**Chapter 14: International Terminal Operations**

**TRUE/FALSE**

1. A terminal is a location where goods arrive at their destination.

ANS: F DIF: Moderate REF: page 514

2. Ocean terminals transfer cargo from one ship to another.

ANS: F DIF: Moderate REF: page 515

3. A dry port is a terminal that exists in countries with no access to oceans or seas.

ANS: F DIF: Easy REF: page 515

4. Terminals act as interfaces between two (or more) modes of transportation.

ANS: T DIF: Moderate REF: page 514

5. Terminals have no means to store goods beyond a few days.

ANS: T DIF: Moderate REF: page 516

6. Bulk terminals handle goods that are not packaged.

ANS: T DIF: Moderate REF: page 517

7. Dry-bulk terminals frequently handle millions of tonnes of merchandise every year.

ANS: T DIF: Moderate REF: page 518

8. Liquid-bulk terminals specialize in either import or export trades.

ANS: T DIF: Moderate REF: page 522

9. Loading a dry-bulk ship can take as little as a single day.

ANS: F DIF: Moderate REF: page 522

10. Petroleum terminals interface between cargo ships and pipelines.

ANS: T DIF: Easy REF: page 523

11. LNG terminals are very labor intensive.

ANS: F DIF: Moderate REF: page 524

12. At a general-cargo terminal, the cargo can be loaded onboard both with geared ships and with ungeared ships.

ANS: T DIF: Moderate REF: page 525

13. RORO cargo is solidly secured onto the deck of the RORO ship.

ANS: T DIF: Moderate REF: page 526

14. Container terminals have the advantage of being able to load export cargo at the same time that import cargo is unloaded.

ANS: T DIF: Moderate REF: page 529

15. The container terminal is responsible for the stowage plan, the order in which containers are loaded onboard the container ship.

ANS: F DIF: Moderate REF: page 530

16. Refrigerated cargo is increasing transported by reefer containers.

ANS: T DIF: Easy REF: page 533

17. The Khorgos rail terminal transfers cargo from one type of railcars to another.

ANS: T DIF: Moderate REF: page 536

18. Road freight centers allow LTL cargo to be transferred from one carrier to another.

ANS: T DIF: Easy REF: page 539

19. Road freight centers at the border between the United States and Mexico allow trailers to be switched from a US carrier to a Mexican carrier, and reciprocally.

ANS: T DIF: Moderate REF: page 538

20. Logistics clusters are area where manufactured goods destined for export are manufactured.

ANS: F DIF: Moderate REF: page 539

**MULTIPLE CHOICE**

1. Terminals fulfill several functions for international logisticians. Which is not one of them?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | customs clearance for international shipments. | d. | convergence of cargo from different origins. |
| b. | interface between modes of transportation. | e. | short-term storage of goods, such as before customs clearance. |
| c. | transfer points for cargo. |

ANS: A

Terminals are interfaces, convergence points, and transfer points. They offer short-term storage. They do not offer customs clearance to importers.

DIF: Easy REF: page 515

2. When a terminal loads a low-density cargo in a dry-bulk ship and fills the ship completely before the ship’s cargo weight carrying limit is reached, the ship is said to have:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | volumed out. | d. | cubed out. |
| b. | spaced out. | e. | bulked out. |
| c. | sized out. |

ANS: D

A ship “cubes out” when the load it is carrying utilizes all of its volume capacity before it reaches its weight-carrying capacity.

DIF: Moderate REF: page 518

3. The amount of time that a terminal is granted to load or unload a ship is called:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | laytime. | d. | loading (or unloading) allowed time. |
| b. | demurrage. | e. | charter time. |
| c. | notice of readiness. |

ANS: A

The amount of time that a charterer is allowed to load or unload a ship is called the laytime. By extension, this is the time that the terminal has to perform this task.

DIF: Difficult REF: page 482

4. Roughly, how many trucks are needed to fill a large dry-bulk carrier to capacity?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 1,000 trucks. | d. | 25,000 trucks. |
| b. | 2,500 trucks. | e. | 50,000 trucks. |
| c. | 10,000 trucks. |

ANS: B

A large dry-bulk carrier has a dead-weight tonnage capacity of approximately 90,000 tonnes. This is equivalent to roughly 2,500 trucks.

DIF: Moderate REF: page 522

5. Terminals that handle cargo such as petroleum and petroleum derivatives, such as gasoline and jet fuel, are called

|  |  |  |  |
| --- | --- | --- | --- |
| a. | fluid-bulk terminals. | d. | hydrous-bulk terminals. |
| b. | petroleum-bulk terminals. | e. | wet-bulk terminals. |
| c. | liquid-bulk terminals. |

ANS: C

Liquid-bulk terminals handle cargoes such as petroleum and petroleum derivatives.

