VPM's
DR VN BRIMS, Thane
Programme: MMS (2016-18) (Operations)
Third Semester Examination October 2017

Subject	**Industrial Engineering Applications and Management**		
Roll No.		**Marks**	**60 Marks**
Total No. of Questions	**7**	**Duration**	**3 Hours**
Total No. of printed pages	**2**	**Date**	**25.10.2017**

Note: Q1 is compulsory and solve any FOUR from the remaining SIX questions.
Q1) 20 Marks (Compulsory)

Q.1Say if the following statements are true or false & Explain:

1. The manufacturing operation has to be reliable, in spite of variability and uncertainty in the environment.
2. Industrial Engineers work so as to eliminate waste of resources in the operations.
3. Efficiency is defined as input divided by output.
4. Costs are not an important resource while calculating productivity.
5. Unfinished activity has only cost but no value.
6. Correct, Complete and Stepwise defined Process only would make all three resources men, machine and materials to give most desirable output.
7. Competition Challenges Productivity.
8. You should keep adequate WIP so as to avoid delays between work stations.
9. In a fixed position Layout the product moves from one stage to the next stage.
10. Proper Layout's and Material Handling Equipment's would enhance Productivity.

Attempt Any FOUR from the Remaining SIX Questions

Q2) ***Any three from below ———— (5x2) = 10 Marks***

a) Elimination of NVA's in the system improves Productivity.
b) Work expands so to fill in the time available for its completion.
c) In Business, efficiency has to be greater than 1
d) Productivity of Men , Machines and Materials.
e) Time Study.
f) String Diagram

Q3) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) Explain with examples 7 wastes in Manufacturing Operations.
b) Explain with a proper diagram how uncertainty and variability can be controlled so as to achieve reliability.
c) Do Not Measure if you don't want to improve. But if you want to Improve Measurement is the only way. Explain in Details with examples.

Q4) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) Explain at least 3 applications of work study with proper examples.
b) What are advantages of work study and method study techniques discuss at least 3.

c) Explain main steps in Method Study namely Select Record, Examine, Develop, Install and Maintain.

Q5) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) What is critical examination technique; explain 4W's and 1 H.
b) Draw neatly at least 5 process flow diagram symbols and explain them.
c) What is a two handed process chart? Select any activity and explain it.

Q6) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) What are Principles of Motion Economy? Explain with proper Diagram.
b) What is Plant Layout and explain its importance.
c) Diagrammatically explain Product, Process and Fixed Position Layouts

Q7) ***Any two from (a) or (b) or (c) ———— (5x2) = 10 Marks***

a) What are Material Handling Equipments, explain its usage and importance.
b) Name any 5 Material handling equipments and its use in relevant industry.
c) Explain growth from Manual Operations to Fully Automatic Operations or AI based activity in any of the two industries - FMCG, Automobiles, Chemicals or Retail.