

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2161907

Date: 05/05/2017

Subject Name: Industrial Engineering

Time: 10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

- | | | |
|------------|--|-----------|
| Q.1 | Short Questions | 14 |
| 1 | Draw flow process chart symbols with meaning | |
| 2 | What is the main function of travel chart? | |
| 3 | Define PMTS | |
| 4 | What is contingency allowance? Is it economically possible to measure contingency allowance? | |
| 5 | Enlist any two applications where combination layout is preferred | |
| 6 | List the various phases of production planning and control | |
| 7 | What is the meaning of follow-up or expediting in steps of production planning? | |
| 8 | List any four factors affecting wages of workers | |
| 9 | Give equation of bonus and wages earned by worker using Halsey incentive plan | |
| 10 | What is the function of control chart in quality control? | |
| 11 | ISO 14000 is related with _____ policy | |
| 12 | The most common confidence interval for engineering applications is ____ percent
(a) 90 (b) 99 (c) 85 (d) 95 | |
| 13 | Which is the basic tool of work study? | |
| 14 | What is UCL? How it can be used in control chart? | |
| Q.2 | (a) Define production and productivity | 03 |
| | (b) Mr Yaw works on 8 hours day as a drill press operator. A work sampling study shows that he was idle 20 percent of the day and that he worked the remainder of the day at a performance index of 120%. The records show that he turned out 400 pieces of acceptable quality during the day. Compute the standard time for the operation he performed (allowance for drill press from time study manual of the company is 15%) | 04 |
| | (c) List various flow patterns of materials used in plant layout. Explain any three patterns in detail with characteristics | 07 |
| | OR | |
| | (c) Explain fixed position layout with suitable example. List advantages and disadvantages of the same | 07 |
| Q.3 | (a) What is forecasting? List important methods of forecasting sales of a product | 03 |
| | (b) Differentiate open and closed job shop | 04 |
| | (c) Write a short note on cellular manufacturing | 07 |
| | OR | |
| Q.3 | (a) Define rating? Why it is required? | 03 |
| | (b) What is EBQ? How it can be determined? | 04 |
| | (c) Explain product and process layout by suitable example | 07 |
| Q.4 | (a) List various steps involved in method study procedure | 03 |
| | (b) Draw only symbols of (1) operation cum transportation (2) inspection cum operation | 04 |
| | (c) Explain how string diagrams are used in work study | 07 |

OR

- Q.4** (a) Why multipurpose tools are generally used in industries? **03**
(b) With suitable example explain two handed process chart **04**
(c) Explain man and machine chart with suitable example **07**

- Q.5** (a) As per the factories act, 1948 define “certifying surgeons” **03**
(b) List important qualities of an entrepreneur **04**
(c) Explain loading and scheduling with suitable example **07**

OR

- Q.5** (a) As per the factories act,1948 list the rules for employment of young person on dangerous machines **03**
(b) Give the advantages of a multistory building over a single storey building for a factory **04**
(c) List various factors contributing to failure of entrepreneurial ventures **07**
