50311

DIPLOMA EXAMINATION, APRIL 2025

First Semester

Fire and Industrial Safety

BASICS OF FIRE SAFETY

(2023 onwards)

Duration: 3 Hours Maximum: 75 Marks

Part A $(10 \times 1 = 10)$

Answer all questions.

- 1. Which class of fire involves combustible metals like magnesium or titanium?
 - (a) Class A
- (b) Class B
- (c) Class C
- (d) Class D
- 2. Which term refers to any unplanned event that results in injury or damage?
 - (a) Hazard
- (b) Risk
- (c) Accident
- (d) Incident
- 3. Which type of eye protection is suitable for protecting against airborne particles and debris?
 - (a) Safety glasses
- (b) Safety goggles
- (c) Face shields
- (d) Welding helmets
- 4. What does DCP stand for in fire extinguisher terminology?
 - (a) Dry Chemical powder
 - (b) Dual Control pressure
 - (c) Dust Control Protocol
 - (d) Detachable Cylinder Pump

	(a)	Wet pipe system	(b)	Dry pipe syst	em
	(c)	Pre-action system	(d)	Deluge system	m
6.		ch of the following ection?	is N	NOT a common	n type of hand
	(a)	Gloves	(b)	Mittens	
	(c)	Wristbands	(d)	Sleeves	
7.	Wha syste	t is the NFPA ems?	72 c	lassification f	for fire alarm
	(a)	Class A	(b)	Class B	
	(c)	Class C	(d)	Class D	
8.		ch skin protection cers exposed to irrit Wearing protectiv Applying moisturi Taking frequent b Using protective c	cants e clot zing reaks	for prolonged ghing cream	
9.		Self-contained bre	irator athin	r	, and the second
10.		t is one of the iratory protection e Slippery surfaces Loud noises Oxygen deficiency Bright lights	quipi		addressed by
			2		C-5615

Which type of sprinkler system relies on a water supply being constantly present in the piping?

5.

 $(5 \times 5 = 25)$

Answer all questions, choosing either (a) or (b).

11. (a) Explain the stages of fire development and provide examples of each stages significance in fire safety.

Or

- (b) Outline the basics of fire, including flash point, auto ignition temperature and fire point.
- 12. (a) Explain the importance of head protection in workplaces and describe the types of safety helmets available.

Or

- (b) Explain the role of foam-based fire extinguishers in combating specific types of fires.
- 13. (a) Explain the importance of hand protection in workplaces and how injuries can be prevented.

Or

- (b) Explain the role of sprinkler heads in fire suppression.
- 14. (a) Outline basic installation considerations for fire alarm systems.

Or

- (b) What are the types of body suits used for? skin protection and how do they function?
- 15. (a) Explain the types of respirators used at work and when each is appropriate.

Or

(b) Outline safety measures for the storage and transportation of flammable and combustible liquids.

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Part C

 $(5 \times 8 = 40)$

Answer all questions, choosing either (a) or (b).

16. (a) Describe the significance of near misses and dangerous occurrences in workplace.

Or

- (b) Discuss the importance of personal protective equipment (PPE) in workplace safety.
- 17. (a) Discuss the different types of goggles available for eye protection and their respective purposes.

Or

- (b) Describe the operating methods and precautions for using fire extinguishers effectively.
- 18. (a) Discuss maintenance and care practices for safety shoes.

Or

- (b) Outline the components and function of water-based sprinkler systems.
- 19. (a) Differentiate between heat detectors, smoke detectors and radiant energy sensing detectors.

Or

- (b) Discuss common causes of skin hazards and its preventive measures.
- 20. (a) Discuss the hazards of hot work and its associated safety protocols in detail.

Or

(b) Compare and contrast wet pipe and dry pipe sprinkler systems, highlighting their advantages and limitations.

C-5615

50312

DIPLOMA EXAMINATION, APRIL 2025

First Semester

Fire and Industrial Safety

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

(2023 onwards)

Duration: 3 Hours Maximum: 75 Marks

Part A $(10 \times 1 = 10)$

Answer **all** the questions.

