy to diagnose as it is a colourful gas with a rapidly sensitizing scent. Statement 2: The treatment for Hydrogen sulphide toxicity should begin promptly as hydrogen sulphide toxicity can be rapidly decompensating and ultimately ensue in death.	Only Statement 1 is correct.	Only Statement 2 is correct.	Both statements are correct.	Both statements are incorrect

23	Which statement accurately describes Class 6 substances according to UN Committee of Experts on the Transport of Dangerous Goods?	They include substances that emit dangerous radiations.	These substances cause severe damage by chemical action.	They are substances that reacts highly with oxygen present in the air.	They are substances liable to cause death or serious health injuries.
24	What is the fundamental characteristic of pool fire?	High initial momentum	Diffusion combustion above a vertical fuel surface	Explosive combustion process	Diffusion combustion above a horizontal fuel surface
25	Nitrogen/ inert gas or other compressed gases used for _____.	mixing	purging	draining	leaking
26	During Unit Start-up, all the air shall be purged with inert gas, steam, water etc. and the system should be tested _____ of oxygen.	mix	inert	free	contaminated
27	In a refinery _____ type safety shoes should be worn while gauging, sampling or taking temperatures.	Heat resistant	Light weight	water proof	conductive
28	In a refinery, sampling shall be carried out as per provisions of _____ Quality Control Manual.	Plant	Unit	Government	Industry
29	The capacity of Fire Engine Fuel Tank shall be designed for _____.	4 Hours Continuous Running at the Desired Head and discharge	6 Hours Continuous Running at the Desired Head and discharge	3 Hours Continuous Running at the Desired Head and discharge	2 Hours Continuous Running at the Desired Head and discharge

30	Minimum separation distance between mounded LPG storage vessel and firewater pump house and / or Firewater tank shall be _____ meters.	15	30	45	50
31	What is the frequency of physical testing of high level alarm on LPG storage vessel _____.	Quarterly	Six monthly	Yearly	Monthly
32	How many emergencies are classified under ERDMP regulations 2010?	1	2	3	4
33	As per ERDMP Regulation 2010, for Emergency Level 2, a duration of siren is for _____.	Depending upon complexity of installation	2 minutes wailing	2 minutes plus gap of 1 minute repeated 3 times	2 minutes straight run

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Environment

Q. No.	Question	Option 1	Option 2	Option 3	Option 4
1	Which component of an Environmental Management System (EMS) involves setting environmental objectives and targets?	Environmental policy	Environmental audit	Environmental planning	Environmental monitoring
2	Which authority is regulated the Air pollution control activity at union territory?	CPCB	SPCB	MoEF&CC	NDMA
3	What is the permissible noise level (in decibels) for residential areas during the daytime under the Noise Pollution Rules 2000?	45 dB	55 dB	65 dB	75 dB
4	Which of the following does NOT fall under the definition of "Trade Effluent" provided under the Water Act of 1974?	Liquid, gaseous or solid substance from any operation or process	Liquid, gaseous or solid substance from treatment and disposal system	Domestic sewage	Gaseous or solid substance from an industry
5	Which body can take punitive action with respect to illegal release of hazardous microorganism under the Environmental Protection Act at state level?	State Genetic Engineering approve committee	Institutional biosafety committee	Review committee on genetics manipulation	State Biotechnology Co-ordination Committee
6	According to the MSIHC Rules 1989, what is the primary objective of conducting a Hazard and Operability Study (HAZOP)?	Identifying potential safety hazards and risks associated with industrial processes	Developing emergency response plans for industrial accidents	Evaluating the financial implications of safety measures implementation	Determining the environmental impact of industrial operations

7	According to the MSIHC Rules 1989, what is the frequency of updating the safety report?	1	2	3	5
8	In accordance with Section 40 of the Air Act 1981, when an offence is committed by a company, _____ shall be deemed to be guilty of the offence and shall be liable to be against and published accordingly.	Only the company	Depend on the facts and circumstances of the case	Every person, who at the time the offence was committed, was directly in charge of the company for the conduct of the business of the company and the company itself.	Only the person(s) who at the time offence was committed was directly in charge of the company or the conduct of the business of the company.
9	What is NOT a role of state pollution control boards (SPCBs) in contributing to air pollution control strategies under the Air Act, 1981?	Developing and implementing air quality management plans	Promoting public awareness campaigns on air pollution prevention	Monitoring ambient air quality through a network of monitoring stations	Administering financial incentives to industries for adopting cleaner technologies
10	Which component of a Sewage Treatment Plant (STP) is responsible for the removal of suspended solids and sediments from wastewater?	Clarifier	Aeration tank	Trickling filter	Pressure filter
11	Which one of the following is the white category of Biomedical Waste Management Rules, 2016 in India?	Microbiology, Biotechnology and other clinical laboratory waste	Contaminated Waste (Recyclable)	Glassware	Waste Sharps including metals

