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***B.Tech. Degree VI Semester Examination in Marine Engineering  
May 2018***

**MRE 1601 MANAGEMENT SCIENCE  
(2013 Scheme)**

Time: 3 Hours

Maximum Marks: 100

(5 × 20 = 100)

- I. (a) Briefly explain the various management functions. (10)  
(b) Describe the objectives of management. (10)

**OR**

- II. (a) Enumerate the principles of scientific management. (10)  
(b) Distinguish between formal and informal organization. (10)

- III. (a) Describe the various types of production systems with their advantages and disadvantages. (10)

- (b) Write short notes on: (10)  
(i) Standardisation.  
(ii) Simplification.  
(iii) Specialisation.

**OR**

- IV. (a) What are the functions of Production Planning and Control (PPC)? (10)

- (b) Write notes on: (10)  
(i) Inventory control.  
(ii) Safety stock.  
(iii) Re-order level.

- V. (a) Draw the network and find out the project duration for the project data given below. (10)

Activity	$t_0$	$t_m$	$t_p$
A	1	2	3
B	1	2	3
C	1	2	3
D	1	2	9
E	2	3	10
F	3	6	15
G	2	5	14
H	1	4	7
J	4	9	20
K	1	2	9
L	4	1	4

- (b) Illustrate PERT and CPM with network diagrams. (10)

**OR**

(P.T.O.)

- VI. (a) From the following project data draw the network, find the critical data and the project duration. (10)

Activity	1-2	2-4	4-7	7-9	1-5	5-6	6-7	1-3	3-6	6-8	8-9	9-10
Normal project duration	4	4	6	8	5	12	7	3	6	9	2	3

- (b) Differentiate between PERT and CPM. (10)

- VII. (a) Enumerate how inventory control is useful for an industry. Briefly explain any three inventory control types. (10)

- (b) Explain the following. (10)

- (i) Logistics and supply chain management.  
(ii) Integrated material management.  
(iii) Process planning.

**OR**

- VIII. (a) What is depreciation? Explain three methods of calculating depreciation. (10)

- (b) Explain Balance sheet and Profit and Loss account with their relevance in an industry. (10)

- IX. (a) Describe the importance of decision making. Briefly explain making under certainty, under risk and under uncertainty. (10)

- (b) Elaborate work study and job evaluation with their advantages. (10)

**OR**

- X. (a) Explain management by objectives (M.B.O) with its advantages and limitations. (10)

- (b) What are the advantages and disadvantages of trade unions in an industry? (10)

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