

Function Subject	4
1	√
2	√
3	a-d
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12	√
13	√
14	√

- 1) Safety awareness
 - a) A safety culture
 - b) Company safety policy and program
 - c) Employee responsibilities
 - d) Airport airside safety regulations

- 2) Human factors
 - a) Motivation,attitude and team work
 - b) Human behaviour
 - c) Communications skills
 - d) Stress at work
 - e) Ergonomics
 - f) The effects of drugs and alcohol abuse

- 3) Procedures and regulations
 - a) Regulations(JAR ops,FAA,etc)
 - b) Safe operating practices
 - c) Emergency procedures
 - d) Dangerous Goods Regulations

- 4) Accidents and Incidents
 - a) Causal factors
 - b) Personnel injuries
 - c) Damage to aircraft,ground equipment and facilities
 - d) Accident and incident reporting
 - e) The real cost of accidents (direct/indirect costs)
 - f) Accident prevention
 - g) Ground Damage/accident Investigation

- 5) Personal Protection
 - a) Working clothes including Hi-Visibility Clothing
 - b) Personal protective equipment for:feet,hands,eyes,knees and hearing
 - c) Back injury prevention:lifting and moving loads

- 6) Hazards
 - a) Vehicular traffic
 - b) Aircraft movement(arrival/departure)
 - c) Jet engines
 - d) Propeller driven aircraft and helicopters
 - e) Aircraft antennae and other protusions
 - f) Aircraft fuelling on the airside and fuel spills
 - g) Adverse weather operations
 - h) Night operations
- 7) Equipment operation
 - a) Driver skills and licensing
 - b) Inspection and serviceability of vehicles and equipment
 - c) Standard Operating Procedures (SOPs)
 - d) Equipment specifications and safety
 - e) Treatment of equipment, "ramp rage"
- 8) Clean –Up
 - a) FOD
 - b) Vehicle cabs
 - c) Airside areas
 - d) Food refuse
- 9) Emergency situations
 - a) Injuries
 - b) Natural disasters
 - c) Threats
 - d) Fuel spills
 - e) Fire sources
 - f) Fire prevention
 - g) Types of fires and extinguishers
 - h) Equipment fires
 - i) Fires on aircraft
 - j) Location of alarms,fuel shut-offs
- 10) Airside markings
- 11) Hand signals
- 12) Airside safety management
 - a) Creating a no threat safety culture
 - b) Managing airside safety
 - c) Due diligence
 - d) Co-ordination of airside activities between departments and companies
- 13) Benchmarking
- 14) Safety audits
- 15) Ramp services
 - a) Marshalling
 - b) Parking

- c) Ramp to flight deck communication
- d) Loading and unloading
- e) Starting
- f) Safety measures
- g) Moving of aircraft

16) Baggage handling

- a) Handle baggage in the sorting area
- b) Baggage screening and reconciliation
- c) Prepare for delivery onto flights
- d) Establish the number and/or weight
- e) Prioritise baggage delivery to claim area
- f) Deliver to claim area
- g) Transfer baggage
- h) Handle crew baggage

17) Aircraft services

- a) Exterior cleaning and Interior cleaning
- b) Toilet service
- c) Water service
- d) Cooling and heating
- e) De-icing/anti-icing services and snow/ice removal
- f) Cabin equipment/ Storage of cabin material

18) Catering ramp handling

1	<p>Safety awareness Safety in aviation is a permanent requirement and its first commandment, in the air or on the ground, safety first is the rule.</p>	<p>A safety culture</p> <ul style="list-style-type: none"> • Is applicable to all employee • Training of personnel in correct operating procedures and safe work practices, with the reasons for these procedures and practices, form an integral part of any organisations' structure
		Company safety policy and program
		Employee responsibilities
		<p>Airport airside safety regulations</p> <ul style="list-style-type: none"> • Legislations applicable to Airside Operations (Penal Code, Air Navigation Order, Supplements, Regulatory Acts) Managing Ground Handling Agents • airport movement areas (areas where aircraft taxi, takeoff, and land) • In movement areas, aircraft have priority and must be given right-of-way at all times
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	Human factors The spirit of aviation, attitude, interest and loyalty of employees are of utmost importance.	Motivation,attitude and team work
		Human behaviour
		Communications skills
		Stress at work
		Ergonomics <ul style="list-style-type: none"> Recognized lifting techniques should be utilised at all times to reduce the risk of personnel injury
		The effects of drugs and alcohol abuse <ul style="list-style-type: none"> No smoking,alcohol or any banned substances are permitted to be consumed on airside

