Code No: RT32036 **R13** SET - 1

III B. Tech II Semester Supplementary Examinations, November -2018

INDUSTRIAL ENGINEERING & MANAGEMENT

(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1 a) What is productivity measurement? [3M]
b) List out the factors governing plant layout. [4M]
c) Define work measurement. [4M]
d) Define six sigma. [3M]
e) What is job classified method? [4M]
f) List out applications of Project management [4M]

PART -B

2 a) State and briefly explain the functions of management. [8M]
b) Explain the functional organization advanced by Taylor using an Organization chart. State its merits and demerits. [8M]

3 a) Explain the steps involved in plant layout with the help of a block diagram. [8M]
b) Discuss the symptoms of a bad layout. [8M]

4 a) List the pre-requisites for a successful method study. [8M]
b) What are therblings? When it is used? What are the advantages of micro-motion study? Give any five with therblings symbols. [8M]

5 a) Construct an $\bar{X}$- R chart from the data given below. The sample size is 5. [12M]

Sample No.	$\bar{X}$	Range
1	177	3
2	177	5
3	176	3
4	176	8
5	174	2
6	177	8
7	175	5
8	176	7
9	176	3
10	174	2

b) Write short note on zero defect concept. [4M]

6 a) Explain in value engineering and write any three practical examples of it. [8M]

b) What is group incentive scheme? What are its advantages? Name any two group incentive schemes. [8M]

7 For the following data, (i) compute the project completion time (ii) Crash the project to 7 weeks at the least cost. [16M]

Activity	Preceding Activity	Normal Time (Days)	Crash Time (days)	Normal cost (Rs)	Crash cost (Rs)
A	-	3	2	700	900
B	-	2	1	1000	1700
C	-	1	1	400	400
D	A	7	3	1500	1700
E	B	6	3	900	1200
F	C	2	1	3000	4000
G	D,E	4	2	1500	2000

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