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#### PORT OPERATION MANAGEMENT

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

#### **GROUP - A**

#### (Multiple Choice Type Questions)

- 1. Choose the correct alternatives for any *ten* of the following :  $10 \times 1 = 10$ 
  - i) A shipping port is a facility for
    - a) receiving ships and / or transferring cargo
    - b) receiving ships and / or repairing vessel
    - c) receiving ships and / or storing cargo.
  - ii) A seaport can be a
    - a) cargo and cruise port
    - b) cargo and fishing port
    - c) both (a) and (b).
  - iii) Feature of a good seaport is characterised by
    - a) a harbour with sufficient draft and repair facilities
    - b) a harbour with close proximity to city and good draft
    - c) a harbour with good draft and distribution facilities.

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- iv) The most important criteria in an 'Efficient Port' is characterised by
  - a) custom of the port
  - b) quick ship turn around
  - c) providing alternative choice of berths.
- v) The most important effect of changing ship technology on port infrastructure is
  - a) increasing ship size
  - b) development of cargo handling features
  - c) both (a) and (b).
- vi) The most important criteria for a ship owner/shipper's choice of port is
  - a) range of available port facilities
  - b) port and associated tariff structure
  - c) overall trade transport service.
- vii) Most important factor towards building of a berth is
  - a) based on all-round observation
  - b) availability of rail lines
  - c) adequate provision for storing and distribution of cargo.
- viii) In modern times, most important technical developments affecting port is
  - a) effects of computer on communication
  - b) changes ship management attitudes
  - c) shift of cargo loading aspects from ship to shore and vice versa.

- ix) The principal objectives of port management after adoption of quality management system is
  - a) rapid port development
  - b) ways of minimising costs and maximization of benefits
  - c) port as economic multiplier of a region.
- x) Port policy is a concern of
  - a) Central Government
  - b) State Government
  - c) Local Administration.
- xi) Advantage of a Free port is that, it
  - a) reduces time and effort of custom formalities
  - b) is outside sovereignty of a state, resulting freedom of business
  - c) is strategically well connected with all major ports around the world.
- xii) The international conventions related with port environmental matters are
  - a) MARPOL 73/78 & SOLAS 74/78
  - b) OPRC 90 & UNCED 92
  - c) Both (a) and (b).

## GROUP – B ( Short Answer Type Questions )

Answer any *three* of the following.

- $3 \times 5 = 15$
- 2. a) What are average port-non cargo handling disbursement heads?
  - b) In context of (a), what are cost heads under cargo handling?

- 3. a) List the important criteria due to which about 20 ports around the world became major ports from the beginning of 2000 onwards.
  - b) Why is hygrographic surveying necessary in a port channel and reverine ports?
- 4. a) Enumerate different functions and features of a port.
  - b) Enlist important facilities and services as provided by a port.
- 5. a) Explain vessel traffic services (VTS).
  - b) Enlist its different categories as per port operation and also under BIMCO Bulletin directive.
- 6. a) Enlist different types of trailers used to move containers in a terminal.
  - b) Enumerate different types cranes used in a port.

# $\begin{aligned} & & & & GROUP-C \\ ( & & & Long & Answer & Type & Questions ) \end{aligned}$

Answer any *three* of the following.  $3 \times 15 = 45$ 

- 7. What are the principal causes of port environmental pollution? Enumerate priority environmental issues as per latest Lhayd's list.
- 8. a) Enlist and discuss the port employees / workers who will need training and licensing for working with port / around port waters.
  - b) Enlist different modes of inland transport for cargo distribution from a seaport.
- 9. Enlist the essential factors which influence port development. Explain the related issues in brief.
- 10. How is the optimum number of Berths required in a port arrived at ? Discuss different methods to analyse quantitatively.
- 11. What are the major factors constraining port development? Explain in brief, underlining reasons.

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