12	What is the main objective of implementing ISO 50001 in an organization?	To enhance product quality	To promote water conservation	To increase production	To reduce energy consumption and costs
13	What is the cause of bulking of sludge?	Growth of filamentous bacteria	Low pH levels	Bacteria in primary sludge tank	Uncontrolled growth of algae
14	Identify correct statement about the Centrifugal collector.	It can remove gaseous and particulate contaminants	Dynamic precipitator is a type of Centrifugal collector	It has higher efficiency in comparison to ESP	It need height electricity supply
15	Which among the following is the goal of solid waste incineration? (i) Volume increment (ii) Volume reduction (iii) Stabilization of waste (iv) Recovery of energy from waste (v) Sterilization of waste	Only (i) and (iv)	Only (iii) and (iv)	(ii), (iii), (iv) and (v)	Only (ii) and (iv)
16	Arrange the following environmental management concept in the descending order of their importance (most important to least important). (i) Waste Disposal (ii) Pollution Control (iii) Reuse (iv) Waste minimization	(i), (ii), (iii), (iv)	(iv), (iii), (ii), (i)	(iii), (iv), (ii), (i)	(iii), (iv), (i), (ii)

NATIONAL SAFETY COUNCIL OF INDIA

17	If a sewage sample incubated at 20°C for 5 days at 3% solution results in a 3 ppm depletion of oxygen, the BOD of sewer is _____. _____.	250 ppm	170 ppm	70 ppm	100 ppm
18	Which air pollution control device is commonly used to reduce sulphur dioxide (SO ₂) emissions from coal-fired power plants?	Wet scrubber	Electrostatic precipitator	Baghouse filter	Catalytic converter
19	How many missions have been identified under the National Action Plan on Climate Change (NAPCC) by Govt of India released on 30th June 2008?	5	8	11	3
20	As per Rule 8 of Hazardous and Other Wastes Rules 2016, Small Quantity Generator (up to ten tonnes per annum) of Hazardous waste can store in its premises for how many days without special permission?	365 days	90 days	180 days	500 days
21	Name the special judicial body that was established by law passed in 2010 to hear environmental cases at national level?	National Appellate Authority	National Green Tribunal	Comptroller and Auditor General	None of these