- 1. The levels of disease prevention include
 - (a) Diagnosis and treatment only
 - (b) Primary, secondary, and tertiary prevention
 - (c) Regulatory enforcement alone
 - (d) Personal protective equipment use only
- 2. Threshold Limit Values (TLVs) represent
 - (a) The maximum amount of money a worker can earn
 - (b) The minimum amount of time required for breaks
 - (c) The noise level at which hearing protection becomes mandatory
 - (d) Recommended safe exposure limits for airborne contaminants

3.	The WBGT index is used to measure						
	(a)	Noise levels					
	(b)	Heat stress in the workplace					
	(c)	Vibration intensity					
	(d)	Illumination levels					
4.		matization involves gradually adapting workers to work environments to					
	(a)	Reduce the risk of heat-related illnesses					
	(b)	Increase their sweat production and risk of dehydration					
	(c)	Make them work faster					
	(d)	Ignore the need for proper hydration					
5.	If a p	person is not breathing, you may need to initiate					
	(a)	Giving them medication					
	(b)	Cardiopulmonary resuscitation (CPR)					
	(c)	Forcefully opening their eyelids					
	(d)	Slapping them awake (can worsen an injury)					
6.	The	eranium is part of the					
	(a)	Thorax (chest cavity)					
	(b)	Pelvis					
	(c)	Abdomen					
	(d)	Head					
		2 C-5616					

- 7. Heat attack is a life-threatening condition. What is a crucial step in first aid management?
 - (a) Applying ice packs directly to the skin
 - (b) Cooling the person down gradually and calling for medical help
 - (c) Leaving them to rest in a hot environment
 - (d) Forcing them to drink large amounts of fluids
- 8. Stretchers are primarily used for
 - (a) Safely transporting injured people who cannot walk on their own
 - (b) Securing splints on fractures
 - (c) Applying pressure bandages to wounds
 - (d) Restricting movement in sprains and dislocations
- 9. Employee Assistance Programs (EAPs) can provide confidential support for
 - (a) Disciplinary issues and performance problems
 - (b) Negotiating wages and benefits with employers
 - (c) Legal matters and financial concerns (may offer referrals)
 - (d) Personal and work-related stress, emotional difficulties, and substance abuse

10.	-	understanding occupational a ards, workplaces can create a more	and psychological
	(a)	Competitive and demanding work	x environment
	(b)	Supportive, healthy, and environment	productive work
	()		

- (c) Stressful and fast-paced work environment for increased efficiency
- (d) Focus solely on productivity without considering employee well-being

Part B $(5 \times 5 = 25)$

Answer all the questions, choosing either (a) or (b).

11. (a) Describe the effects and prevention measures for gas poisoning, focusing on carbon monoxide and ammonia.

Or

- (b) Discuss the importance of early detection and intervention in preventing occupational illnesses.
- 12. (a) Explain the use of the Wet Bulb Globe Temperature (WBGT) index in assessing thermal stress.

Or

- (b) How can a comprehensive hazard control program contribute to a safer work environment?
- 13. (a) Discuss the importance of obtaining consent before providing first aid treatment.

Or

(b) Describe the procedure for assessing consciousness levels in an injured person.

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14. (a) Explain the proper use of stretchers for transporting injured individuals.
Or
(b) Describe the signs and symptoms associated with different types of shock.
15. (a) Explain the concept of Employee Assistance

15. (a) Explain the concept of Employee Assistance Programs (EAPs) and their benefits.

Or

(b) Outline the steps for organizing health education and training programs on communication skills.

Part C $(5 \times 8 = 40)$

Answer **all** the questions, choosing either (a) or (b).

16. (a) Describe the characteristics of carcinogens, mutagens, and teratogens in industrial settings.

Or

- (b) Discuss the types of personal monitoring devices commonly used in occupational health practices.
- 17. (a) Discuss strategies for acclimatization and heat stress management in hot working environments.

Or

- (b) Discuss the methods used for controlling vibration in workplace settings. Provide examples.
- 18. (a) Discuss common mechanisms of injury related to the musculoskeletal system and their management.

Or

(b) Describe the process of assessing breathing rate and quality during a first aid situation.

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19. (a) Discuss the principles of immobilization in the management of fractures.

Or

- (b) Discuss the appropriate response to electric, chemical. radiation, and cold burns.
- 20. (a) Describe techniques for improving communication among employees and management.

