

Total No. of Questions :6]

P81

SEAT No. :

[Total No. of Pages : 2

BE/Insem./APR-121

B.E (Mechanical)

402049 C : INDUSTRIAL ENGINEERING

(2012 Pattern) (Semester -II) (Elective -III)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Solve 3 questions Q1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.
- 2) Figures to the Right side indicate full marks.
- 3) Assume suitable data if necessary
- 4) Neat diagrams must be drawn wherever necessary.

- Q1)** a) Explain principles of management in brief. [6]
- b) Explain span of control, delegation of authority in detail. [4]

OR

- Q2)** a) What are the types of organizational structures? Explain Military structure in detail. [6]
- b) What is productivity? Explain Taylor Devis Model for productivity. [4]

- Q3)** a) What is work study? Explain human factors in work study. [5]
- b) Explain micro motion study in detail. [5]

OR

- Q4)** a) Explain value engineering in detail. [5]
- b) Explain SIMO chart in brief. [5]

P.T.O.

- Q5)** a) What is time study and explain steps in time study. [4]

- b) An industrial operation consists of five elements with following observed times and the performance ratings. Assuming rest and personal allowance as 15% and contingency allowance as 2% of the basic time calculate standard time per piece. [6]

Element	Observed time (minutes)	performance rating (%)
A	0.20	85
B	0.08	80
C	0.50	90
D	0.12	85
E	0.10	80

OR

- Q6)** a) Explain MOST in details. [4]
- b) A work study was conducted in a machine shop. The following data has been recorded [6]

- i) Total number of observations = 2500
- ii) No activity = 450
- iii) The ratio between manual to machine = 3:1
- iv) Average performance rating = 85%
- v) Total number of parts produced = 150
- vi) Duration of study = 60 hours

Calculate the standard time per part assuming 15% relaxation allowance