NATIONAL SAFETY COUNCIL Q

Answer Key

General Aptitude: -

Q. No.	1	2	3	4	5	6	7	8	9	10
Correct Option	2	3	1	1	2	4	3	1	4	1

Q. No.	11	12	13	14	15	16	17	18	19	20	21
Correct Option	3	1	2	2	2	3	1	3	4	1	2

General Safety: -

Q. No.	1	2	3	4	5	6	7	8	9	10
Correct Option	4	2	4	1	2	4	3	1	4	1

Q. No.	11	12	13	14	15	16	17	18	19	20
Correct Option	4	3	2	1	1	3	2	2	3	2

Q. No.	21	22	23	24	25	26	27	28	29	30
Correct Option	4	4	2	3	2	1	4	3	3	3

Q. No.	31	32	33	34	35	36	37	38	39	40
Correct Option	4	2	2	4	4	1	1	1	1	3

Q. No.	41	42	43	44	45	46	47	48	49	50	51
Correct Option	2	4	1	4	3	3	2	4	3	3	3

Oil & Gas Safety: -

Q. No.	1	2	3	4	5	6	7	8	9	10
Correct Option	2	2	3	3	3	2	4	3	2	3

Q. No.	11	12	13	14	15	16	17	18	19	20
Correct Option	4	4	3	3	3	3	3	1	1	2

Q. No.	21	22	23	24	25	26	27	28	29	30	31	32	33
Correct Option	3	2	4	4	2	3	4	4	2	2	3	3	2

Environment: -

Q. No.	1	2	3	4	5	6	7	8	9	10
Correct Option	3	1	2	3	4	1	3	3	4	1

Q. No.	11	12	13	14	15	16	17	18	19	20	21
Correct Option	4	4	1	2	3	2	4	1	2	2	2

General Aptitude

S.No	Question	Choice 1	Choice 2	Choice 3	Choice 4
1	Which of the following is a synonym for the word "abundant"?	Scarcity	Limited	Rare	Plentiful
2	Fill in the blank according to the passage: They already _____ a lot of food on platter, when waiter asked for more pasta.	had	take	have	bought
3	Fill in the blank according to the passage: How _____ you pay the rent with no job?	should	had	will	are
4	Find the appropriate meaning of the highlighted phrase: "I have decided to see the project through come what may ."	To give up on the project	To continue with the project regardless of difficulties	To delegate the project to someone else	To postpone the project
5	Find the appropriate meaning of the highlighted phrase: "After a long day of hiking, Sarah was on cloud nine as she watched the sunset from the mountaintop."	Feeling tired and exhausted	Feeling indifferent and uninterested	Feeling disappointed and upset	Feeling euphoric and extremely happy
6	Convert the sentence into indirect speech. Martin asked her teacher, "When is the assignment due?"	Martin asked her teacher when would the assignment be due.	Martin asks her teacher when the assignment is due.	Martin asked her teacher when the assignment would be due.	When is the assignment due? Is asked by Martin.
7	Arrange the sentences given below in a meaningful sequence. 1. where vibrant colours blended with the cacophony of diverse cultures, 2. painted against the canvas of time. 3. Amidst the bustling city streets, 4. each moment, a snapshot of human experience	1<2<4<3	3<2<1<4	1<4<3<2	3<1<4<2
8	N is the husband of E. W is the mother of N. How is W related to E?	Daughter in law	Daughter	Mother	Mother in Law
9	Find the next term of the series: 11, 47, 89, 137, 191, ...	261	251	241	271
10	Prabhash is standing 20 m north of Sumit, who is standing 15 m west of Rahul. Pappu is standing 20 m south of Rahul, who is 15 m east of Somesh. In which direction and how far is Prabhash from Somesh?	South, 35 m	South, 40 m	North, 35 m	North, 40 m
11	Arrange the following words in a meaningful sequence 1. Frog, 2. Grass, 3. Grasshopper, 4. Eagle, 5. Snake	2, 3, 1, 5, 4	3, 2, 1, 4, 5	2, 1, 3, 4, 5	4, 5, 1, 3, 2
12	The day before yesterday was Saturday. What will be the day after tomorrow?	Thursday	Friday	Wednesday	Monday
13	Which leadership skill involves the ability to inspire and motivate team members towards a shared vision or goal?	Technical expertise	Delegation	Communication	Coaching and mentoring
14	You are assigned a new team in order to build positive relationships and enhance team effectiveness. Which key skill will you require?	Emotional intelligence	Time management	Decision-making	Conflict resolution
15	A team leader consistently addresses disagreements and misunderstandings in a constructive manner. What leadership skill is exemplified in the scenario?	Strategic thinking	Problem solving	Adaptability	Active communication
16	A critical task has been assigned to your team that requires strong coordination, quick decision-making, and efficient problem-solving. What leadership skill should you primarily focus on to ensure the success of the project?	Technical expertise	Delegation	Communication	Conflict resolution
17	Which of the following is an example of a spreadsheet software?	MS Excel	Powerpoint	MS Word	Paint
18	Watson needs to collaborate with her team members who are _____.	Web search engine	Augmented	Cloud computing	Artificial Intelligence (AI)
19	In a presentation of a power point, special effects used to introduce slides is,	Animation	Transition	Anotation	None of the above
20	The error value corresponding to the Excel expression =0/0 is;	NULL	Zero	Infinity	None of the above

