**LESSON PLAN**

**Name of the Faculty : Arvind Bhart**
**Discipline** Mechanical engineering
**Semester** 6th
**Subject** industrial engineering
**Lesson Plan duration : 15 weeks (from January , 2018 to April , 2018)**
Work load (Lecture/ Practical) per week (in hours) : Lecture -04 practical-00

| WEEK | THEORY | | PRACTICAL |
|---|---|---|---|
| | Lecture day | Topic (including assignment and test) | Practical Day |
| | 1 | Introduction to productivity | |
| | 2 | factors affecting productivity | |
| | 3 | factors affecting productivity | |
| 1 | 4 | Measurement of productivity | |
| | 5 | causes of low productivity | |
| | 6 | methods to improve productivity | |
| | 7 | definition and scope of work study | |
| 2 | 8 | | |
| | 9 | Inter-relation between method study and | |
| | 10 | work measurement | |
| | 11 | Human aspects of work study | |
| 3 | 12 | | |
| | 13 | Role of work study in improving productivity | |
| | 14 | Method Study | |
| | 15 | Objectives and procedure for Method analysis | |
| 4 | 16 | Information collection. | |
| | 17 | recording techniques | |
| | 18 | Principles of Motion analysis | |
| | 19 | Therbligs | |
| 5 | 20 | SIMO charts | |
| | 21 | Normal work area | |
| | 22 | design of work places | |
| | 23 | ergonomics | |
| 6 | 24 | Work Measurement objectives | |
| | 25 | work measurement techniques | |
| | 26 | stop watch time study | |
| | 27 | principle equipment used and procedure | |
| 7 | 28 | systems of performance rating | |
| | 29 | calculation of basic times | |
| | 30 | various allowances; calculation of standard time, | |
| | 31 | work sampling, | |
| 8 | 32 | standard data and its usage | |
| | 33 | Introduction to wages | |
| | 34 | Wage payment for direct and indirect labour, | |

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| | 35 | wage payment plans and incentives | |
| 9 | 36 | various incentive plans, incentives for indirect labour | |
| | 37 | Introduction, objectives and components (functions) of P.P.C | |
| | 38 | Advantages of production planning and Production Control | |
| | 39 | stages of P.P.C, process planning, | |
| 10 | 40 | routing, scheduling, dispatching and follow up | |
| | 41 | routing purpose, route sheets | |
| | 42 | scheduling – purpose, machine loading chart, Gantt chart, dispatching – | |
| | 43 | purpose, and procedure, follow up – purpose and procedure | |
| 11 | 44 | CPM/PERT technique, | |
| | 45 | drawing of simple networks and critical time calculation | |
| | 46 | Production Control in job order, batch type and continuous type of productions. | |
| | 47 | Difference between these controls | |
| 12 | 48 | Introduction, purpose/functions of estimating, costing concept | |
| | 49 | ladder and elements of cost, | |
| | 50 | difference between estimation and costing | |
| | 51 | Overheads and their types, | |
| 13 | 52 | estimation of material cost | |
| | 53 | estimation of cost for machining | |
| | 54 | processes, numerical problems | |
| | 55 | Revision | |
| 14 | 56 | Revision | |
| | 57 | Revision | |
| | 58 | Revision | |
| | 59 | Revision | |
| 15 | 60 | Revision | |