Or

(b) Discuss common diseases and disorders related to work stress, including psychosomatic disorders.

50321

DIPLOMA EXAMINATION, APRIL 2025

Second Semester

Fire and Industrial Safety

SAFETY ON ELECTRICAL AND CHEMICAL HAZARDS

(2023 onwards)

Duration : 3 Hours				Maximum : 75 Marks
		Pa	rt A	$(10 \times 1 = 10)$
		Answer a	ll the	questions.
1.	The	flow of electric ch	arge	in a circuit is referred to as
	(a)	Voltage	(b)	Inductance
	(c)	Current	(d)	Resistance
2.		potential differenced	e betv	veen two points in a circuit is
	(a)	Capacitance	(b)	Inductor
	(c)	Current	(d)	Voltage
3.	-	ability of a syste	em to	store an electric charge is
	(a)	Resistance		
	(b)	Voltage		
	(c)	Inductance		
	(d)	None of the above	e	

4.	A device that stores electrical energy in an electric field is known as a						
	(a)	Car	(b)	Magnet			
	(c)	Capacitor	(d)	Containers			
5.	-	ries caused by exc referred to as		e heat from electrical sources			
	(a)	Fracture	(b)	Burn			
	(c)	Breaching	(d)	Existing			
6.		naterial that prevented	ents 1	the passage of electricity is			
	(a)	Lightning	(b)	Rover			
	(c)	Excel	(d)	Bike Arrestor			
7.		-		uits from excessive current by ower are called			
	(a)	Overload relays	(b)	Classifier			
	(c)	Invertor	(d)	None of the above			
8.	Indi	an, The Electricity	Act p	assed on.			
	(a)	2004	(b)	2003			
	(c)	2011	(d)	1995			
9.		concentration of a population is know		ance that is lethal to 50% of a			
	(a)	LF50	(b)	LC50			
	(c)	HF20	(d)	LK25			
10.		European system		classifying, labelling, and n as			
	(a)	LCF	(b)	FR50			
	(c)	CLP	(d)	HAZCHEM			
			2	C-5617			

 $(5 \times 5 = 25)$

Answer all the questions, choosing either (a) or (b).

- 11. (a) Define the following:
 - (i) Resistance,
 - (ii) Capacitor, and
 - (iii) Inductor.

Or

- (b) Write short notes on the effects of shock.
- 12. (a) Define the current surge and list the cause of the current surge.

Or

- (b) Explore the environmental hazards of lighting and briefly discuss its minimization methods.
- 13. (a) List the uses of fuses and mention the types.

Or

- (b) What is not load protection? And discuss shortly about equipment grounding.
- 14. (a) Classify chemicals and discuss briefly any two types of chemicals.

Or

- (b) Narrate the need for importance of labelling of chemicals.
- 15. (a) What are chemical inventory and tracking system?

Or

(b) Explain the general guidelines for the safe storage of chemicals.

3

Part C

 $(5 \times 8 = 40)$

Answer all the questions, choosing either (a) or (b).

16. (a) Explain the type of electrical hazards.

 \mathbf{O}

- (b) Briefly discuss about the international standards on electrical safety.
- 17. (a) Classify voltage and briefly discuss about it.

Or

- (b) National Electrical Safety Code discuss briefly.
- 18. (a) What is under Voltage and over voltage protection? And explore the protective measures against overvoltage.

Or

- (b) Define grounding and elaborately discuss about equipment grounding.
- 19. (a) What do WHMIS symbols stand for? State the purpose of it and discuss the minimum 3 Hazard symbols.

Or

- (b) Describe the concept of health surveillance and distinguish health monitoring from health surveillance.
- 20. (a) Name the types of green chemistry and how green chemistry is used in the chemical industry.

Or

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(b) Briefly discuss the general guidelines for handling hazardous chemicals.