General Safety

S.No.	Question	Option 1	Option 2	Option 3	Option 4																				
1	What is the term used to describe the process of evaluating the severity (seriousness) and probability of risks?	Risk Assessment	Probability Estimation	Hazard Identification	Incident Investigation																				
2	What is the name of gas leaked from LG Polymers at Visakhapatnam on 7 th may 2020?	Chlorine	Styrene	Methyl Isocynate	Ammonia																				
3	What is the main objective of taking into account criteria for the location and arrangement of chemical plants?	Increasing Earnings	Ensure safety, environmental protection, and operational efficiency	Reduce Regulating Compliance	Reduce Transportation Expenses																				
4	What does VOC stand for in the context of nitrogen blanketing?	Volatile Oxygen Components	Volatile Organic Compounds	Ventilation of Oxygen Concentration	Viscosity of Organic Chemicals																				
5	Which of the following is NOT a common application of pressure vessels?	Air conditioning units	Steam boilers	Propane grills	Water heaters																				
6	If a gas cylinder has yellow colour band at its neck end, Which gas contains in it?	Non flamable and non toxic	Flammable but toxic	Flammable and non toxic	Non flammable but toxic																				
7	What kind of details are usually incorporated into a safety checklist?	Safety Precautions and Procedures	Equipment Purchase Dates	Task Deadlines	Employee Salaries																				
8	What is the primary purpose of analyzing near-miss incidents?	Assigning blame to persons involved	Demonstrating the effectiveness of safety systems	Learning from potential hazards and preventing future accidents	Playing down the impact of small incidents																				
9	How is the Severity Rate (SR) calculated?	(Total number of incidents / Total hours worked) x 200,000	(Total Man-days lost due to injuries / Total Man-hours worked) x 100,000	(Total number of accidents / Total number of employees) x 100	(Total number of near-miss incidents / Total hours worked) x 100,000																				
10	Which Indian Standard (IS) is used for analysis of accidents?	IS3786	IS5216	IS5327	IS5557																				
11	What is correct sequence of hierarchy of control?	Elimination, Substitution, Engineering control, Administrative & PPE	PPE, Substitution, Engineering control, Elimination	Engineering Control, Substitution, Elimination, PPE	Substitution, PPE, Elimination, Engineering control																				
12	Match the Following in Column A with their description in Column B	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <th>Column A</th> <th>Column B</th> </tr> <tr> <td>1. Identify Hazards</td> <td>a. Putting designed control measure into practice</td> </tr> <tr> <td>2. Determine Control Measures</td> <td>b. Identifying potential sources of danger</td> </tr> <tr> <td>3. Implement Controls</td> <td>c. Proposing strategies to mitigate or eliminate hazards</td> </tr> </table>	Column A	Column B	1. Identify Hazards	a. Putting designed control measure into practice	2. Determine Control Measures	b. Identifying potential sources of danger	3. Implement Controls	c. Proposing strategies to mitigate or eliminate hazards	1-a, 2-c, 3-c	1-c, 2-b, 3-a	1-b, 2-a, 3-c												
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1. Identify Hazards	a. Putting designed control measure into practice																								
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13	Which Indian standard is referred for conducting safety audit?	IS3786	IS14489	IS15793	IS45001																				
14	What control method entails making physical changes to the workplace environment or equipment in order to lessen or remove hazards?	Administrative Controls	Substitution	Changing the Process	Engineering Controls																				
15	What is the unit of measurement of illumination?	Lux	Decibel	Ampere	None of the above																				
16	What is the maximum permissible noise level limit in a factory for 8 hours duration?	60dB	75dB	115dB	85dB																				
17	How would you categorize lung diseases that result from inhaling workplace dust particles like coal dust?	Pneumonia	Asthma	Pneumoconiosis	Bronchitis																				
18	In a man-machine environment system, what is the key aspect?	Isolating humans from machine interaction	Eliminating the need for human intervention	Optimizing collaboration between humans and machines to accomplish tasks	Reducing the complexity of machines to make them user-friendly																				
19	Repetitive motion injuries are caused by _____ exposure to a combination of factors.	Short	Prolonged	Immediate	Intermittent																				
20	The Model Rules prescribe the maximum permissible weight to be manually lifted by an adult worker without assistance. What is this weight?	15 kilograms	20 kilograms	55 kilograms	30 kilograms																				
21	Electric equipment shall have danger notice with a sign of skull and bones, if voltage exceeds.....	100V	150V	250V	440V																				
22	What is prescribed training period for the drivers carrying hazardous goods by road under the Rule 9 of the Central Motor Vehicle Rules, 1989.	1 Day	2 Days	3 Days	4 Days																				
23	The Public Liability Insurance Act, 1991 applies to?	All industries in India	Industries dealing with hazardous substances listed in the act	Industries operating in rural areas	Only industries with foreign investment																				
24	Among the following topics, which is addressed by ILO Conventions and Recommendations?	Space exploration techniques.	Cooking recipes for international cuisines.	Equal pay for equal work.	Methods of artistic expression.																				
25	Which ISO standard is applicable for environmental management system?	ISO 9001	ISO 14001	ISO 27001	ISO 45001																				
26	Which aspect of the oil industry does OISD primarily focus on?	Exploration techniques	Market analysis	Health and safety	Taxation policies																				
27	Which act led to the establishment of PNGRB (Petroleum and Natural Gas Regulatory Board) in India?	Oil and Gas Regulatory Act, 2005	Petroleum Control and Regulation Act, 2003	Petroleum and Natural Gas Regulatory Board Act, 2006	Energy Sector Regulation Act, 2010																				
28	As per the Factories Act 1948, all lifting appliances are thoroughly examined by Competent Person at least once in a period of (.....) months.	6	12	24	48																				
