

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 140405

Roll No.

**B. TECH.**

**Theory Examination (Semester-VI) 2015-16**

**INDUSTRIAL ENGINEERING**

*Time : 3 Hours*

*Max. Marks : 100*

**Section-A**

**1. Attempt all questions. (2×10=20)**

- (a) What is an organization?
- (b) What do you mean by therblings?
- (c) Write the names of material handling equipments.
- (d) What do you understand by sampling?
- (e) Write the full form of PERT.
- (f) What do you mean by inventory?

- (g) What is the difference between production and productivity?
- (h) What is the difference between private limited company and public limited company?
- (i) What is break even point?
- (j) What do you mean by routing?

### **Section-B**

**2. Attempt any five questions. (10×5=50)**

- (a) Explain the term “Performance Rating”. Correlate the terms performance rating and production rating with the help of a suitable example.
- (b) What is meant by Human Resource Development? Enumerate the objective of the human resource development.
- (c) State the factors governing the amount of compensation paid to the worker under Workmen’s Compensation Act.
- (d) Following data are available for existing equipment and for the proposed equipment to replace the existing one.

Find whether the concern should go for replacement or not:

	<u>Factors</u> <u>Equipment</u>	<u>Existing</u> <u>Equipment</u>	<u>Proposed</u>
(i)	Cost (Market value)	Rs. 1500	Rs. 10000
(ii)	Operating expenses (annual)	Rs. 3890	Rs. 3890
(iii)	Scrap value	Rs. 500	Rs. 1000
(iv)	Interest	11%	11%
(v)	Life of equipment	1 year	10 years

- (e) Formulate a transportation problem as a Linear Programming problem.
- (f) What is Memorandum of Association according to the company act 1956?
- (g) Differentiate between the terms "Lock-Out" and "Closure". Discuss the basic objectives of Industrial Disputes Act.
- (h) Enumerate the various principles of organization. Discuss, the principle of span of control.

## Section-C

**Attempt Any Two questions**

**(15×2=30)**

3. What is meant by the replacement of machine? Differentiate between the annual cost method and present worth method of replacement analysis. Discuss also the advantages and disadvantages of using present worth method of analyzing replacement of machine.
  
4. Derive an expression for economic batch size in production in terms of cost of production , set-up, annual requirement , daily requirement and daily production . A company produces 4800 parts per day and sells them at approximately half of the rate. The set-up cost is Rs. 1000. The carrying costs are Rs. 5 per unit. The annual demand is 480000 units. Find optimal lot size.
  
5. Write short notes on:
  - (i) Factory act 1948
  - (ii) Industrial dispute
  - (iii) Trade union
  - (iv) Independent float
  - (v) First cost V/S Trade in value