

Total No. of Questions : 8]

SEAT No. :

P-1609

[Total No. of Pages : 2

[6002]-239

S.E. (Robotics and Automation)

INDUSTRIAL ENGINEERING AND MANAGEMENT

(2019 Pattern) (Semester - IV) (211508)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Assume Suitable data if necessary.

Q1) a) Describe the entrepreneur's role and task. [8]

b) Describe factors impacting on entrepreneurship. [9]

OR

Q2) a) Describe the characteristics of an entrepreneurship. [5]

b) Following data is available for ABC company: [12]

Variable cost per unit = Rs.15

Selling Price per unit = Rs. 25

Total units sold = 75,000

Fixed cost = Rs.15,000

Calculate:

- i) PV ratio
- ii) BEP in units
- iii) BEP in sales
- iv) Total Profit
- v) Margin of Safety

P.T.O.

Q3) a) Define Industrial Engineering. What are the functions carried out by an Industrial Engineer? Describe any four tools and techniques of Industrial Engineering. [9]

b) Describe Taylor Piece Wage System and Merrick Piece Wage System with suitable illustration. State the advantages and limitations of these systems. [8]

OR

Q4) a) Define Basic work content. Describe the factors which affects the basic work content (i.e. excess work content). [10]

b) Define and explain with suitable illustration i) Total productivity ii) Labor productivity and iii) Material productivity. What are the benefits of increased productivity? [7]

Q5) a) Describe principles of motion economy related to [10]

i) Work place

ii) Design of equipment and tools

b) Describe SIMO chart with suitable illustration and appropriate symbols. [8]

OR

Q6) a) Describe Micro motion study. Describe various therbligs used in Micro motion study. [9]

b) Describe Man - Machine chart with appropriate symbols. [9]

Q7) a) Describe the process to carry out work sampling study. State how the standard time is calculated using work sampling study. [10]

b) Describe MOST with suitable illustration. [8]

OR

Q8) a) Describe various types of allowances used in time study. [9]

b) Describe PMTS with suitable illustration. [9]

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