29	As per the Hazardous area classification which is the highest hazardous zone?	Zone 0	Zone 1	Zone 2	Zone 1 & 2																				
30	As per Gas Cylinder Rules 2016, a 'Gas cylinder' means any closed metal container having a volume exceeding (....) ml but not exceeding (....) liters intended for the storage and transport of compressed gas.	100, 2000	500, 1000	200, 500	100, 1000																				
31	The Public Liability Insurance Act was notified in year (....)	1948	1986	1923	1991																				
32	Display of emergency information panel is a mandatory on the vehicles carrying hazardous goods under (.....)	Factories Act	Motor Transport Workers Act	Air Act	Central Motor Vehicles Act																				
33	At what minimum depth the underground cable of voltage exceeding 33 kV shall be laid?	1.2 m	1 m	0.8 m	0.5 m																				
34	What is the time period of a periodical inspection and testing of electrical installations of voltage above 650 V by the electrical inspector as per the CEA Regulations 2010?	5 Years	15 Years	7 Years	10 Years																				
35	Chemical reaction in which heat is absorbed is called as;	Endothermic	Exothermic	Neutral	None of the above																				
36	Carbon dioxide gas extinguishes fire mainly by _____ principle	cooling	starvation	smothering	evaporation																				
37	What safety mechanisms are employed to avoid unintended or repeated press strokes in power presses?	Anti-repeat controls	Noise reduction systems	Two-hand controls	Vibration dampers																				
38	Identify the most effective risk control measure related to use of power tool from the statements given.	use of battery powered tool	inspecting tool before use	use hand gloves to minimise vibration	use of tool tie to avoid dropping of tools																				
39	What is the main objective behind incorporating safe distances into the design of plant layouts?	Improving Visual Appeal	Ensuring Operational Safety	Lowering maintenance expenses	Increasing storage capacity																				
40	Which precautionary step is effective in avoiding unintentional activation of electrical systems while performing maintenance tasks?	Arc Flash Protection	Lockout and Tagout	Grounding Methods	Electrostatic discharge																				
41	Match the following Overload and Short Circuit Protection types with their definition.	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <th colspan="2">Left side:</th> <th colspan="2">Right side:</th> </tr> <tr> <td>a. Circuit Breakers,</td> <td>1. Monitors the difference between incoming and outgoing currents to detect short circuits.</td> <td>a-2, b-4, c-3, d-1</td> <td></td> </tr> <tr> <td>b. Fuses,</td> <td>2. Monitors temperature and trips the circuit in case of overheating.</td> <td>a-1, b-2, c-3, d-4</td> <td></td> </tr> <tr> <td>c. Thermal Overload Relays,</td> <td>3. Melts when current exceeds a certain threshold, breaking the circuit.</td> <td></td> <td>a-4, b-3, c-2, d-1</td> </tr> <tr> <td>d. Differential Current Protection,</td> <td>4. Automatically disconnects the circuit when current exceeds a safe limit.</td> <td></td> <td>a-4, b-2, c-3, d-1</td> </tr> </table>	Left side:		Right side:		a. Circuit Breakers,	1. Monitors the difference between incoming and outgoing currents to detect short circuits.	a-2, b-4, c-3, d-1		b. Fuses,	2. Monitors temperature and trips the circuit in case of overheating.	a-1, b-2, c-3, d-4		c. Thermal Overload Relays,	3. Melts when current exceeds a certain threshold, breaking the circuit.		a-4, b-3, c-2, d-1	d. Differential Current Protection,	4. Automatically disconnects the circuit when current exceeds a safe limit.		a-4, b-2, c-3, d-1			
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42	What classification of workplace hazard encompasses elements such as noise, extreme temperatures, and ergonomic stressors?	Chemical Hazards	Mechanical Hazards	Biological Hazards	Physical Hazards																				
43	The purpose of a lock-out/tag-out procedure is to;	Improve productivity	Prevent harmful energy source	Slow down work	Save money																				
44	SCBA stands for	Self Closing Body Apparatus	Self Control Body Apparatus	Self Contained Breathing Apparatus	Self Contained Body Apparatus																				
45	Which of the following statements is true about the Job Safety Analysis (JSA)?	JSA focuses on Work area, Men, Machine and Tools	JSA focuses on Men, Machine, Material and Tools	JSA focuses on Work Area, Material, machine and Tools	JSA focuses on Men, Work area, Material and Tools																				
46	Match the following question with correct answers on safety, education and training.	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <th colspan="2">Left side:</th> <th colspan="2">Right side:</th> </tr> <tr> <td>a. Safety education and training,</td> <td>1. Simulation of emergency situation and evaluate employees response</td> <td>a-2, b-1, c-3</td> <td></td> </tr> <tr> <td>b. Reinforcement of safety practices among employees by;</td> <td>2. Promoting safety conscious culture and minimizing workplace hazards.</td> <td>a-2, b-3, c-1</td> <td></td> </tr> <tr> <td>c. Major goal of safety drill.</td> <td>3. Regular safety training sessions and workshops</td> <td></td> <td>a-1, b-2, c-3</td> </tr> </table>	Left side:		Right side:		a. Safety education and training,	1. Simulation of emergency situation and evaluate employees response	a-2, b-1, c-3		b. Reinforcement of safety practices among employees by;	2. Promoting safety conscious culture and minimizing workplace hazards.	a-2, b-3, c-1		c. Major goal of safety drill.	3. Regular safety training sessions and workshops		a-1, b-2, c-3			a-2, b-3, c-1				
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47	What purpose does data processing serve within an MIS?	Collection of data from various sources	To store processed data in databases	To organize, sort, and transform data into meaningful information	To generate reports and dashboards																				
48	Risk is defined as;	Probability X Hazard	Accident X Probability	Probability X Consequences	Consequences X Hazard																				
49	Which of the following is/are physical hazard agent(s)	Falls	Electricity	Noise	All of these																				
50	ABC in the First	Airway, Bandage and Call medical emergency	Airways, Breathing and Circulation	Ambulance, Bandage and Circulation	Airway, Breathing and Call medical emergency																				