 $\boldsymbol{50322}$

DIPLOMA EXAMINATION, APRIL 2025

Second Semester

Fire and Industrial Safety

FOOD SAFETY

(2023 onwards)

Duration : 3 Hours			Maximum : 75 Marks	
	Pa			$(10 \times 1 = 10)$
		Answer &	all the	questions.
1.	Why	y is food quality in	porta	nt?
	(a)	Reduce cost	(b)	Safety
	(c)	Reduce waste	(d)	Simplify
2.	Wha	at is one method of	quali	ty assessment in food?
	(a)	Marketing	(b)	Feedback
	(c)	Price Analysis	(d)	Sensory evaluation
3.	3 sampling is a com-		a comr	mon technique in food quality
	(a)	Random	(b)	Systematic
	(c)	Lot	(d)	Judgmental
4.	Whi	ich is a biological h	azard	in food contamination?
	(a)	Pesticide	(b)	Bacteria
	(c)	Virus	(d)	None of them

5.	What is the principle of food safety?			
	(a)	HACCP	(b)	BIDD
	(c)	FAOD	(d)	FDAS
6.		t does Total Qua	lity I	Management (TQM) in food
	(a)	Improvement		
	(b)	Consistency		
	(c)	Feedback rectifying	ng	
	(d)	All of them		
7.	Wha	t is a challenge in c	currei	nt food safety management?
	(a)	Supply chain	(b)	Transport
	(c)	Handling	(d)	All of them
8.	Wha	t is AGMARK certi	ficati	on for?
	(a)	Agricultural	(b)	Colouring agents
	(c)	Taste inducers	(d)	None of them
9.	Wha	t does a food safety	man	agement system ensure?
	(a)	Safe production	(b)	Increased sales
	(c)	Good packaging	(d)	None
10.	Wha	t is the main focus	of IS	O 9000 standards?
	(a)	Processing		
	(b)	Food packing		
	(c)	Transportation		
	(d)	Quality managem	ent	
			2	C-5618

 $(5 \times 5 = 25)$

Answer all questions, choosing either (a) or (b).

11. (a) State the objective and importance of quality control.

Or

- (b) List the factors which influence the quality of the food.
- 12. (a) Name the essential factors that contribute to biological contamination.

Or

- (b) Explain the pest control methods and briefly discuss their importance of it.
- 13. (a) Shortly, discuss about quality assurance in food safety.

Or

- (b) Write short notes on GAP.
- 14. (a) State the role of national regulatory agencies.

Or

- (b) Abbreviate the following:
 - (i) FDA
 - (ii) BRC
 - (iii) WHO
 - (iv) FAO
 - (v) USDA
- 15. (a) Write short notes on food product recall.

Or

(b) Describe shortly about food safety auditing.

C-5618

Part C

 $(5 \times 8 = 40)$

Answer all questions, choosing either (a) or (b).

16. (a) Explore the assessment methods adopted to check the quality of the milk and milk products.

Or

- (b) Briefly discuss the sampling methods of quality evaluation.
- 17. (a) Explain in detail about the prevention and control of borne hazards.

Or

- (b) What are all cleaning compounds? Discuss briefly about them.
- 18. (a) Elaborately discuss the total quality management of food safety.

Or

- (b) Explain Risk Management in food safety.
- 19. (a) Describe in detail about FSSAI and AGMARK.

Or

- (b) Elaborately discuss the following:
 - (i) ISO 9000
 - (ii) ISO 14000
- 20. (a) Explore the import and export policies in India and what is FDA import policy.

Or

(b) Briefly discuss about the ALERT systems in the food industry.

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50331

DIPLOMA EXAMINATION, APRIL 2025

Third Semester

Fire and Industrial Safety

CONSTRUCTION SAFETY

(2023 onwards)

Duration : 3 Hours				Maximum : 75 Marks
	Part			$(10 \times 1 = 10)$
Answer all			ll the	questions.
1.	avoi	pliance with const d legal issues truction sites.	truction and	on is essential to ensure worker safety on
	(a)	Regulation	(b)	Tools
	(c)	PPE	(d)	None of them
2.	-	lementingematically manage	e safet	helps organizations y and health risks.
	(a)	OSHAS rule	(b)	General Act
	(c)	Sequence	(d)	Inspection
3.		significantly reduc		helmets, gloves and goggles risk of injury on construction
	(a)	Emergency	(b)	PPE
	(c)	Tool	(d)	Accessory

