Paper ID [PE302]

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B.Tech. (Sem. - 6ᵗʰ)
INDUSTRIAL ENGINEERING (PE - 302)

Time : 03 Hours   Maximum Marks : 60

Instruction to Candidates:

1) Section - A is **Compulsory**.

2) Attempt any **Four** questions from Section - B.

3) Attempt any **Two** questions from Section - C.

Section - A

Q1)   (10 × 2 = 20)

a) Define Industrial Engineering.

b) Identify the layout preferred in a car assembly shop.

c) How do you select a person for work study?

d) How do you compare two methods in method study for selecting the best.

e) What is the role of PMTS in work measurement?

f) What do you mean by value?

g) Under what special circumstances, job rotation is preferred?

h) What are the salient features of a car seat designed ergonomically?

i) What do you understand from JIT?

j) What is meant by cycle time?

Section - B

(4 × 5 = 20)

Q2) How could you measure improvement in productivity?

Q3) Describe briefly various types of manufacturing systems.

Q4) Under what circumstances is work sampling preferred to stop watch time study for establishing work standards?

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Q5) What factors contribute to the development of fatigue? How it can be reduced with job design?

Q6) What are the various types of values? Explain.

Section - C

(2 × 10 = 20)

Q7) (a) Explain various stop watches used for time study.

(b) What are the typical errors with time study rating? How it can be minimized?

Q8) Write short notes on the following :

(a) String diagram.

(b) Micromotion and macromotion study.

Q9) Describe the procedure of job design considering behavioral factors by 75 samples of a production cycle gave an average time of 5.28 minute/piece. The performance rating was estimated as 110% and allowances are 25% of total time available. What is the standard time in minutes/piece?

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