

INDIAN MARITIME UNIVERSITY
(A Central University, Govt. of India)
End Semester Examinations - December 2018
SEMESTER-III
M.B.A (Port and Shipping Management) /
(International Transportation and Logistics Management)
Elements of Port Management (PG21T2302/PG22T2302)

Date: 27.12.2018

Maximum Marks : 60

Time: 3 Hours

Pass Marks : 30

PART A
(Answer all the Questions)

12x1=12

- 1(a). Which of the following indicators gives a measure of Utilization indicator?
- A. Ship output per Berth Working hour
 - B. Berth Occupancy hour
 - C. Ship Turnaround Time
 - D. Tons Per Gang Hour
- 1(b). When planning cargo stowage, a ship's Cargo Officer has to bear in mind many, often conflicting, requirements but his primary concern must be with his ship's stability and seaworthiness. Which one of the following 'rules of thumb' does not concern him in this respect?
- A. Large consignments should be split between hatches
 - B. Heavy items of cargo should be stowed in the lower hold
 - C. Weight of cargo should be distributed evenly either side of the ship's centre line
 - D. Weight of cargo should be distributed evenly throughout the length of the vessel.
- 1(c). Which of the following is NOT normally considered as Fixed Cost?
- A. Salaries of permanent staff
 - B. Interest on capital borrowed for equipment purchase
 - C. Wages of hourly-paid
 - D. Cost of berth construction
- 1(d). If the Quay Transfer Operation fails to keep up with the other components of the general cargo berth operation, whether loading or discharging, a number of undesirable consequences arise. Which one of the following is not likely to be caused by a Quay Transfer bottleneck?
- A. Exports piling up on the quay apron
 - B. Imports piling up on the quay
 - C. Storage areas congested with exports
 - D. A hook starved of export cargo

- 1(e). Which one of the following organizations is responsible for the classification of 'Dangerous Cargo'?
- A. Manufacturer
 - B. Carrier
 - C. Forwarder
 - D. Shipper
- 1(f). What value of Berth Occupancy, averaged over a year, is normally taken as a realistic safe maximum for a medium length container terminal quay?
- A. 70%
 - B. 65%
 - C. 60%
 - D. 55%
- 2(a). If a vessel arrives at 08.00 hrs remains at anchorage until 10.00, berths at 12.00, starts discharging at 12.15, completes operation at 20.30, on the same day, leaves berth at 20.45 and leaves port at 22.00, what was its 'Turnaround Time'?
- A. 8.25
 - B. 8.5
 - C. 8.75
 - D. 14.00
- 2(b). Which of the following is the correct definition of the Tare Mass of a container?
- A. The weight of cargo that it can carry when full
 - B. The weight of the container when carrying no cargo
 - C. The weight of the container when full
 - D. The maximum weight that can be stacked on top of that container in the container yard.
- 2(c). A job crane has three distinct motions, in addition to traversing on rails along the quayside. What is the name given to the lowering and raising of the Jib?
- A. Luffing
 - B. Hoisting
 - C. Jibbing
 - D. Slewing
- 2(d). Which type of crane spreader beam is best suited to use with a quayside gantry crane on a busy terminal dealing almost exclusively with large, cellular container vessels?
- A. A fixed-length, manual spreader
 - B. A 20 ft spreader with automatic twist locks
 - C. An automatic, telescopic spreader
 - D. A 40 ft automatic spreader with rotary attachment

2(e). 'Jeddah' is the seaport of

- A. Saudi Arabia
- B. Iran
- C. Iraq
- D. Egypt

2(f). Which of the following countries has no seaport ?

- A. Austria, Switzerland, Laos, Serbia
- B. Uganda, Zambia, Zimbabwe, Nepal
- C. Chad, Ethiopia, Bolivia, Parague
- D. All of the above

PART- B (200 Words)
(Answer any Five out of Seven)

5 x 4 = 20

3. Ports should be considered as one of the most important aspects of maritime transport , Why?
4. There exists a strong interrelationship between various set of measures and the various port performance indicators , How?
5. Role and functions of Port Authority, Terminal Operator, Shipping Agency, Customs in a competitive port environment?
6. Compare and contrast the organizational structure of Indian Public Ltd., Port with the one of the Major Port Trusts of India.
7. Describe the sequence of activities performed in a RoRo ship operation.
8. Discuss the categories and efficacy of various container handling equipment of a dedicated container terminal?
9. Write Short notes on (a) ISO 14001 (b) ISM Code (c) ISPS (d) UNCTAD

PART C

**(Question No.10 is compulsory and
any three questions to be answered from the remaining)**

4 x 7 = 28

10. The MV Nemo was one of the two mainline vessels handled at Port of JNPT Container Terminal during the 'Week 1' of the financial year 2017-18. The Harbour Master's records for the Nemo's call reveal the following:

- Arrived at port — Monday 00.30
- Proceeded to berth — Monday 05.30
- Finished berthing — Monday 06.30
- Work started — Monday 07.00
- Work finished — Tuesday 03.30
- Left berth — Tuesday 06.30
- Left port — Tuesday 08.30

In addition, Control Centre shift records show that, during the period that the Nemo was worked, there were two 30-minute meal breaks and two stoppages of work: one of 35 minutes (because of heavy rain) and one of 25 minutes (because of a power failure). From the Nemo total container movement of 970 during the 1 week, calculate the following:

1. Time spent by the Nemo in port :
 2. Time spent at berth :
 3. Total time spent being worked :
 4. Networking time :
 5. Ship productivity:
 - (a) in movements per ship-hour in port :
 - (b) in movements per ship-hour at berth :
 - (c) in movements per gross ship working hour :
 - (d) in movements per net ship working hour :
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11. Explain various stages and the generations of the port development ?
 12. Describe the component activities of the container handling operations and to describe the principles followed when planning stowage on container ships and to explain how stowage affects the sequence of loading and discharge of containers.
 13. (a) What is the Ballast Water Management Convention? (b) How will ships' compliance be checked? (c) What about ships registered under a flag which hasn't ratified the BWM Convention?
 14. Explain the facilities and services required to be provided by the port in the uplifting regional economic development of the country?
 15. Narrate the strength and weakness of the various types of alternative port management structure and ownership models prevailing in the world.