4.	Conducting helps ensure compliance with safety standards and identifies areas for improvement.					
	(a)	Safety Audit	(b)	Protocol		
	(c)	Standard	(d)	Bi-monthly visit		
5.		ng system n falls on construct		crucial for protecting workers		
	(a)	Tool	(b)	Computer		
	(c)	Electrical	(d)	Fall protection		
6.	_	oer training and involve working a		ment are required for tasks		
	(a)	Flat Surface	(b)	Height		
	(c)	Underground	(d)	All of them		
7.		uring pr dents with lifting r		s are followed can prevent		
	(a)	Crane Safety	(b)	Bus safety		
	(c)	Car safety	(d)	Bike safety		
8.		owing ng digging and tre	_	ines help protect workers gactivities.		
	(a)	Agricultural	(b)	Modern		
	(c)	Training	(d)	Excavation		
9.		dling req kers from exposure		special precautions to protect		
	(a)	Toxic material	(b)	Cotton		
	(c)	Bricks	(d)	Cement		
10.	_	_		ures helps reduce the impact xers and nearby residents.		
	(a)	Water control	(b)	Quality control		
	(c)	Noise control	(d)	None of them		
			2	C-5619		

 $(5 \times 5 = 25)$

Answer all questions, choosing either (a) or (b).

11. (a) Briefly discuss the most common causes of fatal accidents.

Or

- (b) Shortly discuss about quality assurance in construction.
- 12. (a) Write short notes on tunnelling.

Or

- (b) Distinguish pre-ballast and post-blast inspection.
- 13. (a) Explore in detail about the OSHA requirement for fall protection.

Or

- (b) Explain the functions of stairways and distinguish stairs and stairways.
- 14. (a) Define welding and name the welding machines most widely used in construction.

Or

- (b) Shortly, discuss about tower cranes.
- 15. (a) Explain griders.

Or

(b) Shortly, discuss the safe clearance zone.

3

Part C $(5 \times 8 = 40)$

Answer all questions, choosing either (a) or (b).

16. (a) Briefly discuss the construction regulations.

Or

- (b) Explain in detail the need for and significance of education in construction safety.
- 17. (a) What is a contaminated site? Briefly discuss the method of treatment of contaminated land.

Or

- (b) Describe in detail the erection of the structural framework.
- 18. (a) Elaborately discuss the requirement for safe work platforms.

Or

- (b) Explain in detail about scaffolding and safe use of ladders.
- 19. (a) Mention the need for and importance of excavators and concrete pumps.

Or

- (b) Elaborately discuss the uses of grinding tools and drilling tools in construction machinery.
- 20. (a) Explore your interesting experiences at the construction site against fire accidents.

Or

(b) Explain the major keys for safe demolition.

C-5619

50332

DIPLOMA EXAMINATION, APRIL 2025

Third Semester

Fire and Industrial Safety

ACCIDENT INVESTIGATION AND REPORTING

(2023 onwards)

Dura	tion :	3 Hours	Maximum : 75 Marks	
	Part A			$(10 \times 1 = 10)$
		Answer	all q	uestions.
1.		tifying the fundar		l reasons behind an accident alysis.
	(a)	Root cause	(b)	Tree
	(c)	Risk	(d)	Booting
2.		theory that attrib akes is known as _		accidents primarily to human theory.
	(a)	Human law	(b)	Human rights
	(c)	Human error	(d)	Human being
3.	defer			sed to illustrate how layers of guards may be penetrated by
	(a)	France	(b)	Italy
	(c)	Swiss Cheese	(d)	India

4. Various frameworks, such as mod to understand how accidents occur.				
	(a)	Franklyn	(b)	Triggering
	(c)	Griding	(d)	Accident causation
5.		_		_ helps identify potential reats associated with them.
	(a)	Risk assessment	(b)	Test
	(c)	Walk	(d)	Inspections
6.	cond			egulate the employment and lding and other construction
	(a)	BOCW Act	(b)	Chemical Act
	(c)	Forest Act	(d)	Land mine Act
7.		orting safety confor reportin		to regulatory bodies is known
	(a)	Compliance	(b)	Test
	(c)	Behaviour	(d)	Human
8.		ng scientific metho dent is referred to a		determine the cause of an Analysis.
	(a)	Task	(b)	Portal
	(c)	Forensic	(d)	Risk
9.	coor	response d	_	anning ensures a well- workplace crises.
	(a)	Emergency	(b)	Slow
	(c)	Fast	(d)	None of them
10.		cies and procedure		signed to minimize risks are ontrols.
	(a)	Fraction	(b)	Administrative
	(c)	PPE	(d)	Action
			2	C-5620

 $(5 \times 5 = 25)$

Answer all questions, choosing either (a) or (b).