3	Procedures and regulations	Regulations(JAR ops,FAA,etc)
		Safe operating practices <ul style="list-style-type: none"> Jewellery such as rings and indentifications bracelets should not be worn To prevent fingers and hands becoming jammed between objects all load should be slid into place rather than lifted Personnel shall not walk or stand on a moving conveyor belt Personnel should never attempt to jump off or on a moving vehicle Personnel should not be transported on equipment unless there is a seat for them Personnel and equipment must not pass through the arc of a propeller at any time,including when it is stationary
		Emergency procedures
		Dangerous Goods Regulations <ul style="list-style-type: none"> Classification of dangerous goods Load incompatibility chart Notification of dangerous goods

		<ul style="list-style-type: none"> • Radioactive materials • Damaged/spillage packages
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4	Accidents and Incidents Accident-	<p>Causal factors</p> <ul style="list-style-type: none"> • Behaviour <ul style="list-style-type: none"> • Excess speed • Distraction • Lack of practice in that task • Equipment <ul style="list-style-type: none"> • Defective maintenance • Incorrect use • Organisational <ul style="list-style-type: none"> • Lack of standard procedures • Inadequate training • Physical circumstances <ul style="list-style-type: none"> • Weather conditions • Noise • Congestion • Limited space • Regulations/procedures not followed <ul style="list-style-type: none"> • Standard operating procedures • Safety regulations • Validity of operator certification
		<p>Personnel injuries</p> <ul style="list-style-type: none"> • Always be aware of your surroundings • Accidents caused by ground equipment • Accidents during (un)loading
		Damage to aircraft, ground equipment and facilities
		<p>Accident and incident reporting</p> <ul style="list-style-type: none"> • All accidents must be reported immediately to an airport operations officer •
		<p>The real cost of accidents (direct/indirect costs)</p> <ul style="list-style-type: none"> • FOD costs the aerospace industry \$4 billions USD per year and causes expensive, significant damage every year to aircraft and parts and may cause death and injury to workers, pilots and passengers.

		Accident prevention
		<p>Ground Damage/accident Investigation</p> <ul style="list-style-type: none"> • Aircraft Accident Investigation • Accident Investigation (Personnel/Vehicles/Equipment)

5	Personal Protection	<p>Working clothes including Hi-Visibility Clothing</p> <ul style="list-style-type: none"> • Outer garments that contain reflective material and are high visibility colours should be worn by any person whose duties require airside access • Always wear a High Visibility Vest • Clothing appropriate to the weather conditions
		<p>Personal protective equipment for:feet,hands,eyes,knees and hearing</p> <ul style="list-style-type: none"> • Safety shoes or boots should be worn to prevent foot injuries • Approved hearing protection should be worn when working in noise-intensity areas i.e.on the apron • Gloves should be worn by material handling personnel and equipment operators • Safety glasses should be worn
		<p>Back injury prevention:lifting and moving loads</p> <ul style="list-style-type: none"> • Loads means baggage,cargo,mail and any aircraft supplies including ballast • Personnel should assess the weight and never attempt to lift or more than their personal physical capabilities • Personnel must not ride up or down on the rear platform of a loader • Personnel must not ride on elevating platforms when the vehicle is in drive mode • When moving pallets/containers,hands and feet should be kept clear of stops/locks/guides so they do not get caught between the pallet/container and floor hardware • Operatores of equipment shall ensure that other personnel are not entrapped by

