Mohammad Danesh Science and Technology University, Dinajpur
B.Sc. in CSE Level-4, Semester-I (Jan-Jun), Special Repeat Examination-2018
Course Title- Industrial Management
Course Code- MGT 405
Credit Hour-03

Time-3 Hours

Full Marks-90

(The figures in the right margin indicate the marks for respective questions.)
USE SEPARATE SCRIPTS FOR EACH SECTION

Section –A
Answer any **Three**

1. a) Define business. 3
   b) Mention the characteristics of business. 4
   c) Describe the components of business. 8

2. a) What are the main functions of management? 4
   b) Epitomize the principles of scientific management. 4
   c) Briefly discuss the contribution of Henri Fayol. 7

3. a) Illustrate the basic concept of network analysis. 5
   b) Project-X is composed of the following activities whose time estimates are given bellow: 10

Activity	Predecessor	Optimistic time (weeks)	Most likely time (weeks)	Pessimistic time (weeks)
K	-	2	2	8
L	-	2	5	8
M	-	4	4	10
N	A	2	2	2
O	B	2	5	14
P	C	3	6	15
Q	D,E	2	5	8
R	D,E	5	8	11
S	F,G	3	6	15

Requirements:
i) Draw an appropriate network diagram.
ii) Identify the critical path.
iii) Calculate variance and standard deviation of C.P.
iv) Determine the probability of completion of 2 weeks earlier than expected time.
v) What will be the project duration at 65 % of probability?

4. a) Define the concept of productivity. 3
   b) Explain the dynamics of productivity change. 6
   c) Describe the tools of productivity measures with criticism. 6

Section –B

Answer any **Three**

1. a) Define industrial engineering. 3
   b) Identify the functions of industrial engineer in an organogram. 5
   c) Discuss the techniques of industrial engineering. 7

2. a) What are the assumptions in Break-Even Analysis? 5
   b) Given data: fixed cost = 4,000/- BEP= 10,000/- and Per unit selling price=10/- From the following data calculate: i) C/M ratio ii) Per unit variable cost iii) Profit if 2,000 units are sold iv) New BEP if selling price is increased by 10% 10

3. a) What are the features of linear programming? 5
   b) A manager of an oil refinery has to decide upon the optimal mix of two blending processes to which inputs and outputs are given per production run: 10

Process	*Profit/ unit*	*Input*		*Output*	
		Crude A	*Crude B*	*Petrol X*	*Petrol Y*
1	6/-	10	6	10	16
2	8/-	8	10	8	8

The maximum amount of crude *A* and *B* are 400 units and 300 units respectively. Market requirement shows that at least 200 units of petrol *X* and 160 units of petrol *Y* must be produced. Formulate the Objective Function and optimize it.

4. Write short notes on: 5X3=15
   i) Objectives of business
   ii) Emerson's twelve principles of efficiency
   iii) Business Environment