11. (a) Define the accident and mention the major causes of the accident.

Or

- (b) Distinguish reportable and non reportable accidents.
- 12. (a) State the concept of human factors theory and list the important human factors.

Or

- (b) Write short notes on multiple causation Theory.
- 13. (a) Explain in detail about administrative control.

Or

- (b) Briefly discuss about PPE.
- 14. (a) How to do accident investigation?

Or

- (b) Explain the fishbone diagram with a suitable example.
- 15. (a) Write short notes on partial displacement.

Or

(b) What are incident rates, and which one is a good incident rate?

3

Part C $(5 \times 8 = 40)$

Answer all questions, choosing either (a) or (b).

16. (a) Explain in detail the internal management of the accident.

Or

- (b) Elaborately discuss about the accident reporting as per BOCW act 1996 form no 14.
- 17. (a) Describe in detail about Bird's Triangle.

Or

- (b) Name the three theories of causation explain them to anyone with a suitable example.
- 18. (a) Explore the accident control measures with the necessary data.

Or

- (b) Describe in detail about PPE.
- 19. (a) How to collect the evidence and briefly discuss the root cause analysis.

Or

- (b) Briefly discuss about SCAT.
- 20. (a) Elaborately discuss about disabling Injuries.

Or

(b) Classify accidents and discuss them briefly.

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50341

DIPLOMA EXAMINATION, APRIL 2025

Fourth Semester

Fire and Industrial Safety

HAZARD IDENTIFICATION RISK ASSESSMENT AND RISK CONTROL

(2023 onwards)

Duratio	on : 3 Hour	s		Maximum : 75 Mark
		Par	t A	$\mathbf{A} \qquad (10 \times 1 = 10)$
		Answer	all	questions.
1	ause harm.	refers to a	nyt	thing that has the potential to
(a) Warmi	ng	(b)) Safety
(c) Risk		(d)) Hazard
2. <u></u>	 ontributes t	•		xamines how human erro
(a) Humar	n error	(b)) FTE
(c) GIS		(d)) Testing material
3. <u>li</u> i	kelihood of	describes an acciden		situation that increases the
(a) Unsafe	condition	(b)) Working
(c) Enviro	nment	(d)) Agency

	is the	proces	ss of detecting risks in a			
work	xplace.					
(a)	Selection	(b)	Team working			
(c)	Team meeting	(d)	Risk identification			
eval	is a s uate risks in ind		ed method to identify and processes.			
(a)	HAZOP	(b)	SIO			
(c)	FIA	(d)	OIL			
	focuses o	n ident	rifying hazards and analyzing			
their	e effects.					
(a)	SAE	(b)	SWAT			
(c)	HAZAN	(d)	FIL			
	is the o	hemica	l compound involved in the			
Bhop	pal gas tragedy.					
(a)	Methane	(b)	Gasoline			
(c)	MIC	(d)	Hydrogen			
	An effective helps prioritize hazards and azards based on their severity and likelihood.					
(a)	Risk table	(b)	Risk list			
(c)	Risk Matrix	(d)	Risk test			
	The use of in risk assessment helps identi- rulnerabilities in system design.					
(a)	FTA	(b)	RPN			
(c)	TON	(d)	ION			
The was a disaster in France involving the explosion of a petroleum refinery.						
(a)	Feyzin disaster					
(b)	Bhopal disaster					
(c)	Chernobyl disaster					
(d)	Mexico Disaster	-				
		2	C-5621			

 $(5 \times 5 = 25)$

Answer all questions, choosing either (a) or (b).

11. (a) Define hazard and discuss the risk register.

Or

- (b) Shortly, discuss the concept of ALARP.
- 12. (a) Mention the benefits of risk analysis.

Or

- (b) State the objectives of Job Safety Analysis.
- 13. (a) List the types of FMEA and discuss them shortly.

Or

- (b) Describe in detail about HAZOP Methodology.
- 14. (a) Define risk and state the principles of risk assessment.