		movement of load/pallets/containers either in the aircraft or on the loading equipment
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6	Hazards	<p>Vehicular traffic</p> <ul style="list-style-type: none"> • Never park or stand within 3 meters of any aircraft unless you are directly involved in the servicing of that aircraft • Never park or stand within 15 meters of an aircraft being refuelled • driving safely on the airfield in a controlled and courteous manner, following airside markings, road signs and driving regulations. •
		<p>Aircraft movement(arrival/departure)</p> <ul style="list-style-type: none"> • Aircraft always have right of way over vehicles,equipment and pedestrians •
		<p>Jet engines</p> <ul style="list-style-type: none"> • Never approach a jet aircraft while its engines are operating • An anti-collision beacon is a flashing red light located on the top and/or bottom of every aircraft.The pilot will activate this light when the engines are operating •
		<p>Propeller driven aircraft and helicopters</p> <ul style="list-style-type: none"> • Personnel should remain clear of propellers, engine inlets and exhausts until after the engines have spooled down and,in the case of propellers have stopped turning • Never approach a propeller driven aircraft whilst its engines are operating
		Aircraft antennae and other protrusions
		Aircraft fuelling on the airside and fuel spills
		<p>Adverse weather operations</p> <ul style="list-style-type: none"> • Low visibility operations (LVO) • Low visibility notification and operating procedures

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		Night operations

7	Equipment operation	<p>Driver skills and licensing</p> <ul style="list-style-type: none"> • people working in airports carrying out roles that involve driving such as ramp operator, passenger transfer driver, cargo deliverer, airport ramp assistant, ramp agent, aircraft loading supervisor. • Make sure that personal driving authorisation is appropriate to the vehicle • Types of authorisation and licences needed to drive various vehicles •
		<p>Inspection and serviceability of vehicles and equipment</p> <ul style="list-style-type: none"> • Inspect the vehicle before it is used to establish operational condition
		<p>Standard Operating Procedures (SOPs)</p> <ul style="list-style-type: none"> • to create the right working attitude • make the operation controllable • can be use to measure compliance with safe working practices • to indentify physical requirements of the job <p>May be broken down into three phases</p> <ul style="list-style-type: none"> • pre-operation • operation • post-operation
		Equipment specifications and safety
		Treatment of equipment, "ramp rage"

8	Clean –Up	<p>FOD</p> <ul style="list-style-type: none"> • Foreign Object Damage or Foreign Object Debris (FOD) is a substance, debris or article alien to the vehicle or system which would potentially cause damage • Loose objects (FOD) dropped onto or observed on the apron must be picked up
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		<p>and put into FOD bins-examples of objects, catering items, baggage tags/straps, garbage</p> <ul style="list-style-type: none"> •
		Vehicle cabs
		Airside areas
		Food refuse

9	Emergency situations	Injuries
		Natural disasters
		Threats
		Fuel spills
		Fire sources
		<p>Fire prevention</p> <ul style="list-style-type: none"> • Fire prevention is more important than fire fighting • Smoking shall not be permitted on any apron areas or in any vehicles on the apron
		<p>Types of fires and extinguishers</p> <ul style="list-style-type: none"> • Personnel should know the types of fire fighting equipment available and should be trained in their use
		Equipment fires
		<p>Fires on aircraft</p> <ul style="list-style-type: none"> • If fire is discovered in a parked aircraft any persons on board should be immediately advised and evacuated
		<p>Location of alarms, fuel shut-offs</p> <ul style="list-style-type: none"> • The location of fire-fighting equipment, fire alarms, emergency shut-offs, etc, must be known to personnel • Access to fire-fighting equipment, fire alarms, emergency shut-offs, etc, should not be obstructed