Oil and Gas

S. No.	Item/Question	Option 1	Option 2	Option 3	Option 4
1	Which of the following hazards in the Oil and Gas industry can not be mitigated by implementing "permit-to-work" systems?	Noise-induced hearing loss	Fires and explosions	Slips, trips, and falls	Confined space entry accidents
2	What role does a closed-loop sampling system play while collecting samples of highly volatile hydrocarbons from a high-pressure pipeline in the oil and gas industry?	It increases the sampling frequency, allowing for better data accuracy.	It allows for the use of any type of hand tools without the risk of sparking.	For preventing accidental release or exposure.	It reduces the need for safe distance from electrical equipment during sampling.
3	Which sequence correctly represents the safe handover process for a high-pressure pump scheduled for maintenance?	Isolating, Purging, Draining, Depressurizing, Cleaning	Depressurizing, Draining, Purging, Isolating, Cleaning	Draining, Depressurizing, Isolating, Purging, Cleaning	Depressurizing, Isolating, Draining, Purging, Cleaning
4	Which of the following is an important consideration when designing storage layouts for atmospheric venting?	The velocity of wind in the storage area	The color of storage containers	The weight of the storage materials	The cost of storage materials
5	What is the primary purpose of a relief valve in the storage and handling of hazardous chemicals and industrial gases?	To regulate the flow rate of chemicals and gases in the system.	To prevent overpressure and ensure safe operation by releasing excess pressure.	To control the temperature of stored chemicals and gases.	To reduce the size of storage tanks required for hazardous materials.
6	Which of the following actions will best maintain electrical continuity and resistance in the grounding and bonding system, hence decreasing the risk of a static discharge igniting a flammable atmosphere?	Frequent replacement of bonding and grounding cables.	Employing larger diameter cables for grounding and bonding.	Regular inspection and cleaning of all connection points.	Using the highest resistance possible in grounding and bonding cables.
7	Suppose a storage tank contains a blend of crude oil and a flammable hydrocarbon solvent. What will happen if this blend comes into contact with Sodium Hypochlorite (NaOCl)?	Formation of a less volatile compound	Initiation of a polymerization reaction	Precipitation of Sodium Chloride	Generation of Chlorine Gas
8	Which of the following gas leak detection methods provides the highest sensitivity and real-time monitoring capabilities?	Ultrasonic Leak Detection	Flame Ionization Detector (FID)	Infrared Gas Imaging	Catalytic Bead Sensor
9	What practices should be followed for safe storage of LPG, considering factors like pressure-temperature relationships, leak sources, and storage vessel conditions?	Regularly reducing storage pressure to minimize the quantity of LPG that could leak during an accidental release.	Storing LPG in high-volume storage vessels to minimize the frequency of storage transfer operations.	Encouraging the use of personal protective equipment (PPE) only when there is a significant risk of leak or spill.	Adopting a rigorous inspection and maintenance schedule for storage vessels, pressure relief devices, and associated equipment.
10	Which risk mitigation strategy is most appropriate to minimize the consequences of an unexpected leak in a petroleum tanker truck during transportation?	Emergency Shutdown System (ESD) with Remote Activation	Increased Driver Training on Defensive Driving Techniques	Advanced GPS Tracking for Real-time Monitoring	Regular Vehicle Maintenance and Inspection Protocols
11	Which fail-safe system improvement can best reduce human error potential in petroleum product transportation?	Enhancing physical robustness of the transport vessel	Incorporating an automatic shutdown feature	Increasing security measures against external threats	Regularizing manual safety inspections
12	In which process a fire is initiated due to the exothermic oxidation of a substance, releasing heat and leading to a self-sustained combustion process?	Pyrolysis Theory	Spontaneous Combustion Theory	Flame Propagation Theory	Fire Tetrahedron Theory
13	Which specific zone is characterized by the stoichiometric ratio, representing the perfect balance between fuel and oxygen for complete combustion, and consequently exhibits the highest flame temperature?	Ignition zone	Pre-heat zone	Reaction zone	Cool-down zone
14	Which of the following fire protection measures is considered the last line of defence when all other primary and secondary measures have failed?	Fire-resistant construction materials	Automatic fire detection and alarm systems	Firewater spray system	Fire fighting foam and chemical agents
