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Pages: 2

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Eighth Semester B.Tech Degree Examination June 2022 (2015 Scheme)



Course Code: ME404

Course Name: INDUSTRIAL ENGINEERING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

Marks

- 1 a) Discuss the functions of industrial engineering and the role it can play in raising industrial productivity (5)
b) Explain the importance of the following terms in break-even analysis (a) Margin of safety (b) Angle of incidence (c) Contribution (5)
- 2 a) Explain the significance and need of the following in product development and design? (a) standardization (b) simplification (5)
b) A company makes a product which is sold for Rs. 10.5 per unit and the fixed cost of the assets in Rs. 5,000 with a variable cost of Rs. 6.5 per unit. How many units should be produced to break even? How many units must be produced to earn a profit of Rs. 10,000? (5)
- 3 a) Briefly explain the principles of plant layout. (5)
b) Explain briefly the significance of the following in connection with material handling (a) Engineering factors (b) Economic factors (5)
- 4 a) Differentiate between preventive and breakdown maintenance in an industry (5)
b) Describe the following methods of depreciation (a) Straight line method (b) Sinking fund method (5)

PART B

Answer any three full questions, each carries 10 marks.

- 5 a) Explain the need of micro motion study & therbligs in industries (5)
b) What is flow process chart? What is its utility? (5)
- 6 a) Differentiate between job evaluation and merit rating with its application (5)
b) Briefly discuss the following wage incentive plans (a) Taylors differential piece rate system (b) Halsey incentive plan (5)

7. a) Explain the objectives of industrial psychology. (5)
b) Write a note on the need of any three personal protection devices used in an industry. (5)
8. a) Briefly explain the causes of industrial disputes. (5)
b) Explain the concept and objectives of worker participation in management. (5)

PART C

Answer any four full questions, each carries 10 marks.

9. Describe the functions of production planning and control (10)
10. Explain the functions of the following in an industry (a) Routing, (b) Scheduling (10)
(c) Dispatching
11. What is Economic Order Quantity (EOQ)? Derive the formula for determining EOQ in an industry. (10)
12. Discuss any two destructive and non-destructive testing methods in detail. (10)
13. Explain in detail the need and applications of X and R control charts (10)
14. Discuss the concept and industrial benefits of following in detail (a) TQM (b) Six Sigma (10)
