

Roll No. ....  
1500 -/12/45/-

**HV-641**

**January 2017**  
Master of Business Administration (MBA) Examination

(Full Time) (New) Third Semester  
**FT 305P : WORK STUDY AND PRODUCTIVITY**

Time 3 Hours]

[Max. Marks 80

**Note :** Question paper consist of two Sections A and B. Attempt any four questions from Section A. Section B is compulsory.

**Section A**

1. (a) What are the causes and remedies for 'ineffective time due to shortcoming of management'? 10  
(b) What are the benefits of increased productivity for workers and customers ? 5
2. (a) Various operations are conducted in various departments of an assembly of a car. What factors will you consider for selecting a department for method study ? 10  
(b) Which recording techniques are useful for designing a layout ? Explain in brief. 5
3. (a) Describe objectives and tools used in micromotion study. 10  
(b) Draw a diagram to depict various classes of working areas of a workman. 5
4. (a) Describe various steps in time study to determine standard time of a job using a flow chart. 10  
(b) Describe various types of relaxation allowances. 5
5. Assume that you are seating on your seat in a class. Your teacher asks you to draw a diagram on the White Board in front of the class. Draw the flow process chart. 15
6. Write short notes on any three of the following :  
(a) Rating.  
(b) Predetermined Motion Time Study (PMTS).  
(c) Capital Productivity.  
(d) Qualified Worker. 5×3=15

**Section B**

7. An operation consist of 6 elements A to "F. time study is conducted and following observations are made. Calculate production rate per hour if contingency allowance is 3%.

Element	Observed Time (Min : Sec)	Rating	Relaxation allowance
A	1:20	80	10%
B	0:40	90	15%
C	3:30	100	13%
D	1:30	120	8%
E	0:20	80	8%
F	2:10	110	12%

**12**

8. Work sampling study was conducted to determine percentage of idle time of an automatic section. Calculate no. of observations necessary to attain results with confidence level of 55% and accuracy level of  $\pm 5\%$ .

A pilot study was conducted 1000 random observations showed 250 observations when machine was idle.

**8**

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