10	Airside markings	<p>The areas requiring safety markings are</p> <ul style="list-style-type: none"> • Service roads • Aircraft parking stands/gates • Aprons • Pedestrian crossing/walkways • Marking for “No Parking” • Ground Support Equipment parking areas • Push back line
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11	Hand signals	<ul style="list-style-type: none"> • GSE signals • Aircraft marshalling signals <ul style="list-style-type: none"> • Turn to your left • Turn to your right • Stop • Insert chocks • Chocks away • Connect/disconnect ground power signals • Ground crew push back signals
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12	Airside safety management	Creating a no threat safety culture
		Managing airside safety
		Due diligence
		Co-ordination of airside activities between departments and companies

13	Benchmarking	
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14	Safety audits	<ul style="list-style-type: none"> • Ramp Safety Audits
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15	Ramp services	<p>Marshalling</p> <ul style="list-style-type: none"> • Marshalling the aircraft on the ground at arrival and departure
		<p>Parking</p> <ul style="list-style-type: none"> • Position and/or remove wheelchocks • Position and/or remove safety cones • Provide or arrange for ground power
		<p>Ramp to flight deck communication</p> <ul style="list-style-type: none"> • Phonetic Aviation Alphabet • Headsets

		<ul style="list-style-type: none"> • Communication <ul style="list-style-type: none"> • During tow-in and/or push-back • During engine starting • For other purposes
		<p>Loading and unloading</p> <ul style="list-style-type: none"> • Passenger steps • Passenger and crew transport between aircraft and airport terminals • Equipment for loading and/or unloading • Equipment and personnel to perform baggage delivery and pick-up at aircraft • Equipment for transport baggage,cargo,mail and documents • Unload aircraft returning lashing material to the Carrier • Load and secure loads in the aircraft • Operate in-plane loading system • Redistribute loads in aircraft • Open and secure aircraft hold doors • Provide or arrange for ballast •
		<p>Starting</p> <ul style="list-style-type: none"> • Provide or arrange for air start unit • Engines starting
		Safety measures
		<p>Moving of aircraft</p> <ul style="list-style-type: none"> • Provide or arrange for tow-in and/or push-back tractor • Provide authorised cockpit brake operator in connection with towing

16	Aircraft services	<p>Exterior cleaning and Interior cleaning</p> <ul style="list-style-type: none"> • the external and internal cleaning of the aircraft
		<p>Toilet service</p> <ul style="list-style-type: none"> • empty,clean,flush toilets and replenish fluids
		<p>Water service</p> <ul style="list-style-type: none"> • drain water tanks • replenish water tanks with drinking water

		<p>Cooling and heating</p> <ul style="list-style-type: none"> • the cooling and heating of the cabin • provide or arrange for cooling unit • provide or arrange for cooling heating unit
		<p>De-icing/anti-icing services and snow/ice removal</p> <ul style="list-style-type: none"> • the removal of snow and ice,the de-icing of the aircraft
		<p>Cabin equipment/ Storage of cabin material</p> <ul style="list-style-type: none"> • the rearrangement of the cabin with suitable cabin equipment,the storage of this equipment

17	Catering ramp handling	<p>Catering ramp handling</p> <ul style="list-style-type: none"> • unload or load
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18	Baggage handling Baggage Handling Area	Handle baggage in the sorting area
		<p>Baggage screening and reconciliation</p> <ul style="list-style-type: none"> • screening checked baggage • screening transfer baggage • sreening mishandling baggage
		<p>Prepare for delevary onto flights</p> <ul style="list-style-type: none"> • bulk baggage • ULDs
		<p>Establish the number and/or weight of</p> <ul style="list-style-type: none"> • bulk baggage • built-up ULDs
		<p>Offload</p> <ul style="list-style-type: none"> • bulk baggage • ULDs
		Prioritise baggage delivery to claim area
		<p>Deliver to claim area</p> <ul style="list-style-type: none"> • Baggage • Oversize baggage
		Transfer baggage

		<ul style="list-style-type: none">• Provide or arrange for• Sortation of transfer baggage• Storage of transfer baggage prior to despatch• Transport of transfer baggage to the sorting area of the receiving carrier
		Handle crew baggage
		Arms and ammunition as checked baggage