15	Which fire protection classification is best suited for areas with the highest fire risk, such as processing units and storage areas?	Portable water-based systems	Fixed non-water-based systems	Fixed water-based systems	Portable non-water-based systems
16	Which fire extinguishing agent would be the most appropriate choice for effective suppression while minimizing damage to the equipment?	Dry Chemical Powder (DCP)	Carbon Dioxide (CO2)	Foam	Clean Agent (HFC-227ea)
17	Which method of entry employs the principle of "pressure demand" and provides the highest level of respiratory protection for firefighters?	Self-Contained Breathing Apparatus (SCBA)	Air Purifying Respirator (APR)	Supplied Air Respirator (SAR)	Powered Air-Purifying Respirator (PAPR)
18	What ventilation system in the industry uses controlled clean air introduction to maintain higher internal pressure, preventing smoke and contaminants from entering?	Exhaust ventilation	Supply ventilation	Recirculating ventilation	Pressurization ventilation
19	What distinguishes deflagration and detonation in terms of flame speed, shock wave formation, and energy release rate?	In deflagration, the flame speed is supersonic, while in detonation, it is subsonic.	Detonation creates shock waves, while deflagration doesn't produce any shock waves.	The energy release rate in a detonation is uniform, while in deflagration, it is variable.	Deflagration produces a higher energy release rate compared to detonation.
20	How does an understanding of personnel's cognitive and behavioural responses under stress influence the design and execution of evacuation procedures?	It assists in determining the safety equipment required	It helps in establishing the duration for periodic emergency drills	It influences the evacuation routing and movement strategies	It aids in identifying potential hazardous materials on site
21	When considering practical methods for designing evacuation passages and exits in emergency response, which factor ensures a smoother flow of people during an evacuation?	Incorporating multiple narrow exits spaced evenly apart.	Designing passages that merge into a single, wider main exit.	Introducing sharp turns and corners in the passage design.	Ensuring even flooring with minimal obstructions.
22	Which disaster response stage involves improving agency capacity, conducting drills, and securing resources?	Preparedness	Mitigation	Response	Recovery
23	As per the Disaster Management Act of 2005 in India, which of the following accurately describes the hierarchical functioning of disaster management authorities?	National Disaster Management Authority (NDMA) > State Disaster Management Authority (SDMA) > District Disaster Management Authority (DDMA)	State Disaster Management Authority (SDMA) > National Disaster Management Authority (NDMA) > District Disaster Management Authority (DDMA)	District Disaster Management Authority (DDMA) > State Disaster Management Authority (SDMA) > National Disaster Management Authority (NDMA)	National Disaster Management Authority (NDMA) and State Disaster Management Authority (SDMA) advise, while District Disaster Management Authority (DDMA) makes all policy decisions.
24	What is the highest level of emergency prescribed under the Petroleum and Natural Gas Regulatory Board (Codes of Practices for Emergency Response and Disaster Management Plan (ERDMP)) Regulations, 2010?	Level I	Level - II	Level - III	Level - IV
25	What is the frequency for conducting onsite mock drill for level I & II emergency stated under the Petroleum and Natural Gas Regulatory Board (Codes of Practices for Emergency Response and Disaster Management Plan (ERDMP)) Regulations, 2010?	Once in 3 months	Once in a 6 months	Once in a 12 months	Once in a 18 months
26	OISD-STD-105 deals with;	Pressure relief and disposal system	Oil storage and handling	Work permit system	Layouts for oil and gas installations
27	As per Petroleum and Natural Gas Regulatory Board (Codes of Practices for Emergency Response and Disaster Management Plan (ERDMP)) Regulations, 2010, the emergency siren code of straight run for 2 minutes is specified for	Level I emergency	Level II emergency	Testing of siren	None of these
28	for butane gas emission the sensor of Gas Detection System should be located	below the probable leak source	above the probable leak source	Anywhere	None of these
29	Which of the following legislation specifies minimum safety distances between the pressure vessels?	Factories rules	Environment (protection) rules	Petroleum rules	Gas cylinders rules
30	How static electricity can be controlled for pipelines carrying hydrocarbons	Bonding & grounding	Earthing	Lightning arrester	None of these