DIF: Easy REF: page 522

6. Natural gas is transported internationally:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | liquefied to a temperature of -162 degrees C (-260 degrees F) | d. | as a gas. |
| b. | liquefied to a temperature of 0 degrees C (32 degrees F) | e. | liquefied and transported at room temperature |
| c. | liquefied to a temperature of -50 degrees C (-58 degrees F) |

ANS: A

Natural gas must be cooled to -162 degrees C (-260 degrees F) so it can be liquefied and transported as a liquid.

DIF: Moderate REF: page 524

7. One of the primary characteristics of breakbulk cargo terminals is that they are:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | labor intensive. | d. | land intensive. |
| b. | capital intensive. | e. | asset intensive. |
| c. | time intensive. |

ANS: A

Breakbulk terminals are labor intensive.

DIF: Easy REF: page 524

8. Which function do stevedores working for a general-merchandise terminal fulfill?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | they place cargo in containers so it can be loaded them onto the ship. | d. | they analyze the value of cargo transported. |
| b. | they stow cargo onto the ship using blocks and chains. | e. | they operate the cranes that are onboard breakbulk ships. |
| c. | they sort the cargo by weight and size. |

ANS: B

Stevedores are responsible for loading cargo onto breakbulk ships, stowing it with blocks and chains to prevent movement.

DIF: Moderate REF: page 487

9. How are automobiles loaded onboard a RORO ship?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | they are placed onboard the ship by specially equiped tow trucks and tied down to the deck of the ship. | d. | they are loaded into containers, tied down, and the containers are then placed onboard the ship. |
| b. | they are driven onboard the ship and placed in parking spaces that are wide enough to allow them to sway when the ship moves. | e. | they are driven onboard the ship, and then tied down to the deck of the ship. |
| c. | they are loaded onboard with cranes and placed in padded parking spaces. |

ANS: E

RORO cargo is driven onboard the ship and then tied down to the deck of the ship.

DIF: Easy REF: page 526

10. What is the minimum size of the parking area needed in a RORO terminal to load or unload an entire ship?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 50 spaces | d. | 10,000 spaces |
| b. | 1,000 spaces | e. | 15,000 spaces |
| c. | 5,000 spaces |

ANS: C

A RORO ship carries between 5,000 and 8,500 cars, so the minimum parking size would be for 5,000 cars.

DIF: Moderate REF: page 526

11. Containers are stored in shorter stacks in a container terminal than they are onboard a containership. What is the reason for that decision?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | stacks that are tall make it time consuming to retrieve the containers at the bottom of the stacks. | d. | all of the responses in this answer set are reasons to keep terminal stacks shorter than containership stacks. |
| b. | the terminal may not be built to sustain all of the weight of a high stack. | e. | rubber-tired gantry cranes are not tall enough. |
| c. | the stackers have limited reach. |

ANS: D

Stacks are kept to 5 or 6 container because the RTG cranes and the stackers cannot reach that high (the maximum onboard a ship is 9 containers), the concrete pads in the terminal may not have the capacity to handle the weight, and it is very time consuming to have to move 8 containers to retrieve the bottom one.

DIF: Moderate REF: page 528

12. What type of vehicle transports containers from the container yard to the gantry cranes that load containerships?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | stackers. | d. | jockey tractors. |
| b. | rubber-tired gantry cranes. | e. | all of the responses in this answer set are means by which containers are moved from the yard to the loading cranes. |
| c. | forklift trucks. |

ANS: D

Terminal tractors (jockey tractors) move containers from the yard to the cranes. Some ports also use Automated Guided Vehicles.

DIF: Moderate REF: page 528

13. The loading plan determines the location of containers onboard the ship and the order in which they are placed on board. Which entity builds the loading plan?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | the freight forwarder. | d. | the stevedore operating the crane. |
| b. | the container terminal operator. | e. | the shipper (owner of the cargo). |
| c. | the shipping line. |

ANS: C

The loading plan is determined by the shipping line in function of a large number of criteria. The container terminal implements it.

DIF: Moderate REF: page 530

14. The Port of Yangshan is the largest container port in the world. Approximately how many containers did it handle in 2019?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 5,000,000 TEUs. | d. | 10 million TEUs |
| b. | 1,000,000 TEUs. | e. | 20 million TEUs |
| c. | 500,000 TEUs. |

ANS: E

The Port of Yangshan handled 19.8 million TEUs in 2019.

DIF: Moderate REF: page 532

15. A terminal that is located away from an ocean port and helps relieve some of the congestion in the ocean port is called a:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | dry port. | d. | off-land port. |
| b. | dry terminal. | e. | subordinate port. |
| c. | intermodal terminal. |

ANS: A

A dry port is an inland port that is located in the vicinity of an ocean port.

