

Roll No

ME-701(D)

B.E. VII Semester

Examination, December 2016

Work Study And Ergonomics

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

v) Assume missing data suitably, if any.

vi) Draw neat and clean sketches/diagrams/figures wherever required.

1. a) State the objectives and applications of Method Study? Compare with time study.

b) What is operation process chart and Flow process chart?

c) State the steps or procedure involved in methods study.

d) Discuss the following :

i) String Diagram

ii) Man machine chart.

OR

State the principles of motion economy and their application in work design

2. a) Compare work sampling and work measurement.

b) State brief applications of work study in industries.

c) State the basic steps in making a time study.

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d) Discuss various equipment needed in time study. How selection of jobs is done in work measurements?

OR

What do you mean by establishment of standard time?

Define various types of time allowances with reasons.

3. a) Define job evaluation.

b) What is work factor system? State its importance.

c) What is MOST? Discuss in brief.

d) Compare the method of job evaluation with the help of suitable examples.

OR

Explain in detail Methods Time Measurement (MTM)

4. a) Define the Anthropometry. State its importance.

b) Compare relative capabilities of human being and machines.

c) Give an accounting of energy expenditure in physical activities.

d) Describe the relationship between stress, strain and related procedure of mental workload in detail.

OR

Discuss factors affecting information reception and processing. Explain selection of sensory input.

5. a) What are warning signals? Why they are required?

b) Explain differentiate between factorial and graphic display.

c) Explain types of visual display.

d) Discuss the general principles of auditory and tractral display.

OR

Explain characteristics and selection of auditory with examples.

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