Environment

S. No.	Question	Choice 1	Choice 2	Choice 3	Choice 4
1	What is the primary objective of the State Pollution Control Board (SPCB) as per the Water (Prevention and Control of Pollution) Act, 1974?	Finance the water conservation projects	Groundwater extraction	Implement water conservation	Control water pollution
2	Which of the following activities would require a 'consent to operate' from the State Pollution Control Board (SPCB) under the Air Act, 1981?	Setting up a small-scale industry	Household cooking using LPG	Public transportation using electric vehicles	Planting trees in urban areas
3	Which of the given options represents the purpose of the Public Liability Insurance Act?	To regulate the use of public spaces for commercial activities	To regulate the import and export of hazardous chemicals	To promote public awareness about environmental protection	To ensure liability coverage for damage caused by pollution
4	Mark Industries, a major manufacturing company, operates in a state where strict regulations under the Water and Air Acts. Which of the following roles is likely to be carried out by the State Pollution Control Board (SPCB)?	Monitoring local transportation routes	Regulating the emission of pollutants from the Industries	Ensuring proper waste disposal at households	Managing public parks and recreational areas
5	A major industrial plant in the state is suspected of releasing toxic pollutants into the air. What would likely be the course of action of state pollution control board?	Focus solely on promoting tourism in the region	Ignore the situation as it's beyond their scope	Wait for public complaints before taking any action	Conduct an investigation and take necessary regulatory actions
6	Which waste management technique can lead to soil pollution?	Landfilling	Composting	Recycling	Reusing
7	The local environmental authorities have mandated the implementation of a Common Effluent Treatment Plant (CETP) in the industrial area. How will CETP contribute to environmental protection?	By allowing industries to bypass wastewater treatment regulations	By concentrating all industrial wastewater at a single point of discharge	By releasing treated effluents without any monitoring	By increasing pollution levels in the water body
8	Which of the following symbol is found in label of bio hazardous waste materials?				
9	Which of the following is the correct group of greenhouse gases?	Oxygen (O ₂), Nitrogen (N ₂), Carbon Dioxide (CO ₂), Sulphur Dioxide (SO ₂)	Carbon Dioxide (CO ₂), Methane (CH ₄), Oxygen (O ₂), Nitrogen (N ₂)	Hydrogen (H ₂), Nitrous Oxide (N ₂ O), Water Vapour (H ₂ O), Carbon Monoxide (CO)	Carbon Dioxide (CO ₂), Methane (CH ₄), Nitrous Oxide (N ₂ O), Ozone (O ₃)
10	Which type of light is considered to be the most energy efficient?	Halogen bulbs	LED bulbs	CFL bulbs	Incandescent bulbs
11	Which of the following are key elements of the energy management system ISO 50001?	Energy policy, energy planning, and energy performance evaluation	Quality management, safety management, and financial management	Energy efficiency, waste reduction, and resource conservation	Employee training, product marketing, and customer relations
12	Which of the following is the essence of Sustainable Operations Management?	Short-term profit optimization	Cost reduction	Quick fixes for environmental challenges	Integration of environmental, social, and economic factors
13	The full form of MINAS in respect of effluent standards achievable by industry is	Minimum National Standards	Maximum National Standards	Minimal National Standards	All of these
14	Zero Liquid Discharge (ZLD) refers to	No process effluent is generated inside factory	All process effluent generated is used within factory without any treatment	All process effluent generated is used within factory after required treatment	None of these
15	In Air Quality Index (AQI) of the Central Pollution Control Board, RED colour signifies which category?	Very Poor	Poor	Moderate	Good
16	Permissible concentration of SO ₂ in ambient air for industrial areas as per National Ambient Air Quality Standards based on 24 hourly monitored values is	60 microgram per cubic meter	80 microgram per cubic meter	120 microgram per cubic meter	None of these
17	CRZ stands for	Coastal Registration Zone	Coastal Regulation Zone	Coastal Red Zone	None of these
18	United Nations came up with how many sustainable development goals?	15	16	17	20
19	Name the card that must be carried by the people involved in transportation of hazardous wastes.	TREM Cards	OSHA cards	MSDS Cards	None of these
20	Ambient air quality standard in respect of noise for industrial area during night time is (_____) dB(A) Leg	70	55	45	40

Answer Key

General Aptitude

S.No	1	2	3	4	5	6	7	8	9	10
Correct answer	Choice 4	Choice 1	Choice 3	Choice 2	Choice 4	Choice 3	Choice 4	Choice 4	Choice 2	Choice 4

S.No	11	12	13	14	15	16	17	18	19	20
Correct answer	Choice 1	Choice 3	Choice 4	Choice 1	Choice 2	Choice 3	Choice 1	Choice 3	Choice 2	Choice 3

General Safety

S.No	1	2	3	4	5	6	7	8	9	10
Correct option	1	2	2	2	1	4	1	3	2	1

S.No	11	12	13	14	15	16	17	18	19	20
Correct option	1	3	2	4	1	4	3	3	2	3

S.No	21	22	23	24	25	26	27	28	29	30
Correct option	3	3	2	3	2	3	3	2	1	2

S.No	31	32	33	34	35	36	37	38	39	40
Correct option	4	4	1	1	1	3	1	1	2	2

S.No	41	42	43	44	45	46	47	48	49	50
Correct option	3	4	2	3	3	2	3	3	4	2

Oil and Gas

S.No	1	2	3	4	5	6	7	8	9	10
Correct answer	1	3	4	1	2	3	4	3	4	1

S.No	11	12	13	14	15	16	17	18	19	20
Correct answer	2	2	3	3	3	4	1	4	2	3

S.No	21	22	23	24	25	26	27	28	29	30
Correct answer	4	1	1	3	1	3	3	1	3	1

Environment

S.No	1	2	3	4	5	6	7	8	9	10
Correct answer	Choice 4	Choice 1	Choice 4	Choice 2	Choice 4	Choice 1	Choice 2	Choice 2	Choice 4	Choice 2

S.No	11	12	13	14	15	16	17	18	19	20
Correct answer	Choice 1	Choice 4	Choice 3	Choice 3	Choice 1	Choice 2	Choice 2	Choice 3	Choice 1	Choice 1