DIF: Easy REF: page 534

16. At which airport do 90 percent of all flowers imported into the United States arrive?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | New York. | d. | Chicago. |
| b. | Los Angeles. | e. | Miami. |
| c. | Memphis. |

ANS: E

Miami Airport is the point of entry for 90 percent of all flowers imported into the United States.

DIF: Easy REF: page 535

17. The “one-belt, one-road” rail link allows freight to be shipped from China to Great Britain in less time than it does by ocean, despite:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | delays due to the Russian weather. | d. | the crossing of the Bosporus. |
| b. | the different rail gauges between Russia and Europe. | e. | the need to find train engineers who speak Chinese, Russian, and English. |
| c. | lengthy customs procedures. |

ANS: B

The different gauges demand that the cargo be transferred from one type of railcar to another in Khorgos and Brest-Severny, but this can be done in little time.

DIF: Difficult REF: page 537

18. A road freight center can be used to transfer cargo from one truck to another. What kind of cargo are this type of terminals designed to handle?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | full truckload (FTL) cargo. | d. | drybulk cargo. |
| b. | less than truckload (LTL) cargo. | e. | roll-on roll-off cargo. |
| c. | breakbulk cargo. |

ANS: B

Road freight centers are designed to transfer LTL cargo from one carrier to another.

DIF: Easy REF: page 539

19. FTL shipments from one European Union country to another

|  |  |  |  |
| --- | --- | --- | --- |
| a. | can be handled by the same carrier and driver from departure to destination. | d. | must be cleared for import in all of the countries in which they travel. |
| b. | have to be transferred from one driver to another at the border. Both work for the same carrier. | e. | must be transported by a driver fluent in the languages of the country of origin and country of destination. |
| c. | have to be transferred from one carrier to another at the border. |

ANS: A

European Union countries allow cargo to be transported by the same driver and carrier from point of origin to point of destination.

DIF: Easy REF: page 538

20. PLAZA (Platforma Logistica de Zaragoza) is one of several logistics clusters in the world, as defined by:

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Malcom McLean. | d. | Fred Smith. |
| b. | Michael Porter. | e. | Pierre David. |
| c. | Yossi Sheffi. |

ANS: C

Yossi Sheffi coined the term “logistics clusters,” that applies to location with a high concentration of logistics-related companies. Michael Porter was the first to define the concept of “manufacturing clusters” (Chapter 1). Malcom McLean is the inventor of the ISO container, Fred Smith is the creator of FedEx and time-defined deliveries, and Pierre David is the author of your textbook (much lower impact than the other four).

DIF: Moderate REF: page 539

COMPLETION

1. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a location at which cargo is transferred from one ship to another.

ANS: terminal

DIF: Easy REF: page 515

2. If cargo is kept at a terminal beyond the free alloted time, the shipper is charged a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fee.

ANS: demurrage

DIF: Moderate REF: page 516

3. Granular cargo, such as grain, fertilizer and gravel is handled by \_\_\_\_\_\_\_\_\_ terminals.

ANS: dry-bulk, drybulk, bulk

DIF: Easy REF: page 517

4. Before loading, grain is kept in \_\_\_\_\_\_\_\_\_\_\_ (short-term storage) in export dry-bulk terminals.

ANS: silos

DIF: Difficult REF: page 518

5. When unloaded in the drybulk terminal in the port of destination, grain is dumped by a crane into a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that is then unloaded into trucks.

ANS: hopper

DIF: Moderage REF: page 519

6. The company that rents the entire capacity of a ship is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

ANS: charterer

DIF: Moderate REF: page 519

7. A ship is said to have “weighed out” when the cargo reaches the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ capacity of the ship.

ANS: carrying, weight

DIF: Easy REF: page 518

8. Cargo ships that are equipped with an onboard crane are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ships.

ANS: geared

DIF: Moderate REF: page 525

9. Containers are loaded onboard containerships by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cranes.

ANS: gantry

DIF: Moderate REF: page 529

10. Jockey tractors move containers in and out of the container \_\_\_\_\_\_\_\_\_\_\_ where they are handled by rubber-tired gantry cranes and stackers.

ANS: yard

DIF: Easy REF: page 528

11. The largest container terminal in the world is located in the Port of \_\_\_\_\_\_\_\_\_\_\_\_.

ANS: Shanghai, Yangshan, Yang Shan.

DIF: Difficult REF: page 531

12. Cargo of exceptional size and/or weight is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cargo.

ANS: project

DIF: Moderate REF: page 526

13. The Garonor road freight center was originally designed to transfer cargo from semi trucks to smaller trucks that were nimble enough to make deliveries in the city of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

ANS: Paris

DIF: Moderate REF: page 539