Exam.Code:0944
Sub. Code: 33914

2056

B.E. (Mechanical Engineering)
Eighth Semester
MEC-804(g): Work Study

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting two questions from each Section.

x-x-x

Marks:-50

1	(a) How work study can help in improving the productivity? (b) Define travel chart. (c) What is the necessity of performance Rating? (d) Define therbligs. (e) State the goal of work sampling used in time study techniques.	(5 x2)
	Section - A	
2	**(a)** What is method study? How will you determine the areas that need method study application in an industry? **(b)** Discuss the system's concept applied to productivity.	(6) (4)
3	**(a)** State the construction procedure of two hand process chart .Explain the symbols used. (b) Draw left hand right hand chart for bottling operation carried out by a machine. Assume the necessary data and state them.	(5) (5)
4	**(a)** Discuss the importance of Principles of Motion Economy as applied in work station layout. **(b)** Explain the practical significance of alternative solution used in work study.	(5) (5)
	Section - B	
5	**(a)** Explain stop watch study. What is the need to carryout time study? Discuss. **(b)** Why do you provide allowances in time study? Explain. What are the various allowances? State the objectives of providing allowances.	(5) (5)
6.	**(a)** What is MTM system? State the basic principles involved in MTM. State some of its industrial application. **(b)** A sample study was conducted in a workshop of highly productive machines. Down time was recorded as 40%.Determine the number of observations required for the study for a 95% confidence level and an accuracy of ±5%.	(5) (5)
7	**(a)** Explain incentives and their types. State the importance of direct financial incentive plans and indirect financial incentive plans. Why are they more effective? Explain. **(b)** Define wages and how they differ from wage-incentives.	(6) (4)

x-x-x