Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (E-I 2011 Onwards) (Sem.–6)

INDUSTRIAL ENGG.

Subject Code : DE/ME-2.1

M.Code : 71253

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Answer briefly :**

   a) Define Industrial Engineering.

   b) Enumerate principles of good layout.

   c) What is line of balance?

   d) Differentiate between Production and Productivity.

   e) Define Work study.

   f) Explain in brief various techniques for micro motion study.

   g) What is contingency allowance?

   h) How displays can be economically designed on machines?

   i) Enumerate the benefits of job rotation.

   j) What is value engineering?

SECTION-B

2. Explain the qualities an Industrial Engineer should possess.

3. Based on the information given in the Muther's grid, develop the plant layout in the arrangement shown. Department 1 must be in the location shown below :

Deptt-1	E	A	E	E	X	A	U
Deptt-2	A	A	E	X	A	O	
Deptt-3	U	A	X	X	X		
Deptt-4	U	I	A	A			
Deptt-5	X	O	U				
Deptt-6	E	A					
Deptt-7	A						
Deptt-8	-						

	1		

4. What is method study? Explain in brief various charts and diagrams utilized in method study.

5. What is job enrichment? Discuss the methods for achieving job enrichment at workplace.

6. Explain the role of ergonomics in product design.

SECTION-C

7. a) In order to achieve sound plant layout, explain in detail the scientific step by step procedure that must be followed.

   b) State the relationship between cumulative timing and fly back timing. How standard time is calculated?

8. a) Discuss the following :

      i) Work Study and Management.

      ii) Work Study and the Worker.

   b) Describe the steps involved in value engineering studies. Also enumerate the applications of value engineering.

9. a) Describe the ergonomic considerations in designing man machine systems.

   b) How various material handling equipment can be classified?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.