Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards E-II) (Sem.–7,8)

INDUSTRIAL ENGG.

Subject Code : DE/PE-2.1

M.Code : 72007

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) What is GT layout?

c) Define JIT.

d) Enumerate the situations wherein the fixed path material handling systems are deployed in manufacturing plants.

e) What is the reaction of workers to the work study?

f) Enumerate the advantages and limitations of using PMT systems.

g) Define normal work areas.

h) Why job rotation is important for manufacturing organizations?

i) Ergonomics means “fitting work to people”. Comment.

j) Define value engineering.

SECTION-B

2. Explain the role of Industrial Engineering in improving the plant efficiency.

3. Discuss the salient characteristics, advantages, limitations and applications of product layout.

4. Define method study. Explain various techniques of method study.

5. How do organizations plan for job enrichment at workplace? How does job enrichment affect employee performance?

6. What is the need for ergonomics in Industry? Discuss the benefits of an ergonomics approach to an organization.

SECTION-C

7. a) Describe various types of material handling equipment used in manufacturing industry.

   b) Seven areas will receive incoming parts from a factory's receiving dock, which can be located at either position (A) or position (B) in the facility. The number of loads per month is shown in the parenthesis. The distance to (A) & (B) are given in brackets. Which position you will choose & why?

A	1 (90)	B
2 (60) [A:1,B:2]	3 (30) [A:1,B:1]	4 (50) [A:2,B:1]
4 (40) [A:2,B:2]	5 (90) [A:2,B:2]	6 (70) [A:2,B:2]

8. a) Explain principles of motion economy related to human body, workplace arrangement, design of tools and equipment and time conservation.

   b) Describe systematic procedure for work study explaining all steps.

9. a) Enumerate ergonomics considerations for design of controls.

   b) "*Value engineering is a powerful cost reduction tool*" Comment. Discuss the various fields of application of value engineering.

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.