Or

- (b) Write short notes on the Risk Matrix.
- 15. (a) What is risk credibility? And discuss the assessment techniques.

Or

(b) What happened in the Seveso disaster? What does Seveso stand for?

3

Part C $(5 \times 8 = 40)$

Answer all questions, choosing either (a) or (b).

16. (a) Briefly discuss about hazard characterization.

Or

- (b) Define Horseplay and briefly discuss the purpose of preliminary hazard analysis.
- 17. (a) Explain the cost-benefit risk analysis in detail.

Or

- (b) Elaborately discuss the risk analysis process.
- 18. (a) Describe in detail about HAZOP and HAZAN.

 O_1

- (b) What is Event Tree Analysis? Differentiate ETA and FTA.
- 19. (a) Briefly discuss the following in HIRA:
 - (i) Implementation;
 - (ii) Review.

Or

- (b) Explain the risk control method in detail.
- 20. (a) Briefly discuss the Mexico disaster.

Or

(b) Bhopal disaster — explain with necessary data.

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50342

DIPLOMA EXAMINATION, APRIL 2025

Fourth Semester

Fire and Industrial Safety

EHS LAW

(2023 onwards)

Duration: 3 Hours Maximum: 75 Marks

Part A $(10 \times 1 = 10)$

Answer all questions.

- 1. Factories act
 - (a) 2000
- (b) 1952
- (c) 1948
- (d) 1978
- 2. Who audits the safety of industries?
 - (a) Inspection staff
- (b) Police
- (c) DSP
- (d) Advocate
- 3. Biomedical waste handling and management rules,
 - (a) 2000
- (b) 1989
- (c) 1965
- (d) 1875
- 4. Air Act was introduced on
 - (a) 1981
- (b) 1957
- (c) 1955
- (d) 1985

6.		ufacture, storage nical rule	and	d handling	10	hazardous		
	(a)	2000	(b)	1985				
	(c)	1989	(d)	2015				
7.	How	How to identify the properties of chemicals?						
	(a)	Safety Datasheet	(b)	SOP				
	(c)	LOP	(d)	PIL				
8.	The	e building and other construction workers act.						
	(a)	2001	(b)	1987				
	(c)	1994	(d)	1996				
9.	E-wa	aste rules						
	(a)	2016	(b)	2004				
	(c)	2018	(d)	1979				
10.	The	William Steiger A	ct					
	(a)	2000	(b)	1970				
	(c)	1947	(d)	1985				
		Par	rt B			$(5 \times 5 = 25)$		
	Aı	nswer all questions	s, choo	osing either (a) or	(b).		
11.	(a)	Mention the majo 1948.	or wel	fare under th	e Fa	actories Act		
			Or					
	(b)	Shortly discuss about the health chapters of the Factories Act 1948.						
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The Water Act was implemented on

1980 (d) 1974

(b) 1960

5.

(a)

(c)

12.	(a)	Identify the best noise pollution control methods and discuss any one method shortly.				
Or						
	(b)	Differentiate accounting and auditing and mention the types of audits.				
13.	(a)	List the responsibilities of the occupier.				
Or						
	(b)	Shortly, discuss the handling of hazardous wastes.				
14.	(a)	Write short notes on the Workman Compensation Act.				

Or

- (b) State and explain the Ewaste (management) rules 2016.
- 15. (a) What is occupational safety and health in the USA?

Or

(b) Mention the need for and importance of AERB.

Part C $(5 \times 8 = 40)$

Answer **all** questions, choosing either (a) or (b).

16. (a) How many safety officers are required as per the Factories Act 1948 and briefly discuss the important amendment of factory rules in Tamilnadu?

Or

(b) Working hours for men and women – describe them with the necessary data.

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17. (a) Briefly discuss about biomedical waste and its control methods.

Or

- (b) Elaborately discuss the powers and functions of state and central boards in pollution control.
- 18. (a) What are major accidents? Explain with a suitable example and distinguish between major and minor accidents.

Or

- (b) Describe in detail about the Safety reports and safety data sheets.
- 19. (a) Workman Compensation Act explain.

Or

- (b) What is the Explosives Act of 1884? Discuss it briefly.
- 20. (a) Elaborately discuss about NFA.

Or

(b) Define safety and discuss the following Occupational safety.